

## Investigation of Relation between X&Y Theory and A&B Behavioral Models (Case Studies: Mazandaran and Vali-Asr Universities Iran)

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### ABSTRACT

In this paper, one statistical analysis method was used in order to examine the relation between X&Y theories, also between behavioral models A&B in Mazandaran (pardis set) & Vali-a-asr Universities in Iran. The Purposes of this research involve the Investigation of the relation between X&Y theories and behavioral model A&B besides analyzing the relation between factors such as Service experiments, Age, Education document, Country of the received document and Faculty type among the professors of these two universities. After presenting the results of the research, the paper gave some suggestions to motivate the scholars. The research involved all of the professors of the two universities < faculties. The methodology of the research contained using questioner for gathering data & spss software for analyzing them. The results showed that there is a direct correlation of 58% between X theory & behavioral model A. it means that the professors having X attitude in 58% of cases own the behavioral model A. in the same way, the ratio of the correlation between Y attitude & behavioral model B was estimated 27%. In other words, the professors with Y attitude in 27% of the cases showed behavioral model B. Finally, the paper concluded that variables such as service experiments, age, education document, country of received document and faculty type did not influence significantly on the people attitude and their behavioral models.

**KEY WORDS:** X theory, Y theory, A behavioral model, B behavioral model

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### 1. INTRODUCTION

Hathorn experiments which were performed by Elton Mayo, Fritter Zrotlisberger and Dickson in Western Electric Company near Chicago (Illinois) during 1924-1932 was the prologue to the examination of the role of human factor in the work environment. Hathorn studies were began primarily by Dickson in the view of scientific management and in order to improve work pieces and methods and to increase efficiency and evaluate the relationship between clearness and operation; but finally led to the discovery of the common mass theory (generally workers are a mass deserved misery and scorn) by Mayo (Seyyed Javadin,2007,P68). Probably, Mayo's work specially exploring the attitude of common people was a way to two classic and contemporary hypothesis of Doglas McGregor (Hersy & et al, 2000,P62); these two hypothesis were introduced in 1960 (Raofi,1999,P24).

In 1960, Doglass McGregor developed the human aspects of organization (THSE). From the view point of McGregor management is something beyond ordering and compelling the subordinates. Management means creating an exact balance between set needs and individuals' needs (McGregor, 1960). He defined people needs through Mezlo needs hierarchy (Bennis,2000). Along with McGerigor studies, the scientists of social science found many reasons to approve Mezlo ideas (McGregor,1960). Using the idea of needs hierarchy in the work environment, in 1950s, Mc Gregor presented a new theory in management which could dehisce the creativity of American work force and start a new age of management theories. Mazlo gave a new idea about the work environment to McGerigor; an environment in which managers help workers to achieve their needs; such as self-respect and self-dehiscence (McGregor,1960). McGregor believed that most of stimulating theories of management can't help workers to achieve their high level needs. In his opinion, most of the managers behave according to a set of hypotheses which he called classic management or X theory. McGregor has determined these two groups as X and Y to avoid prejudgement of people about them. X attitude assumes that most of people prefer to be guided in such a way that they aren't interested to accept responsibility and more than anything else want to be provided; but attitude Y assumes that people aren't naturally lazy and unreliable. According to this, basically human can be creative and self-ordered, but if he is motivated appropriately (Rezaean,2009,P452). Argeris following answer to this question that why in most work environments management is used in the style of X hypotheses, introduced two value systems: pyramid-bureaucratic (a set equal to the hypotheses of X theory about people) and human- democratic Systems (Moshabki,1999,P142). in this sketch pyramid- bureaucratic value system is called behavioral model A and human-democratic system is called behavioral model B. In behavioral model A, people doesn't disclose their feelings; exact controlling and being regulated are special characteristics of this behavior. In behavioral model B, people are allowed to disclose their feelings, frankness, experiment and helping the others to perform these affairs. Their behaviors are facilitators and have some signs of support with themselves, the result are the norms accompanied by confidence, interest and individuality (Hersy & et al,

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2000, P64). In this article the relationship between X and Y theories and behavioral models A and B among the professors of Mazandaran and Rafsanjan Vali\_a\_sr universities and also between variables of years of service, age, academic document, place of receiving the academic document and the kind of college are investigated. Then X and Y theories and A and B behavioral models are explained. After describing the methodology of the research, the article ends with a summary of results and suggestions.

