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220

INVESTIGATING ORGANIZATIONAL HEALTH OF IRANIAN AGRICULTURAL COLLEGES:

TO DEVISE APPROPRIATE AND COMMENSURATE RESEARCH INSTRUMENT FOR HIGHER EDUCATION

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Abstract

The aim of this study was to investigating of organizational health of Iranian Agricultural Colleges . A healthy organization is one that not only survives in its environment, but continues to grow and prosper over the long term. An organization on any given day may be effective or ineffective, but healthy organizations avoid persistent ineffectiveness. This was a descriptive–analytic study. Questionnaires including statements pertaining to organizational health scale were used . proportional stratified random sampling method was used for achieving to samples among agricultural colleges in Iran. In this case 97 faculty members in national Universities of Tehran, Zanjan and Ardebil were included in statistical sample. The validity of the questionnaire was approved by the judgment of a panel of faculty members of University of Tehran. In order to measure the reliability of the questionnaire, Cronbach Alpha coefficients were calculated. The data were analyzed by SPSS-win$_{16}$ software's, with proper statistical methods. The exploratory factor analysis extracted 8 factors pertinent to Organizational Health that explained about 72 percent of the total variance. We entitled these factors according to OH literature and it's idioms. likewise, statistically, there was a significant relationship between some of dimensions of organizational health and faculty members' personal characteristics. Relatively compare of OH levels of Iranian agricultural colleges showed that leadership level has less health.

Keywords: Innovation, technology, research projects, etc. [Arial 10-point, justified alignment].

INTRODUCTION

Agricultural universities worldwide are facing numerous challenges including increasingly limited resource allocations, declining enrollments, keeping up with advances in information and other technologies, remaining aware of and responsive to clientele, and the need to aggressively globalize their teaching, research, and outreach programs (Jischke et al.,1999). Over the past 15 years the higher agricultural education system in Iran has been considerably expended, reflecting a broad shift away from an elite system towards mass higher agricultural education. Since 1990, there has been an increase in student numbers and it is estimated that there are currently over a hundred thousand student studying at higher agricultural education institutions in Iran (Ahmadpour-e-daryani,2003). Iranian Agricultural universities are facing numerous challenges including new competition in the form of high demand for online course work, and

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

221

demands for quality products, increased accountability, and new marketplace requirements (Veisi et al., 2008). These challenges call attention to factors that facilitate growth and development as well as to intra organizational conditions that impede positive organizational dynamics.

Organizational climate is the framework used to analyze the nature of educational organizations such as schools and universities . it is a general term that refers to teachers' perceptions of their work environment; it is influenced by formal and informal relationships, personalities of participants, and leadership in the organization. As public and private institutions become more complex, social scientists continue to target the study of climate as a critical aspect of healthy organizations. (Hoy *et al.*, 1991; Hoy and Sabo, 1998; Goddard *et al.*, 2000). Originally, "climate was used as a general notion to express the enduring quality of organizational life" (Hoy and Sabo, 1998, p. 3).

Organizational Health (OH) is useful framework for the analysis of school climate. it is the capability of the organization in performing its functions of development and growth (Klingele, Lyden and Vaughan, 2001). OH concept with regard to schools was at first developed by Matthew Miles (1965) in the form of assimilation (metaphor) with school atmosphere. By making use of such assimilation, relationships between students, teachers, and managers are described (Hoy et al., 1990). Organizations like their employees, may either be healthy, or unhealthy. While unhealthy organizations fail in fully performing their functions, healthy organizations act functional. Level of organizational health is correlated with its rate of success in performing its aims and objectives (Hoy& Feldman,1987). Miles defined healthy organization as: "A healthy organization is the one, not only continuing its existence within its current environment, but also constantly developing in the long-term with improving competing and subsistence capabilities" (Miles, 1969:17). OH is an essential concept for organizations in performing their objectives, as well as in their efforts for orientation, and change. It reveals the psycho-sociological condition of the educational institutes. Determination of OH of colleges, as being organizations, is intended for not only ascertaining the current situation, but also for arranging improvement plans accordingly (Boydak & Yavuz, 2010). Various studies show that there is a positive relationship between OH and function of educational institutions (Rony et al.,2007). Also these studies revealed that healthy organizations have a better performance and their employee are motivated (Tsui et al.,1994). Considering to the crucial role of agricultural colleges in agricultural development, in order to achieve its goals, it is necessary to have the acceptable health.

