

FACTORS AFFECTING AGRICULTURAL EXTENSION PERSONNEL'S MOTIVATION LEVEL

Hassan Sadighi

Assistant Professor of Agricultural Extension and Education
College of Agriculture, Tarbiat Modarres University
P.O. Box 14115-336, Tehran, Iran.

Sadigh_h@modares.ac.ir

Abstract

*The primary purpose of this study was to investigate factors influencing professional staffs' motivation. This was a national study using a descriptive-corrolational design. A total of 478 extension professional staffs from these organizations were selected by a complete randomized sampling technique as a sample of the study. The study showed that more than 68% of the respondents' motivations are in low (or somewhat motivated) levels. This indicates that a substantial work needs to be done in order to improve the situation. Extension organization in Iran needs to develop strategies to optimize its human potential. The result showed that age of the respondents had a positive and statistically significant association with their motivation level. The result also showed that respondent's participation, experience, and management system (under which they work) have a 'low' association with their motivation. The respondents' professional satisfaction was highly correlated ($r=0.61^{**}$) with their motivation level which is considered a 'substantial association'. A Multivariate Linear Regression indicated that among the independent variables, age, experience, participation, management system, and professional satisfaction accounted for 38% of the variance in the respondents' motivation level. This implied that there are other factors that may have contributed substantially to variations in motivation level that were not investigated in this study.*

Introduction and Theoretical Foundation

Organizational psychologists have been studying motivation for more than five decades. However, the progress in understanding the specifics of what motivates people has been advancing slowly. Motivation—the psychological process that gives purpose, direction, and intensity to behavior—is the most important determinant of effective job performance and is mainly responsible for differential work output (Lawler III, 1973; Kreitner, 1986). Employees work harder and perform better if motivated and satisfied with their jobs (Beder, 1990; Watanabe, 1991).

Motivated behavior has been described as one that is under central or voluntary control (Lawler, 1973) thus the challenge for administrators is to influence motivation of their individual members, and create a suitable environment so people voluntarily aspire to excel, and be successful in the future. By exploring motivational needs of employees, managers and administrators can determine what motivates their employees. If the motivators can be identified, then behavior may be predicted.

According to the Motivator-Hygiene theory, jobs have factors that lead to satisfaction or dissatisfaction. Job satisfying (motivator) factors included achievement, responsibilities, advancement, recognition, and the work itself. Hertzberg (1972) stressed that enriched jobs rather than pay, and other environmental factors were the key to motivation and job satisfaction.

Hertzberg advised managers to redesign jobs to provide opportunities for individual achievement, recognition, responsibility, advancement and personal growth. He notes that overall job performance of a worker is a function of his/her ability plus motivation. Job dissatisfying (hygiene) factors were related to the work environment and were pursued in order to prevent job dissatisfaction or discomfort. Job dissatisfying factors included pay, working conditions, supervision, policies, and interpersonal relationships.

Expectancy theory, one of the most widely accepted explanations of motivation, was particularly well-suited as a basis for this research. Its premise is that motivation depends on how much an individual wants something (the strength of the valence) relative to other things, that they will get it. The transaction is essentially an economic one and it is assumed that individuals have expectations and preferences regarding the rewards they will receive in exchange for their investment of time and efforts. One can presume that if an imbalance exists for an individual, that individual will be motivated to attend to the inequity at the expense of being motivated toward a particular organizational objective. The optimal point exists when an individual perceives the exchange to be a balanced one, when their "wants" and "gets" match. Presumably the focus of individual energies will be toward the organization's goals, and in turn, this will satisfy personal goals. Similarly, imbalance exists when ratios are unequal. To determine if a state of disequilibrium exists, it is necessary to know the value placed upon a set of potentially achievable outcomes by the individual in the workplace. It is also necessary to appraise the relative attractiveness attributed to the perceived rewards that will be granted in exchange for the job done.

Motivation depends on incentives that the staffs value and believe to be attainable with increased individual performance, and is high when staff frustration is minimal (Bender, 1990; Cohen, 1990; Watanabe, 1991). As times and conditions change, past motivational strategies become ineffective (Buford & Bedeian, 1988). Therefore, agents' needs should be identified regularly in order to provide meaningful motivation, and incentives (Kreitner, 1986). As staff motivation changes as time and conditions changes, this study was important in order to provide reliable information, which is essential for good decision making and accountability (Altschuld & Thomas, 1991).