## **2- x & y theory of Douglas Mcgerigor**

McGerigor in his two-extension idea about human being divided managers deductions, ideas and observations about human in two groups (Rezaean,2009,P452). X theory originally is negative and Y theory is positive. After observing the behavior of managers with workers, he resulted that the point of view of managers about human essence is based on a set of special hypotheses, so they desire to behave with their subordinates based on they hypotheses (Rabins, 2011,P319). Usually, to motivate workers one of the X or Y theories forms their dominant behavior (Moshabki, 1999,P141). Paying attention to the subject in class and merely learning the lesson materials as well as considering the human relationship justify each of the X and Y theorems in the class (Raofi, 1999,P24).

### **1-2 X theory**

X theory assumes that most of people prefer to be guided in such a way that they aren't interested in accepting the responsibility and they want to be provided more. This philosophy accompanies this idea that money, job advantages and threatening to punishment make people motivated. The managers, who accept the hypotheses in X theory, try to shape form their workers' behaviors and to control and supervise them directly. They assume that in managing the behavior of reliable, unresponsive and undeveloped people direct control is completely suitable and necessary (Hersy & et al, 2002,P52).

Considering the hypotheses of X theory, human feels a kind of inherent indifference to work and escape it as soon as possible. This theory has powerful roots. The story of reproaching Adam and Eve for eating the forbidden fruit of knowledge tree and being driven away from paradise to the world in which they should work to live is included. All manager and teacher affairs such as making motivation or allotting reward or vise versa, threat and punishment are because of standing against the desire trend of escaping from work. In conventional classes which are teacher-centered, the teacher allocates the power of decision making to him/her.

Teachers who accept the hypotheses of X theory put the students along with teaching objects using severe calling the role, threat and .... These teachers call themselves as motives and students as responses. The student isn't able to control his/her behaviors consciously and according to his own desire. so, the desirable behavior resulted from their severity will be come some part of the student's personality (Raofi, 1999,P24-26).

### **The hypotheses of X theory are as following:**

- 1-Most of people are inherently lazy and hate to work (Rezaean, 2009,P452).and use any chance to shirk the work (Rabins, 2011,P319).
- 2-Many people aren't ambitious, and are less desirous to accept responsibility and prefer to be guided by others (Hersy & et al, 2000,P63).
- 3-The workers shirk the responsibility and ask for direct orders and guides as soon as possible (Rabins & et al, 2011,P319).
- 4-Most of people have low capability to innovate or to solve the organizational problems (Hersy & et al, 2002,P53).
- 5-To motivate people, pecuniary and economic incentives along with making security are necessary (Rezaean, 2009,P452).
- 6-Most of workers consider security more than anything else (Rabins & et al, 2011,P319).

### **2-2 Y theory**

This theory assumes that people aren't naturally lazy and unreliable. According to this theory, human basically can be creative and self-ordered in his work, if he is invoked appropriately (Hersy & et al, 2002,P53). Integrating purposes of the organization and the individual, is the main component of Y theory. Achievement of these two sets should be sought in the cooperation of organization employees (Moshabki,1999,P142). Managers, who imagine the human nature as that of Y theory, usually don't form, control, and supervise the environment of their workers directly. Instead they help their workers to grow by less outward control so that they can control their tasks more and more. In such an environment workers can be satisfied regarding social needs such as respect and self- finding that is often ignored in work (Hersy & et al, 2002,P53). Management is interested in work and McGerigor believes that work can be natural and as satisfying as game for people. So both work and game are not only physical activities but also regarded as mental activities. Consequently there is no difference between the natures of play and game (Hersy & et al, 2000,P65). The Y theory about human being is used by able teachers who have the ability of perceiving needs and answering them well. The teacher, who believes in Y theory, tries to help the individual to achieve his purposes by making him motivated. So a teacher with such a point view moves completely against X theory (Raofi, 1999,P27).

### **Hypotheses of Y theory include:**

- 1-If the work conditions are desirable, work is a natural affair as game (Hersy & et al, 2000,P63), and under these conditions workers can imagine work as an entertainment (Rabins & et al, 2011,P320).
- 2- People are usually responsible for their work and accept their responsibility desirably (Rezaean,2009,P453).

3-To meet organizational purposes, self - controlling is often necessary (Hersy & et al, 2000,P53).

