

Effective factors on job performance of agricultural extension experts in Iran

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Abstract: The purpose of this research was to investigate the effective factors on job performance agricultural extension experts in Iran. The type of research is descriptive correlational. Experts of agricultural extension were the statistical population of research and by using stratified random sampling we select 127 experts as statistical sample and totally give 120 questionnaires. Validity of the questionnaire has been confirmed by a panel of experts consisted of senior faculty members of agriculture extension and education department and research committee advisors. Introductory test and reliability of questionnaire was completed via 15 questionnaires by experts of agricultural extension in a city other than the city of research population. Cronbach's alpha coefficient estimated as 0.84. Results show a high level in job performance of agricultural extension experts. The results of correlational coefficient show that there is a significant and positive relation between factors of organizational, environmental, job entities, managerial, motivational, hygiene, educational and job performance of experts. Result of step by step regression analysis shows that factors of professional, managerial and motivational could explain 40% of job performance changes.

Key words: Job performance; Agricultural extension experts

1. Introduction

Human resources are the most important asset for improvement of organizations. Today, inspection and recognition of effective organizational factors on job performance is one of substantial programs of macro management and in this way related issues as education, absorption and resource conservation can be performed and designed better (Karimi Goughari, 2011). Job performance is one of remarkable variables in developed countries. Psychologists considered it as a product of human behavior and believe that motivations and needs are effectual factors on job performance and consequently economic development and growth. Also, they believe that job performance is a combinational structure which can be a criterion to distinct successful employee from unsuccessful employee. (Abolghasemi et al., 2011)

Agricultural Extension Organization has to be more sensitive about its addressee. This organization has a great prophecy to realize the agricultural extension and development. So, whereas employees' performance is an important variable in this area, this organization needs expert with high responsibility (Rezaei and Rezvanfar, 2007). Concerning the important task of extension experts for success of this organization, inspection and recognition of effectual factors on job performance is one of important programs of extension management and based on this information better

absorption and improvement can be reached. (Hejazi and Shams, 2004)

Job performance is the same as outcome according to appointed formal duties. It is the consequence of manpower's activities and defines the effort and success domain of employee (Rezaei and Rezvanfar, 2007). Job performance is what one performs and can be observed. It contains activities related to the aims of organization which can be measured based on the Jargon (Agha Yousefi and Saleh Mrhosseini, 2011). Job performance in organizations can be considered from two dimensions: Standard and Inventive. Standard job performance is related to the organizational duties. An organization that depends only on predefined duties is a breakable social system. For adaptation and coping with competitive environment of organization, managers have to improve their standard official behaviors by creativity, understanding of environment and new ideas for organizational changes. So, inventive job performance is a vital issue for organizations (Sajjadi and Omid, 2007).

In a research, Karimi Goughari (2011) analyzed the relation between organizational factors and job performance among Kerman agricultural extension organization's experts. Findings of confirmatory factor analysis show that organizational commitment and culture have positive and significant effect on job performance of extension employees.

In a research Moazzen et al. (2011) revised effective factors on teacher's job performance in

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schools of agriculture in Tehran. The results of data analysis show that job performance level of 75% of teachers was normal and high. Results of correlation analysis show that with 99% assurance there is a positive and significant relation among job performance with high skill, job satisfaction and professional feature of teachers.

Dabirian (2008) in his thesis for master's degree investigated and analyzed effective factors on job performance of agricultural extension organization's experts (case study in Hamedan Province). Results show that at assurance level of 0.01, there is a positive and significant relation between job performance variable and psychological independent variables: achievement motivation, job satisfaction, job attitude, job motivation, personality and professional independent variables, cooperation in budgetary affairs, cooperation in management, official conditions, organizational commitment, organizational support, satisfaction of organizational communication, and personal variable of the expert's city. Multiple Linear Regression test shows that cooperation in management, job satisfaction, job motivation and organizational support can determine 59.3% of changes in expert's job performance.

In another research, Rezaei and Rezvanfar studied effective factors on job performance of Agricultural Extension Organization's experts (case study in Yazd Province). Among all variables of research, the rate of use of informational resources and pipelines, the rate of cooperation with media (presenting statistics and reports about agricultural condition of region, presenting expertise discussions, offering ideas and cooperation for producing radio and TV programs about agriculture), the rate of association with manager of the organization and related unit (association for investigation about improving productivity of organization, cooperation in decision making, active cooperation with official board and cooperation in all phases after decision making) and other variables which were about physical and mental characteristics like job capacity, motivation and satisfaction have a positive and significant relation with job performance.