Purpose and Objectives

The primary purpose of this study was to investigate factors influencing professional staffs' motivation. The more specific objectives of the study were to:

1. determine the professional characteristics of the extension staffs;
2. determine the extension professional staffs' motivation levels;
3. determine the Bivariate relationship between dependent variable and the staff members' professional characteristics (independent variables);
4. determine how much of the variability in participants' level of motivation could be explained by their professional characteristics; and
5. determine R² level using hierarichal and multivariate regression analysis.

Methodology

This was a national study using a descriptive-corrolational design. Four provincial extension organizations (representing each geographical region of North-Central, Southern, Western, and Eastern provinces) were randomly selected for the study. A total of 478 extension professional staffs from these organizations were selected by a complete randomized sampling

technique as a sample of the study. Sample size and sampling technique utilized were supported by the study of Krejcie, and Morgan (1970).

The motivation instrument used in this study was based on expectancy theory developed by Hackman, Lawler, & Porter (1977) was used in this study. This instrument was previously used in similar studies to measure agricultural extension professional staffs' level of motivation (sadighi, 2000; Djire, 1994). The motivation instrument consisted of three major components: The first component concerns performance to outcome expectancies (P-O). Performance-outcome expectancy implies that an individual expects to get something in return (rewarded as an outcome) for certain behavior (performance) that he or she puts out. The second component of this instrument concerns with the valences of the outcome (V), which is a subjective value that an individual gives to an outcome. The third part deals with effort to performance expectancy (E-P).

The combination of high positive valence, high expectancy, and high instrumentality, produces the strongest motivation. If any key element is low, then motivation will be moderate. If all three elements are low, weak motivation will result. The first and second parts of the questionnaire have corresponding scores. The motivation measurement was computed as follow:

1. The average expectancy times valence = $(Q1p1 \times Q1p2) + (Q2p1 \times Q2p2) + (Q3p1 \times Q3p2) + \dots (Q19p1 \times Q19p2) / 19$
2. The average effort to performance = $Q1p3 + Q2p3 + Q3p3 / 3$
3. Motivation score = The average expectancy times valence (the result of step 1) multiply by the average effort to performance (the result of step 2).

In the above notations Q = question, and p = part.

A pilot study was conducted on a similar population in a province outside of the population area, and reliability coefficients (Cronbach's alpha) of the instruments were computed with the aid of SPSS program (Norusis/SPSS Inc., 2000) to be 0.92, 0.87, and 0.84 respectively for the parts one, two, and third. In a recent study utilizing this instrument, Sadighi, & Akhondi (2000) found reliability coefficients of of .83, .87, and .74 for part one, two, and three of the questionnaire respectively. According to Pedhazur (1982) a reliability coefficient between .50 and .80 is acceptable for a non-experimental study.

In order to characterize the staffs' motivation levels, after normalizing the motivation data, the Intervals of Standard Deviation from the Means (ISDM) was used to categorize motivation into four levels. The computation was done as follows: Less Motivated=A: [Minimum score \leq A < Mean score - St.dev.]; Somewhat Motivated=B: [Mean score - St.dev. \leq B < Mean score]; Fairly Motivated=C: [Mean score \leq C < Mean score + St.dev.]; Highly Motivated=D: [Mean score + St.dev. \leq D \leq Maximum scores].

A return rate of 88.91% (n=425) was achieved for the study, after a second follow up on the participants. Examining the differences between early and late respondent, and between respondent and non-respondents, a "method-1" of the procedures for handling no response issues proposed by Lindner, Murphy, and Briers, (2001) was followed and found no statistically significant differences on dependent variables.

Results and Conclusion

Findings are presented and discussed here for each objective and followed in the order that appeared on "purpose and objective" section.

Objective One

The majority of the participants (48.5%) had a Bachelor of Science degree in agriculture, while 10.4% of them had their BS degrees in agricultural extension education. 8.5% of the participants carried an associate degree in general agriculture and about 6.5% of the respondents had a Master of Science degree in agriculture and the rest held a high school diploma. The respondents consisted of extension professional staffs stationed at city (50.6%), provincial headquarter (30.3%), and villages (19.1%) to carry out their assignments. About 90% of the respondents were male, which is consistent with national extension personnel's gender ratio, and 91% of them were married. The mean age of respondents was about 35 years; their minimum and maximum age was 26 and 62 years, respectively. The average tenure in the extension organization was 7 years.