4- The abilities of creation and innovation in order to decide, are distributed through the society and essentially aren't limited by high authorities of the organization (Rabins & et al, 2011,P320).

5-In fact, inter-satisfaction is the best reward for people and self controlling is better than being controlled by others (Rezaean, 2009,P453).

6- If people have enough and proper motivation, they can be creative in their work and be leaders themselves (Hersy & et al, 2000,P53).

**3- A & B BEHAVIORAL MODEL \_ CRISS ARGRIS**

Seeking an answer to this question that why management is used in the style of hypotheses in X theory in most of work environments, Criss Argeriss introduced two value systems of pyramid- bureaucratic and human-democratic (Moshabki, 1999,P142).In which the first system is called behavioral model A and the second behavioral model B (Hersy & et al, 2000,P64), these two systems are also called development theory and undevelopment theory (Hersy & et al, 2002,P56). Argeriss assumed that the changes uncured from childhood to maturity are connected to each other. And a healthy character is shaped from undevelopment to development (maturity).

Undevelopment (un maturity)	Development (maturity)
Inactive	Active
Dependant	Independent
Behave in one way	Behave in several ways
Superficial and random interests	Deep and stronger interests
Limited time view	Extensive time view
Subordinate and lower position	Equal and better position
Conscious of himself	Un conscious of himself

Table1) Appendix of undevelopment-development

These changes are only general desires but highlight the matter of maturity partially. Cultural and character norms of a mature person prevent his/her complete growth and dehiscence and limit him/her. But as the age rises, there is still the desire to develop. Maybe Argeriss is the first one who claims that a few ones get mature (Hersy & et al, 2002,P56-57).

**3-1 behavioral model A :( pyramid-bureaucratic system)**

Model A presents the behavior between people, group dynamics and organizational norms which Argeriss considered it as related to X theory in his research. In model A people don't show their feelings. Being under the exact control and having much discipline are the properties of this behavior (Hersy & et al, 2000,P64). According to Argeriss idea, following the bureaucratic or pyramid evaluation leads to superficial or unreliable relations. These relations don't allow free and natural display of feelings and cause merit decrease between people.

In pyramid-bureaucratic value system the effectiveness of human relationship increases when the behavior becomes more rational and through and its fast induction; and whatever the behavior is more affectionate, its power reception becomes less and less. The most effective device to motivate human relationship is that while determining the direction of the problem, control authority, the problem of notes and suitable punishments which emphasize rational behavior and achieving the purposes, are clarified too (Moshabki,1999,P142-143).

Argeriss doesn't regard the indifference among the industrial workers and their effortlessness is not merely the result of laziness. In his opinion this is resulted from management (Hersy & et al, 2002,P57-58)

**3-2 behavioral model B (value- democratic system)**

Model B presents the same views which are related to Y theory. In model B people are allowed to show their feelings, frankness, test and helping others to do them. These people behaviors are facilitating, and appear such support which result in norms accompanied by confidence, interest, and individuality (Hersy & et al, 2000,P64). If an organization is a partial to human or democratic values, such correct and reliable relations will be made among people who lead to merit increase among people. In this environment the organization and its members find the chance to develop more and it's tried that becomes work exciting and challenging. In value-democratic system the important relations of human not only are those that relate to the organization purposes, but also those that relate to holding the internal system of the organization and conforming with the environment. The effectiveness of human relations is increased when everyone enjoys the behaviors related to consciousness, ability and control of ability. As the direction of movement, control, notes and punishments affect on the human relationships, the most important factors should be sought among true relations, inner promise, psycho favour and the process of confirmation (Moshabki, 1999,P142-143).

**4-combination of x & y theories with a& b behavioral models**

Model A and Y theory may be accompanied in special conditions as, model B and X theory. BX managers have negative thoughts about people, but it sounds that their behaviors are facility and appear support. BX combination occurs because of two reasons:

1-The reason that though BX managers think of the majority of people as lazy and unreliable, they show a kind of supporting and facilitating behavior, is that they have heard or experienced that such behavior increase the production level.

2-These managers work for people who have created an environment that supports them, so if they want to keep their job should behave in the same manner. YA managers use this leading style because of two reasons: 1- While these managers think that people are self-motivated and mature they try to either they work for people who control them and expect them to behave similarly or they deem such a leading and controlling behavior necessary for a period. The reason for such a behavior is that to control and supervise them. They either work for whom that.