In a research, Sajjadi and Omidi (2007) studied effective factors on job performance of headquarters in Physical Education Organization. Results show that there is a positive and significant relation between job satisfaction and motivation and job performance. There is no positive and significant relation between job performance and independent variables of age and education from personal factors. But only there was a positive and significant relation between precedent in organization and job performance. Also there is a positive and significant relation between job performance and all variables of educational factors (to contribute in during-work educating courses and how practical and applicable it is, adaptation of during-work educating courses with job needs, adaptation of academic education with the current job).

In a research, Hejazi and Shams (2004) studied effective factors on job performance of Agricultural Extension Organization's experts in East Azerbaijan Province. Results show that there is a positive and significant relation between job performance and during-work educating courses, precedent, job satisfaction and motivation. Comparison of job performance among groups shows that adaptation between discipline and job will result in a better performance.

Kabiri (2005) in his thesis for master's degree investigated effective factors on job performance of agricultural extension organization's experts in Isfahan Province. Results show that studied statistical population had a moderate job performance. Their job satisfaction and motivation were also moderate. Results of correlation coefficient indicated that there is a significant relation between job performance and job satisfaction, job motivation and other variables related to the educational and organizational factors. The results of regression analysis show 70% capacity of prediction for independent variable variance via job motivation, availability of printed resources like book and magazine in organization and scientific and educational cooperation of organization.

In a research, Hejazi and Iravani (2002) studied the relation between personality traits and job performance. Findings show no significant relation between personality traits and job performance.

In a research titled: most dominant organizational policies which are effective on job performance, Samad (2008) studied civil workers of Malaysia. Results show a negative relation between job performance and organizational policies and their details. Rising from organizational policies was the most dominant factor which was effective on job performance.

In a research, Suhandi et al (2008) studied job performance of Extension Agents in west Java province. Results show that attention to sanitary factors and creation of motivational factors is so important and has to be done. These results also show that best performance was related to informal leaders, improvement of farmer group, schedule of extension, using extensional method, programming and performance assessment, reports about improvement affairs, improvement of farmer's confidence, office management, needs assessment and economic improvement of village.

Hingis et al (2007) studied job performance of managers in a productive company. Results show a positive and significant relation between managers' job performance and responsibility.

In Bangladesh, Ziaul, Karim and Mahboob (1994) studied effective factors on job performance in four groups: personal, observational, job dependent factors and situational traits. Results show that during-work educating courses have a positive and significant relation with job performance but age increase, household size and distant between home and office will affect job performance negatively.

Attending to the theoretical literature of the topic, this article designed and conducted to answer these aims:

1. Measurement of Experts' job Performance in Mazandaran Agricultural Extension Organization.
2. Prioritize the factors which compose job performance of Experts in Agricultural Extension.
3. Effect of personal factors, organizational factors, environmental factors, job entity factors, managerial factors, educational factors, professional factors and Motivator-Hygiene theory of Herzberg.

2. Material and method

The method of this research is descriptive correlational. Its statistical population contains Experts of Mazandaran Agricultural Extension Organization (N=177). We use stratified random sampling by Cochran formula (n=127), and totally 120 questionnaires were answered. For confirming the validity of research, we considered ideas and offerings of some specialist and members of agricultural education and extension faculty and experts of agricultural education and extension organization. Based on their offers the corrections were done. An introductory test was used for validation of research tools and achieving variance for sampling. We gave mentioned questionnaire to the 15 experts of Golestan agricultural education and extension organization (Gorgan City). There was economic and cultural and territorial similarity between these 15 experts and statistical population. Cronbach's alpha coefficient estimated as 0.84. Variables of this research are personal traits (age, gender, matrimony, official background, official post, education, employment background, discipline, unit of work and social belonging situation of experts), organizational factors with 14 questions, environmental factors with 21 questions, job entity factors with 16 questions, managerial factors with

18 questions, Herzberg Motivator-Hygiene factors with 11 questions, professional factors with 15 questions and educational factors with 9 questions. For measurement of experts' job performance a questionnaire with 18 questions and three chapters was used. The first chapter relates to job capacity and skills, the second chapter relates to organizational behavior and third part to job quantity. All chapters have 6 point Likert scale. (Nothing=0, Very Low=1, Low=2, Moderate=3, High=4, Very High=5)

Table 1: Reliability of the variables

Variable	Cronbach's alpha
Organizational Factors	0.90
Environmental Factors	0.94
Job Entity Factors	0.95
Managerial Factors	0.94
Motivational Factors	0.77
Hygiene Factors	0.85
Professional Factors	0.96
Educational Factors	0.93
Job Performance	0.97

3. Ranking of the extension experts' job performance

As you see in Table 2, about capacity and skill, respectively (correct using of tools, available resources and facilities for conducting programs, accurate work and good communication with clients) have the farthest priorities. About organizational behavior, respectively (responsibility, satisfaction of clients and perseverance) and about job quantity (working of employee based on 80% of standard productivity rates) have the farthest priorities.