Objective Two

The respondents' motivation levels were determined as described on the methodology section and for the purpose of characterization the score was transformed into four levels as having a "low Motivation", "Somewhat Motivated", "Fairly Motivated", and "highly Motivated". Table 1 shows that more than 68% of the respondent having either low motivation or somewhat motivated. This shows that a substantial work needs to be done in order to improve the situation. It is hard for Extension to serve its clients well without adequate staff incentives (Moris, 1987), and high motivation level. Vroom (1964) believed that if employees believe their actions lead to valuable, attainable rewards, they will work harder. Therefore, managers should identify, support and reinforce individual perception by linking appraisal to professional and personal development. Traditional motivators, according to Bellerman (1963), while necessary, are not sufficient in themselves to produce positive motivation. Marchant (1982) found that giving a raise or a financial reward was not an important motivator and had little impact on most people's further performance. However, this type of motivator was found (Marchant, 1982) to have other values, such as in recruitment of high performers and demonstration of aspiration. In Iran, traditional motivators include monthly salary, housing, transportation, health insurance, and working under Extension supervisors with high management skills.

Table 1. The Extension Professional Staff's Level of Motivation.

Motivation Levels	Frequency	Percent	Cumulative Percent
Less Motivated	35	26.8	26.8
Somewhat Motivated	55	41.5	68.3
Fairly Motivated	37	28	96.3
Highly Motivated	5	3.7	100
Total	132	100	

Objective Three

The relationship between the respondents' motivations and their individual and professional characteristics have been measured by Pearson Product Moment Correlation using a bivariate method on SPSS (as shown on Table 2). The result showed that age of the respondents had a positive and statistically significant association with their motivation level. According to Davis (1973), Table 3, this relationship could be characterized as 'low' association which means that age could be responsible for the level of respondents' motivation, but by a low degree. Table

3 also shows that respondent's participation, experience, and management system (under which they work) have a 'low' association with their motivation. The respondents' professional satisfaction was highly correlated ($r=0.61^{**}$) with their motivation level. The degree of association between these two variables showed to have a 'substantial association' (Table 3). Hellriegel (1992) indicated that an employee who derives satisfaction from the job tends to be motivated to perform better than one who is less satisfied. Quick (1982) concluded that motivation is a significant factor contributing to performance. Researchers have shown that organizational structure, management style, and job satisfaction play important roles in employee motivation (Lawler, 1986; Sashkin, 1984) which supports the findings of this research.

Table 2. Bi-variate Correlations of the Respondents' Individual and Professional Variables.

Variables	1	2	3	4	5	6	7	8	9
1. Age	—								
2. Education	-0.24* 0.018	—							
3. Manag.Sys	0.193 0.065	-0.34** 0.001	—						
4. Experience	0.91** 0.000	-0.30** 0.003	0.165 0.113	—					
5. Salary	0.41** 0.000	0.31** 0.003	0.144 0.168	0.34** 0.001	—				
6. Distance	-0.18 0.072	-0.046 0.661	-0.086 0.412	-0.170 0.104	-.42** 0.000	—			
7. Satisfaction	0.171 0.103	-0.21* 0.040	0.327** 0.001	0.235* 0.023	-0.023 0.827	-0.30 0.774	—		
8. Participation Level	0.25* 0.016	-0.32** 0.001	0.955** 0.000	0.220* 0.034	0.165 0.114	-0.45 0.672	0.29** 0.004	—	
9. Motivation	0.21* 0.046	-0.040 0.699	0.231* 0.023	0.268* 0.009	0.133 0.204	-0.052 0.621	0.61** 0.000	0.2** 0.01	—

** $p < .001$; * $p < .05$

Table 3. The Davis Convention Characterizing Correlation Levels.

<i>The Coefficient's Magnitude</i>	Characterization
±0.70	A very strong association
± 0.50 to ± 0.69	A substantial association
± 0.30 to ± 0.49	A moderate association
± 0.10 to ± 0.29	A low association
± 0.01 to ± 0.09	A negligible association
0.000	No association

Davis (1973)

Objective Four & Five

The regression analysis provided variables with statistically significant level (as shown in table 4), so the following predication equation was formulated to estimate the respondent's motivation level.

$$Y = 1.753 + 0.832(X1) + 0.069(X2) + 0.104(X3) - 0.051(X4) - 0.032(X5)$$

X1=Satisfaction; X2=Experience; X3=Participation; X4=Management; X5=Age; and

Y = The Motivation Level.

Table 4. Multivariate Regression Analysis (Respondents' Motivation Level as Dependent Variable).

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	1.753	2.503		0.700	0.486
Satisfaction	0.832	0.131	0.562	6.337	0.000
Experience	0.0690	0.081	0.181	0.852	0.397
Participation	0.104	0.087	0.356	1.197	0.235
Management	-0.0514	0.053	-0.288	-0.975	0.333
Age	-0.0321	0.078	-0.088	-0.412	0.682

Table 5. R² Changes in Hierarchical Regression Analysis

	R ²	R ² Changes
Satisfaction	0.367	
Experience	0.397	0.030
Participation	0.402	0.005
Management	0.408	0.006
Age	0.383	-0.025

Conclusions

1. The fact that more than 68% of the respondents' motivation are in low (or somewhat motivated) levels. This indicates that a substantial work needs to be done in order to improve the situation. It is hard for Extension to serve its clients well without adequate staff incentives (Moris, 1987), and high motivation level.