## 5- THE METHODOLOGH OF RESEARCH

The experimental study of this paper was done using a model of 164 professors of colleges in Pardis university of Mazandaran and Vali-a-asr university of Rafsanjan (82 people in each university). In this study data was collected using questionnaires and then was analyzed by SPSS software; finally some suggestions and results were introduced. After gathering questionnaires, data was analyzed by SPSS software in which answers to the questions related to X and Y theories and answers to the questions related to A and B models were separated, then the measures related to the answers to X theory and A behavior model entered into SPSS. Finally the relationship and coordination between X theory and behavioral model B was obtained. The same way is applied on Y theory, behavioral model B and among other variables.

### 1-5-Goals and research questions

The goals of this paper include:

- 1-Evaluating X and Y personal characteristics among professors of Rafsanjan Valiasr University and Mazandaran University.
- 2-Determining A and B behavioral models among professors of Rafsanjan Valiasr University and Mazandaran University.
- 3- Determining the relationship between kind of behavioral model and personal characteristics with external factors.

### 2-5 Research questions include:

- 1-Do the professors by X personal characteristics are included in behavioral model A?
- 2-Do the professors by Y personal characteristics are included in behavioral model B?
- 3- What are the dominant behavioral model and personal characteristics in every college and group?
- 4-What relationship is there among some factors like age, service years, the place of receiving academic document and educational grades with personal characteristics and behavioral models?

### 3-5 Devices of gathering data

After studying literature of the issue and based on research questions, a questionnaire was designed then it distributed among 15 people to get the needed model capacity. The questionnaire included 28 questions and its distribution for attitude and behavioral models comes as the following chart:

Number of questions	View/ behavioral model
6 questions	X view
8 questions	Y view
6 questions	A behavioral model
8 questions	B behavioral model

Table2) the number of questions related to view points and behavioral patterns

To evaluate the credit of measuring devices, Alpha Kronbache method was used. Based on this method and using SPSS software the credit of questionnaire was estimated %69 which is an acceptable permanent coefficient. In the following chart the permanent coefficient of every factor in questionnaire are showed.

The resulted alpha coefficient for every factors	Research factors
0.62	A behavioral model
0.68	B behavioral model
0.69	X view
0.65	Y view

Table3) Reliability of every element in the questionnaire

### 4-5 Description of research variables

The studied variables in this research include: age, service years, education grade, the place of receiving academic document, and kind of college. After studying questionnaire, the extent of X and Y views and also A and B behavioral models and the relation between them, also with age and the work history of professors, kind of college, the place of

receiving document were studied. To determine attitudes and behavior levels, four groups of questions were designed: questions related to X view, questions about Y view, questions about behavioral model A and questions about behavioral model B. To determine the kind of view (X,Y) and behavioral model (A, B), the marks' average of everyone for each of the four models was calculated, and to determine kind of view, X marks were subtracted from Y marks (x-y); If it is a positive amount, the result of dominant view for the person is Y and if it is negative the result of dominant view will be X . For behavioral model, also, a mark were subtracted from b marks (a-b); If it is positive B is considered as the dominant behavioral model and if it is negative, the dominant behavioral model is A.

### 6- RESULTS AND FINDINGS

About the extent of A and B behavioral models and X and Y personal characteristics, studies showed that there is a strong and direct coordination between X and A by %58 and in other words it can be claimed that in %95 credit level, the increase of the extent of X views among professors, has resulted in an increase in the extent of A behavioral model. In other side, there is a significant and direct coordination between Y view and B behavioral model by %27; and it can be said that in %95 credit levels by increasing the extent of Y views among professors, the extent of B behavioral model is increased too. The results showed that service years, age, and academic document of professors and place of receiving document don't have a meaningful effect on their view and behavioral model. Studying view and behavioral model in colleges and several educational groups in Mazandaran University and Rafsanjan Vali\_e\_ar University also showed that kind of college doesn't affect on the view and behavioral model significantly.

Error rate	Significance level	Calculated coordination	Variables
0.01	0.000	0.586	A and X
0.05	0.719	0.70	B and X
0.05	0.276	0.132	A and Y
0.05	0.035	0.271	B and Y

Table4) the results of coordination between X and Y personal models and A and B behavioral models

As it is observed in the above chart, there is no meaningful relation between (X,A) and (Y,B) variables. The extent of these variables in several colleges is observed in the following chart.