Research Design

The main purpose of this study was to identify amount OH of Iranian agricultural colleges. To achieves this goal, the following specific objectives has been considered:

- To achieve an appropriate research tool to measure OH
- Determine the dimensions and levels of OH

OH studies have paid less attention to colleges and higher education institutions, these studies more considered to schools and high schools, hence the standard questionnaires that are designed for this purpose have less fit with internal conditions and functions of colleges. In this research we tried to find the proper tool for measuring OH of colleges. For the collection of quantitative data used the Organizational Health scale (OHs) that has been made by researchers. We designed This scale (OHs) especially to map the profile of the higher education system health. To create this scale At first stage 65 statements prepared based on a collection of special documents about OH such as concept of Organizational health (Hoy & Feldman, 1987) Effective Supervision (Hoy and Forsyth 1986) , Planned Change and Organizational Health (Miles,1969) and assessing the Organization Health (Leyden and Klingele ,2002). An expert panel assessed the content validity of questionnaire. The panel included faculty members from Departments of planning & management and industrial management of Tehran University. By using "Chi2 test" amount of expert's agreement for any statement (maximum 100% and minimum 80%) were investigated and finally, 49 statements which enjoyed the most agreement were elected.

Questionnaire reliability was estimated by calculating Cronbach's Alpha. Reliability for the overall instrument was estimated at 0.83, Survey responses to the Likert-type items that ranged from, " at all=1 to very frequently occurs= 6" . they were asked to indicate the extent to which each statement occurred in their department. The statistical population of the study include Iranian agricultural colleges (including 31 College) . the number of faculty members based on "*Research and programming for higher education Institute*" in the year 2008 was 1837 members. The sample size was determined by using Cochran's formula. However, the sample included 97 faculty members. Earlier, a pilot study was conducted. The aim was to test and improve the questionnaire; Revisions were made based on the pilot study. Using the organizational health scale, data were collected from faculty members in the three colleges. In determining sample, the sampling plan was divided into two stages. in the first stage, agricultural colleges based on the number of faculty members

divided into three classes: the great, middle and small colleges. therefore agricultural colleges with less than 50 faculty members considered as small class, colleges with 50 to 70 faculty members as middle class and colleges that they had higher than 70 faculty members, as Great colleges. Then university of Ardebil, university of Zanján and University of Tehran as small, medium and large universities were elected Respectively. In the second stage, buy using proportional stratified random sampling method proportion of each college were determined.

RESULTES AND DISCUSSIONS:

The data in Table 1 and 2 show the frequent distribution of faculty members by personal characteristics. The ages of the respondents ranged from 25-63. The mean age was 46 (SD = 8.87, N = 79). The majority (36.7%, n = 36) of respondent were 41-50 years old. The years of instructional experience of respondents ranged from 2-55. The mean instructional experience was 46 (SD = 8.87, N = 79). The majority (36.7%, n = 36) of respondent were 41-50 years old.

Table 1:participants' personal characteristic

characteristic	grouping	f	%
gender	Male	91	93.6
	Female	6	6.7
Age Mean= 46	30-40	33	33.7
	41-50	36	36.7
	51-60	22	22.4
	61<	6	6.2
Sci. classification	Instructor	11	11.3
	Assistant professor	59	60.8
	associate professor	18	18.6
	Professor	9	9.3
Instructional experience (year)	5>	18	18.6
	5-10	23	23.7
	11-15	10	10.3
	16-20	23	23.7
	20<	23	23.7

Approximately 9.3% of faculty members had a Professor degree in agricultural extension and education discipline (n=9), 18.6 percent (n=18) of respondents were associate professor, most of faculty members (60.8%) had a assistant professor degree and about 11% of them were instructor. Table2 shows the Faculty' scintific backgrounds, too.