Table 2: Ranking of job performance aspects from experts' point of view

Variable	Ordinal Average	Standard Deviation	coefficient of variation	Rank
A: Skills and Capability				
Accurate using of tools facilities and resources	3.55	0.84	23.66	1
Elaborateness	3.65	0.87	23.83	2
Appropriate communication with clients	3.94	0.94	23.85	3
Doing the duties in the best way (based on constitution)	3.63	0.93	25.61	4
Controllership to see the problems nearly	3.65	1	27.61	5
Scientific, studious and educational activities (Dynamical)	3.30	1.04	31.51	6
Being innovative and presenting new ideas to solve problems	3.25	1.05	32.30	7
B: Official Behaviors				
Responsibility about the job	3.96	0.81	20.45	1
Clients' Satisfaction of respective expert	3.87	0.80	20.80	2
Seriousness and persistence	3.90	0.83	21.28	3
Regular Attending in workplace and respecting laws and methods	3.85	0.86	22.33	4
Appropriate communication with coworkers and seniors	3.84	0.87	22.65	5
Appropriate communication with clients	3.94	0.94	23.85	6
Appropriate cooperation with other units of organization	3.75	0.93	24.80	7
Accepting oneself faults and try to eliminate them	3.65	1	27.64	8
Appropriate cooperation with external units	3.55	1.03	29.01	9
C: Work Quantity				

working of employee based on 80% of standard productivity rates	3.64	0.86	23.62	1
Preventing works postpone	3.77	0.93	24.66	2

* Measurement 0=Nothing – 5=Very High

The score of job performance for 18 questions based on given scores is minimum 0 and maximum 90. Based on job performance grouping in Table 3, the job performance level of 60% of subjects concerning the environment was "much", job

performance level of 28% was "very low" and for the others this level was "moderate", "low" and "very low".

Table 3: Distribution of frequency of job performance of experts

Job Performance	Frequency	Frequency Percentage	Cumulative Frequency Percentage
Very Low (0-18)	1	0.8	0.8
Low (19-36)	3	2.5	3.3
Moderate (37-54)	13	10.8	14.2
High (55-72)	72	60.0	74.2
Very High (73-90)	31	25.8	100
total	120	100	-

Average: 66.4 Standard Deviation: 1.3 Minimum: 7 Maximum: 90

4. Inspecting correlation rate of studied variables with experts' job performance variable

As you see in Table 4, there is a positive and significant relation between subjects' job

performance and organizational, environment, job entity, educational traits, Herzberg Motivator-Hygiene, professional traits and managerial factors in the level of P=0.01. Therefore, the hypothesis of the research is disproved.

Table 4: Inspecting Correlation Rate of Studied Variables with Experts' Job Performance

Variable	Pearson's Correlation Coefficient	Level of significance	Type of Correlation	Correlation Force
Age	0.01	0.89	Pearson	No Relation
Employment Background	0.02	0.77	Pearson	No Relation
Organizational Factors	0.36**	0.00	Pearson	Moderate
Environmental Factors	0.36**	0.00	Pearson	Moderate
Job Entity Factors	0.43**	0.00	Pearson	Moderate
Managerial Factors	0.46**	0.00	Pearson	Moderate
Motivational Factors	0.35**	0.00	Pearson	Moderate
Hygienic Factors	0.33**	0.00	Pearson	Moderate
Professional Traits	0.56**	0.00	Pearson	Relatively High
Educational Factors	0.44**	0.00	Pearson	Moderate

5. Definition of independent variables share in predicting changes of job performance and its estimating equation

For understanding the independent variables' power of predicting job performance we use multiple step by step regression analysis. Results achieved in three steps:

In the first step, we entered the variable of professional factors in the equation. Coefficient of multiple correlation (R) was 0.56 and Coefficient of Determination (R2) was 0.32 (Table 5). It means that 32% of changes are related to this variable. The regression equation in first step is:

$$Y = 13.294 + 0.415X_1$$

In the second step, we entered the variable of managerial factors in the equation. Coefficient of multiple correlation (R) was 0.59 and Coefficient of Determination (R2) was 0.35 (Table 5). It means that 3.5% of changes are related to this variable. The regression equation in first step is:

$$Y = 13.294 + 0.316X_2$$

In the third step, we entered the variable of motivational factors in the equation. Coefficient of multiple correlation (R) was 0.63 and Coefficient of Determination (R2) was 0.4 (Table 5). It means that 4.5% of changes are related to this variable. The regression equation in first step is:

$$Y = 13.294 + 0.575X_3$$

Table 5: Coefficient of Determination for effective variables on job performance in step by step regression