Chart1) Dominant conceptual and behavioral models in several college of Mazandaran University

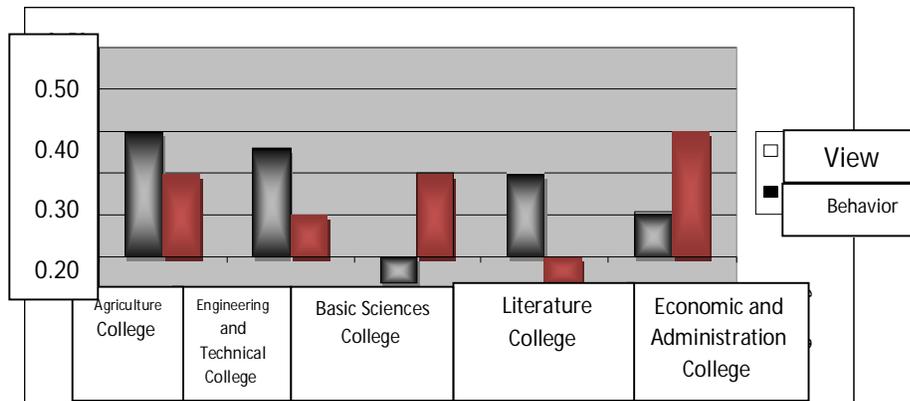
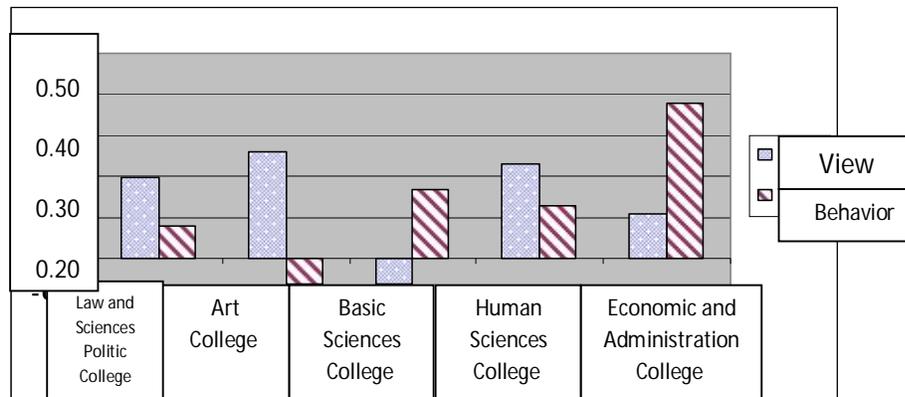


Chart2) Dominant conceptual and behavioral models in several college of Vali-e-Asr University

In the above chart positive levels show B and Y and negative levels show A and X. Regarding this the most rate of Y view is related to the Art college and the least rate of it is related to the Economic and Administrative science college

in Mazandaran university. On the other side, only the basic science college has X view, and only Art college has A behavioral model.

The results of F test which has studied the significance of view differences and view has been shown in the following table.

Studied variables	Freedom degree	Calculated F	Significance level
view	71	.5570	.7570
behavior	61	.5640	.7480

Table5) the results of F test in comparison with view and behavior in colleges

As it is observed, average of the professors' view and behavior has no meaningful difference in each of the colleges. It means that in %95 credit levels it can be claimed that professor's view and behavior is the same in several colleges.

The other variable was the education level of professors, the following chart shows the kind of behavioral model and view in terms of education level (senior expertise and Ph.D).