2. Extension organization in Iran needs to develop strategies to optimize its human potential. Scientists assert that the goal of HRD is to find an optimum match between the needs of the extension organization and the needs of its human resources.
3. The result showed that age of the respondents had a positive and statistically significant association with their motivation level.
4. The result also showed that respondent's participation, experience, and management system (under which they work) have a 'low' association with their motivation.
5. The respondents' professional satisfaction was highly correlated ($r=0.61^{**}$) with their motivation level which is considered a 'substantial association'.
6. A Multivariate Linear Regression indicated that among the independent variables, age, experience, participation, management system, and professional satisfaction accounted for 38% of the variance in the respondents' motivation level. This implied that there are other factors that may have contributed substantially to variations in motivation level that were not investigated in this study.

Educational Importance

Staff motivation changes as time and conditions change. As times and conditions change, past motivational strategies become ineffective, therefore, agents' needs should be identified regularly in order to provide meaningful motivation, and incentives. This study was important in order to provide reliable information, which is essential for good decision making and accountability. Extension needs to develop strategies to optimize its human potential. The goal of human resource development is to find an optimum match between the needs of the extension organization and the needs of its human resources. Researchers believe that if employees believe their actions lead to valuable, attainable rewards, they will work harder. Therefore, managers should identify, support and reinforce individual perception by linking appraisal to professional and personal development. Managers should state which behaviors will be rewarded and which ones will not, and should tie rewards to individual performance.

References

- Apps, J. W. (1993). Leadership for the Next Age. *Journal of Extension*. [On-line] Available at: <http://joe.org/cgi-bin/mktoc/joe/1993summer>.
- Buford, J. A., Jr. (1990). Extension Management in the Information Age. *Journal of Extension* [On-line] Available at: <http://www.joe.org/joe/1990spring/fut2.html>.
- Davis, J. A. (1971). *Elementary Survey Analysis*. Englewood Cliffs, NJ. Prentice-Hall.
- Hall, J. (1988). *The competence connection: A blueprint for excellence*. The Woodlands, TX: Woodstead.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and psychological measurement*, Vol. 30, p. 608.
- Lawler, E. E., III. (1985). Education, Management Style, and Organizational Effectiveness. *Personnel Psychology*. 38(1): 1-25.
- Likert, R. (1979). From Production and Employee Centeredness to Systems 1-4. *Journal of Management*. 5(2): 147-156.
- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling Nonresponse in Social Science Research. *Journal of Agricultural Education*. Available [On-Line] at: <http://pubs.aged.tamu.edu/jae/pdf/Vol42-04-43.pdf>

- Lorich, N. P. (1987, Spring). Merit Pay and Motivation in the Public Work Force: Beyond Technical Concern for More Basic Consideration. *Review of Public Personnel Administration*, 7(2), 54-71.
- Lunenburg, F. C., & Ornstein, S. C. (1991). *Educational Administration: Concepts and Practices*. Belmont, California, Wadsworth Publishing Company.
- Marchant, M. P. (1982). Participative Management, Job Satisfaction, and Service. *Library Journal*. 107(8): 782-784.
- McClelland, D. C., (1987). *Human Motivation*. Cambridge University Press.
- Pedhazur, E. J., (1982). *Multiple Regression in Behavioral Research: Explanation and Prediction*. Holt, Reinhart & Winston.
- Rainey, H. G. (1982). Reward Preference Among Private and Public Managers: In Search of the Service ethic. *American Review of Public Administration*, 16, 288-302.
- Rainey, H.G., Blackoff, R.W., & Levine, C.H. (1976). Comparing Public and Private Organizations. *Public Administration Review*, 36, 233-244.
- Sadighi, H. & Mohammadzadeh, J. (2002). Extension Professional Staffs' Attitudes toward Participatory Approach of Extension Activities and Rural Development. *Proceeding of the 18th Annual AIAEE Conference, Durban, South Africa*. Available [On Line] at: <http://www.aged.tamu.edu/aiaee/2002/sadighi521-528.pdf>
- Sadighi, H. & Akhondi, A. (2001). Organization Management System Affecting Extension Professionals' Motivation. *Iran Agricultural Research*, 20: 107-120.