Step	Variable	Coefficient of Correlation	Coefficient of Determination	Modified Coefficient	F	Sig.
1	Professional Factors	0.566	0.32	0.314	55.514	0/000
2	Managerial Factors	0.596	0.355	0.314	32.2	0/000
3	Motivational Factors	0.632	0.4	0.384	25.742	0/000

Table 6: Comparison of independent variables' effect on job performance in step by step regression

Variable	Nonstandard coefficient	Standardized Coefficient	t	Sig.
Fixed Number	13.294	-	1.958	0.053
Professional Factors	0.451	0.347	3.768	0.000
Managerial Factors	0.316	0.264	3.018	0.003
Motivational Factors	0.575	0.226	2.937	0.004

This model shows that most effective factors on experts' job performance are professional factors and in the next steps managerial and motivational factors are effective. These three variables totally determine 40% of job performance variance. Concerning the explanations and linear equation Table of dependent variable regression, job performance is:

$$Y = 13.294 + 0.415X_1 + 0.316X_2 + 0.575X_3$$

6. Conclusion

There is no significant relation between experts' job performance and personal characteristics (age, gender, matrimony, official background, official post, education, employment background and discipline). But, it is important that there is no coherence between the results of this research and researches of Hejazi and Shams (2004), Hejazi and Iravani (2002), Moazzen et al (2011) and Sajjadi and Omidi (2007). There is a significant and positive relation between organizational factors and job performance of extension experts. Results of this test have coherence with research's results of Kabiri (2005), Dabirian (2008) and Karimi Goughari (2011). There is a significant and positive relation between environmental factors and job performance of extension experts. There is a significant and positive relation between job entity factors and job performance of extension experts. There is a significant and positive relation between managerial factors and job performance of extension experts and managerial factors are the best indicators of changes in job performance. There is a significant and positive relation between Herzberg Motivator-Hygiene factors and job performance of extension experts and motivational factors can determine 4.5% of changes in job performance. Findings show that Motivator-Hygiene factors improve job performance. Results of Suhanda et al. (2008) Research show that attention to Motivator-Hygiene factors is so important. Results of Hubeis (2007) show that success, recognition, hard work and responsibility have significant effect on productivity. There is a significant and positive relation between professional traits and job performance of extension experts. Professional factors determine about 32% of change in job performance. These results have coherence with research results of Rezaei and Rezvanfar (2007), Dabirian (2008), Moazen et al. (2011). There is a significant and positive relation between educational factors and job performance of extension experts. These results have coherence with research results of Hejazi and Shams (2004),

Kabiri (2005), Sajjadi and Omidi (2007). The research of Ziaul Karim and Mahboob (1994) shows that there is a significant and positive relation between job performance and during-work educating courses. Concerning components of variable, findings show that job performance level of extension experts is high and they continue their activities seriously.

7. Suggestions

Based on achieved results we present these suggestions:

- More attention to the organizational factors as administration and leadership, rightful wage according the experts' expectation and difficulty of their job, gratuity, acclaim and advancement to improve job performance.
- Managers of the organization can improve the efficiency and competence of personnel by making a favorable physical environment, improvement of friendship among experts, adoption of cooperative management, continuative consult with experts about job affairs and presenting welfare service, appointment of managers and selecting aim.
- Management of organization have to supply experts needs based on their job entity. We suggest an evaluation system to measure job performance correctly and then negotiation between administrators and experts and presenting instructions.
- For improvement of experts' job performance, their professional skills have to be a parameter for selection and so their appointment can be done based on capability. Also, capabilities like communicative skill as an effective variable have to be considered. Required instruction has to be presented to improve these abilities.
- As education has positive effect on performance it is suggested that managers attend to this issue and by executing instructional courses improve experts' familiarity with new instructional strategies and adaptation of programs with needs, context and facilities.
- By presenting variant and continuing instructions and using different methods for improvement of knowledge and skills, the organization has to help experts to enhance their innovation and information, especially older experts.
- Applied variable or practicality of passed courses is also one of educational factors of research and explain the impotence of during-work educating courses. So, the instructions have to be applicable and therefore help the experts to do their duties

better and enhance their job satisfaction and job performance.

- It is suggested that managers by producing motivational factors (contain success achievement, gratitude for doing work, hardworking, increasing responsibility and improvement) and Hygienic factors prevent job disaffection. By doing this they can motivate experts and make them more creative and hardworking.

Concerning the step by step regression, for improvement of experts' job performance we suggest that their motivation for growing and responsibility have to be reinforced. Also, more informational resources have to be used and organizational goals must be cleared for experts.

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