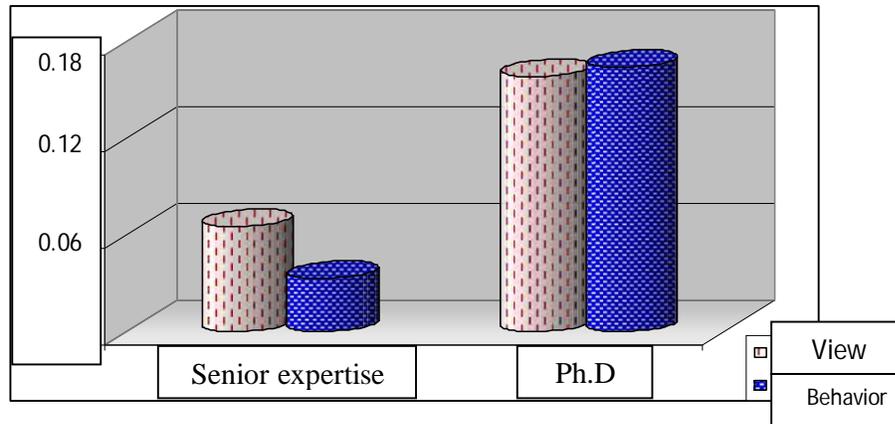


Chart3) Dominant conceptual and behavioral models in senior expertise and Ph.D Professor

As it is observed in the above chart, the view and the behavior of professors are similar in two groups (Y view and B behavior) are similar. The result of the average comparison test between two groups shows that in the field of view and behavior no meaningful difference was observed between senior expertise and Ph.D groups; though the average mark of view and behavior in Ph.D professors is more than that of the senior expertise instructors.

Studied variables	Freedom degree	Calculated t	Significance level
View	70	-0.518	0.606
Behavior	60	-0.924	0.359

Table6) the results of t test in comparing the view and behavior in several education levels

According to the above table in %95 credit level it can be claimed that there is no meaningful difference in the average of view and behavior between Ph.D group and senior expertise group. The other factor studied for its effect on view and behavior was the service years of professors. Its effect on their view and behavior is given in the following chart:

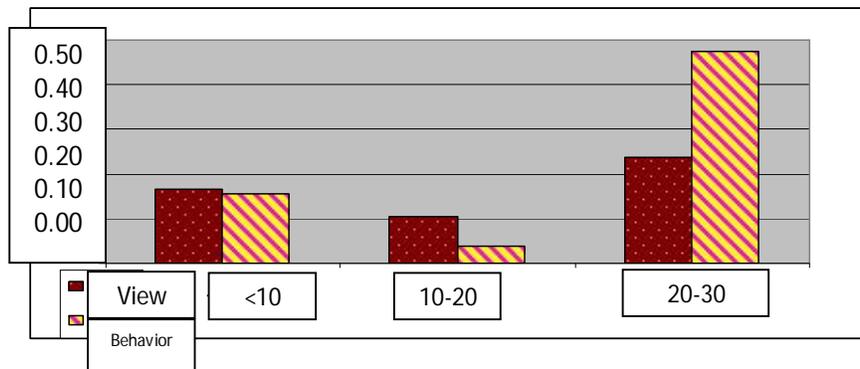


Chart4) Dominant conceptual and behavioral models in different service year.

According to the above chart the view and behavior of professors are similar (Y view and B behavior) in all three groups. The result of F test between these groups show that there is no significant difference between three groups professors with the service years under 10, between 10 and 20, and between 20 and 30, in the field of view and

behavior; though the average mark of professors' view and behavior by 20 to 30 service years was the most among others.

Studied variables	Freedom degree	Calculated F	Significance level
View	66	0.17	0.844
Behavior	57	0.813	0.449

Table7) the results of F test in comparing view and behavior in service years

According to table 7, with the credit level of 95% it can be said that the average of view and behavior among the professors with service years less than 10, between 10 to 20 years and 20 to 30, does not differ significantly. Another variable studied was the age of the professors. This variable influence on the kind of view and behavior has been brought in the following chart:

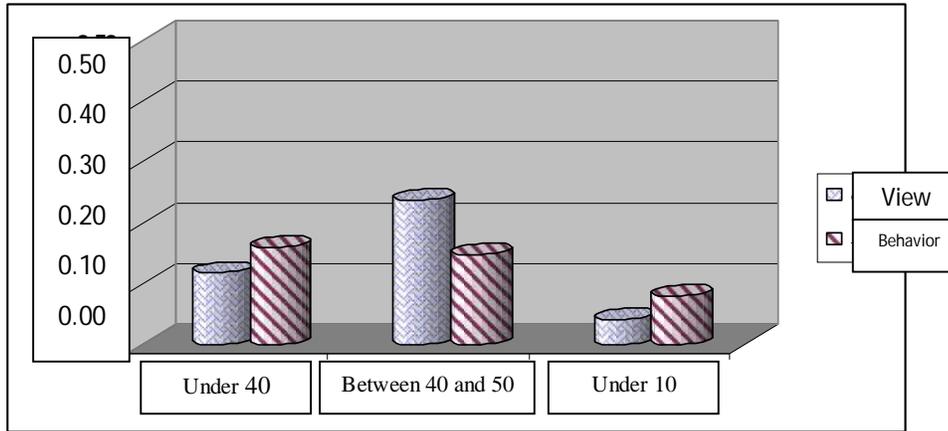


Chart5) Dominant conceptual and behavioral models in levels different ages.