8-10 June 2015- Istanbul, Turkey
Proceedings of SOCIOINT15- 2nd International Conference on Education, Social Sciences and Humanities

223

Table2: participants' scientific backgrounds

Subject	Range	F	%	Mean	SD
Scientific plan	No plan	10	10.2	1.74	**0.98**
	1-2	53	54.1		
	3-4	27	27.6		
	5<	8	8.2		
ISA paper	No paper	17	17.3	2.1	**1.6**
	1-2	61	62.2		
	3-4	18	18.4		
	5<	2	2.1		
Presenting paper in international conferences	No paper	14	14.3	0.95	**1.2**
	1-2	74	75.5		
	3-4	9	9.2		
	5<	1	1		

Inferential statistics

Factor analysis: Exploratory Principal Component Analysis (PCA) was utilized to summarize the variables of the research *to* a smaller quantity and to determine the most appropriate dimensions for OH. The implemented computations revealed that the internal coherence of the data is appropriate (KMO = 0.746) . Nelson and Thompson(2005) reported that KMO values of 0.6 and above are required for good factor analysis. Bartlett's statistical data was at 0.01 level significant. According to Kaiser Criteria there were 8 factors that their Eigen values were extracted more than 1 (Table 3). The research variables were categorized into 8 factors by using Varimax Rotation Method.

Table 3: The extracted determinants along with the Eigen values, variance percentage and the cumulative variance percentage

The factor No.	Eigen values	the variance percentage of the Eigen values	cumulative variance percentage
1	3.72	11.99	11.99
2	3.53	11.37	23.36
3	3.42	11.02	34.38
4	2.86	9.23	43.61
5	2.75	8.86	52.47
6	2.49	8.01	60.48
7	2.02	6.51	66.99
8	1.59	5.13	72.12

According to factor analysis the dimensions of OH were categorized into 8 groups, The variables of each factor were extracted based on the Table4 and entitle them according to OH literature and it's idioms as follows:

1- the first factor was called the *Intimacy factor*. This factor had the most Eigen value (3.72) among the other factors. Also this factor explained 11.99% of the total variances of the variables. This dimension consisted of four items incuding: there is solidarity between Faculty., the Faculty have parties for each other, the Faculty are are indifferent to each other and the Faculty help and support each other.
 Intimacy refers to the employee' enjoyment of warm and friendly social relations with each other (Hoy et al,1991).

2- The second factor was called the *Innovativeness*. This factor that its Eigen value was 3.53 explained 11.37% of the total variances of the variables.this dimension consisted four items incuding: The rules set by the principal are never questioned, the faculty invents new procedures to improving their tasks, the faculty.encoureged to invent new procedures and the faculty fancy to new subjects,

Innovativeness is the organization's ability to invent new procedures, move to new goals and objectives, and become more differentiated over time.

3- The third factor was called the *participation factor*. This factor that its Eigen value was 3.42 explained 11.02% of the total variances of the variables. this dimension consisted four items incuding: the principal puts suggestions made by Faculty into operation, The principal listens to and accepts Faculty' suggestions and the Faculty.' opinions will not be used

4- The fourth factor was called the *Cohesiveness& autonomy*. This factor that its Eigen value was 2.86 explained 9.23% of the total variances of the variables. this dimension consisted five items incuding: Transfer request and work absence is below, the Faculty wish to remain in college, the Faculty. are are proud of their college, the principal haven't tendency to Devolution to their subordinates and The principal is impeded by the superiors.
 Cohesiveness refers to a clear sense of identity participants have with the organization. Healthy organizations have members who are attracted to the organization, take pride in their membership, and wish to remain. They are influenced by the organization and exert their influence in a collaborative fashion. In brief, they are proud of the organization and glad they are part of it.

Table 4: The dimensions/ factors extracted and the variables of each factor

factors	variables	Factor loads
Intimacy	there is solidarity between Faculty	0.861
	the Faculty have parties for each other	0.715
	the Faculty are are indifferent to each other	0.611
	the Faculty help and support each other	0.583
Innovativeness	The rules set by the principal are never questioned	0.912
	the Faculty invents new procedures to improving their tasks	0.892
	the Faculty.encoureged to invent new procedures	0.807
	the Faculty fancy to new subjects	0.799
Participating	the principal puts suggestions made by Faculty into operation	0.914
	The principal listens to and accepts Faculty' suggestions	0.888
	the Faculty.' opinions will not be used	0.819

Cohesiveness& autonomy	Transfer request and work absence is below	0.848
	the Faculty wish to remain in college	0.798
	the Faculty. are are proud of their college	0.685
	the principal haven't tendency to Devolution to their subordinates	0.554
	The principal is impeded by the superiors	0.517
Goal path	the Changes has happened without planning and preparation	0.747
	the college goals understandable for the Faculty.	0.711
	the principal schedules the work for the Faculty	0.633
Leadership	the principal encourage Faculty. to harmony	0.865
	the principal is friendly and approachable	0.750
	the principal is exceptionable	0.744
	the principal treats all faculty members as his/ her equal	0.635
Adaption	there is A continuous program to facilitate the changes	0.936
	the Faculty. are compatible with happened changes in methods and strategies of their college	0.814
	College is prepared to accept new viewpoints and strategies for the change	0.788
	All sttaf regarded as the members of one organization	0.758
	there are dissent and discord between Faculty. and principal	0.693
Improvement	There are opportunities for professional development	0.859
	Faculty. feel job security	0.771
	Faculty.' participation in the training courses will be supported	0.644

5- The fifth factor was called the *goal path*. This factor that its Eigen value was 2.75 explained 8.86% of the total variances of the variables. this dimension consisted three items incuding: the changes happened without planning and preparation, the college goals understandable for the Faculty. and the principal schedules the work for the Faculty.

6- The sixth factor was called the *leadership*.this factor that its Eigen value was 2.49 explained 8.01% of the total variances of variables. this dimension consisted four items incuding: the principal encourage Faculty. to harmony, the principal is friendly and approachable, the principal is exceptionable and the principal treats all faculty members as his/ her equal.

7- The seventh factor was called *adaptation factor*. This factor that its Eigen value was 2.02 explained 6.51% of the total variances of the variables. this dimension consisted five items incuding: there is A continuous program to facilitate the changes, the Faculty. are compatible with happened changes in

methods and strategies of their college, All sttaf regarded as the members of one organization and there are dissent and discord between Faculty. and principal.

8- The last factor was called the *improvement factor*. This factor that its Eigen value was 1.59 explained 5.13% of the total variances of the variables. this dimension consisted three items incuding:There are opportunities for professional development, Faculty. feel job security and Faculty.' participation in the training courses will be supported

   As shown in Table 3, the 8 above factors explained 72.12% of the total variance of the research variables. In other words it wasn't explained 27.88% of total variance that pertains to other variables and these portending has not come true in this analysis.

   The data in Table 6 show the relationship between Faculty' personal characteristics and dimensions of OH. The Pearson *r* was selected as the appropriate quantitative measure to determine the relationship between the variables. The result showed that There was a negative relationship between age and some of dimension of OH such as the Intimacy (r= -0.189), the cohesiveness & autonomy (r= -0.0.46), the goal path(r= -0.60) ,the leadership (r= -0.013) and the adaption (r= -0.032) ,but this relations were not significant, but relationship between the participating dimension and age was significant at 5% level (r= -0.22 , p= 0.026). altogether, there was a negative relationship between age and OH but this relation was not significant (r=-0.103, p= 0.315). the relationship between all of dimension of OH and instructional experiences were negative, except the participating dimension (r= -0.210, p= 0.04), this relationships were not significant. Also, The relationship between Faculty' scientific backgrounds and the improvement dimension (r= 0.192, p= 0.007), the Cohesivenes & autonomy dimension (r = 0.297, 0.004) and the innovativeness dimension (0.290, p= 0.004) were significant and positive at 1 % level, also, there was a positive significant relationship between Faculty' scientific backgrounds and the goal path dimension (r= 0.255, p= 0.013) and the adaption dimension (r = 0.253, 0.014) at 5% level. This was similar to Tamimi nejhad (2007). He reported that the relationship between some individual variables such as service record and the type of employment with some aspects of organizational health has been confirmed.