In the above chart the professors in all three age groups have had similar view and behavior (Y view and B behavior). In other side the extent of X view between ages of 40 and 50 was more and in the ages above 50 was less. The result of F test among these three groups shows that there is no meaningful difference between them (under 40, between 40 and 50, above 50) concerning view and behavior. The results of coordination test also approve this finding in such away that there is no significant relation between professors' ages and their views and behaviors.

Studied variables	Freedom degree	Calculated F	Significance level
View	60	0.461	0,633
Behavior	55	0,551	0,58

Table8) Results of F test in comparing age groups.

Another variable which was examined regarding its influence on the professors's views and behaviors was the place of reciving their academic document(within or out of country). The effect of this variable has come in the following chart:

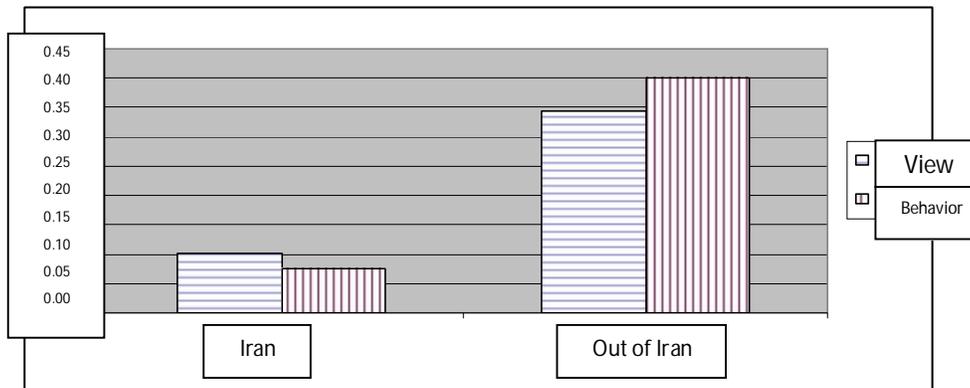


Chart6) Dominant conceptual and behavioral models based on the place of academic document

According to the above chart, both groups had the view and behavior similar to(Y view and B behavior); but the extent of this kind of view and behavior was more between the professors who received their academic document out of Iran. The result of average comparison test between two groups shows that there is no significant difference between two groups in the field of view and behavior (table 9).

Studied variables	Freedom degree	Calculated t	Significance level
View	68	-1.503	0.138
Behavior	59	-1.657	0.103

Table9) Results of F test in comparing different age groups.

## 7- RESULTS AND SUGGESTIONS

In this paper one statistical method has been presented to examine the relation between X and Y views and A and B behavioral models. At first library studies were done then a questionnaire related to the collected literature was provided. The questionnaire was primarily answered by 15 professors to obtain the size of model. The statistical society includes more than 210 professors (the members of scientific missions in two universities) and the size of the studied model was 164 professors. After providing information, data was analyzed by SPSS software. The results showed the positive relation between X and Y views and A and B behavioral models. This result was expected regarding research literature. In addition, we examined the relation between X and Y views and A and B behavioral models with other variables like service years, age, academic document, place of receiving document and kind of college that at last no meaningful relation between these variables, views and behavioral models was found. After analyzing data by SPSS software, changes of views and behavioral models based on each of the above variables were shown in single charts. Studying these charts can give beneficial information about views and ideas of the professors. For example, regarding chart 1 the highest level of Y view was in Art College but in the other side, only these colleges tended to the behavior model A. Examining these subjects in colleges and determining optimum and effective models for the behavior can have an important role in improving the output of the universities. To suggest for future research one can evaluate the operation of different colleges and determine both the efficiency of them and the relation between the efficiency of every college and the kind of its behavioral model. Using this method the exploration of the effective models of view and behavior proportionate to every college will be possible.

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