Table 6: Pearson Correlation measures between Faculty' personal characteristics and dimensions of OH

Dimensions of OHs	Age		Instructional experience		Scientific backgrounds	
	r	p	r	p	r	p
Intimacy	-0.189	0.064	-0.152	0.132	-0.045	0.661
innovativeness	0.020	0.843	-0.050	0.628	0.290**	0.004
Participating	-0. 22*	0.026	-0.210*	0.04	-0.090	0.370
Cohesivenes & autonomy	-0.046	0.668	-0.091	0.390	0.297**	0.004
Goal path	-0.60	0.565	-0.097	0.352	0.255*	0.013
Leadership	-0.013	0.890	-0.040	0.691	0.111	0.301
Adaption	-0.032	0.757	-0.028	0.798	0.253*	0.014
Improvement	0.001	0.099	-0.103	0.233	0.192**	0.007
Organizational health (OH)	-0.103	0.315	-0.116	0.111	0.008	0.430

Note. *: p<0.05; **: p<0.01

   As Hoy and Forsyth (1986) we classified these dimension in three levels (table 5). First, the technical level that produces the products. In educational institutes, the technical function is the teaching- learning process teachers and supervisors are responsible for the technical function. Educated student are the products of colleges. Second, the managerial level that mediates and controls efforts the organization. The administrative process is the managerial function. a process that qualitatively different from teaching. And

the final is the institutional level that connect organization with its invironment. It is important for educational institute to have legitimacy and backing in the community.

Table 5: levels of OH

Levels	dimensions
technical	Innovativeness and improvement
managerial	Leadership, participation and intimacy
institutional	Adaption, goal path and Cohesiveness

ISDM[1] formula applied to determining OH levels. As shown in table 8, about 61 percent of faculty belived that technical level was at "low" and "relatively low" status, also about 23 percent belived that it was at "relatively high" status. Findings showed that managerial level in comparison with two other level is more undesirable. Why we can see 71.13 percent of faculty believed that managerial level was in the "low" and "relatively low" While this amount for technical and institutional levels were about 61 percent.

Table 8:faculty's percepective about levels of OH

status	Technical level			Managerial level			Institutional level		
	f	%	Cum %	f	%	Cum%	f	%	Cum%
Low	25	25.77	25.77	31	31.96	31.96	28	28.87	28.87
Relatively low	34	35.05	60.82	38	39.17	71.13	32	32.99	61.86
Relatively high	23	23.71	84.53	18	18.56	89.69	24	24.74	86.6
High	15	15.47	100	10	10.31	100	13	13.40	100

A: Low= min ≤A< mean-St.d, B:Relatively low=mean–St.d≤ B<mean,C:Relatively high=mean≤C< mean +St.d ,D:High= mean +St.d ≤D< max

Tamimi nejhad (2007) findings show that the duties dimension of Shiraz university and Shiraz university of medical sciences were at low level, While in the growth , change and intra-organizational processes dimensions were at middle level.

CONCLUSIONS

The findings of the study supported and confirmed the importance of some personal characteristics on Organizational Health dimensions, hence to enhance OH is required particular attention to improving internal interactions. Relatively compare of OH levels of Iranian agricultural colleges showed that managerial level has less health. Based on research findings can argued that interaction and relationship between administrators and faculty need more attention. Faculty's perspective showed that planning department has need for a participatory management. Faculty members who have more age and scientific background believed that they are given below in decision making. In other word they believed that is not provided conditions for using their experiences and academic abilities. Hence can be claimed that internal communication mechanisms should be designed to form that to provide all members partnership and enjoying their experiences.

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[1] Interval of Standard Diviation from the Mean

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