



Contents lists is available online

International Journal of Applied Science in Physical Education

Journal Homepage : [www.ijaspe.com](http://www.ijaspe.com)

## Investigating the Characteristics of the Chaos Order System in the General

### Department of Sports and Youth of West Azerbaijan Province

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#### Keywords

Chaos Order Organization  
Edge of Disorder  
Sports Organization  
Complexity

#### Abstract

The chaos order system includes systems that while showing disorderly they have a regular order and the activities that are done in these systems are all between order and disorder. Managers to balance these organizations must be so powerful to well perceive the conditions that the organization have and act very intelligent. The management of such organizations will be through in-company training and the acquired growth. In this paper it is try to investigate the characteristics of the organization of chaos order (acceptance of innovation, interconnectedness, uncertainty, non-linearity, unexpected events, disorderly structure, and the attraction of powerful employees) at the General Office of Sports and Youth of West Azerbaijan Province. For this purpose, the questionnaire of the characteristics of chaos order system of Ghorban-Zadeh and Arab was used with acceptable validity and reliability, which was designed to examine the concepts and characteristics of chaos order system. The statistical population of this study was all employees of the General Directorate of Sports and Youth of West Azerbaijan province, which were 89 individuals (the sample equals to the population). In this research, one-sample t-test was used to examine each of the hypotheses. According to the results of the research and according to the results of the T-chart, it is concluded that the General Department of Sports and Youth of West Azerbaijan has the characteristics of chaos order system.

## 1. Introduction

Chaordic Organization is a new approach recently introduced in the management of organizations. The word of chaos order, consists of two words of order and chaos, is derived from the theory of chaos and complexity (1). The word of chaos, turmoil, confusion and chaos which basically derived from a Greek word and originally means an empty and unformed space. However, in modern applications, this term is used to express the state of disorder and turmoil, disorder, chaos, disorientation and disturbances (2). For the first time Dee Hock the founder of VISA Company, used the word of chaos. The simplest example for the chaos-order system is a healthy as well as in a wider range the VISA company and Internet are significant samples of chaos-order organizations (3). Chaos-order indicates a subject that all the behaviors and acts of various phenomena including physical and psychological phenomena that appear to be irregular, all have a final order. In fact, there is an order within an irregularity and also there is regularity within an irregularity (4). The chaos-order organization is a system in which there is no repetitive activity, that is, nothing is done twice, but the existing order prevents complete collapse and chaos (5). In these organizations, in fact a machine-driven, predetermined plan is not applicable, but it also has a regular pattern (6).

The chaos-order organization is a complex, dynamic and adaptive system that is located in an

irregular environment and requires a clever management style (5) and it must be completed through capabilities such as organizing and fundamental changes. These organizations are not limited to financial activities and appear in various areas of social, educational, economic, cultural, etc., and they associate individuals of different organizations (3). Organizations that are constantly exposed to constant changes and there are chaotic and overwhelming conditions in them are sports organizations that deal with various factors such as government, private sector, sponsors, athletes, coaches, fans, and sports fans and so on and most importantly, the social, political, and cultural factors affecting these organizations results that they constantly be in the turbulent environment (7). In recent decades, the sports organizations managers, have encountered difficulties to effectively managing the under supervised organizations. The commercialization of sports, raising the level of community awareness and raising expectations of athletes and participants in sporting events, global developments, increasing sports spending and budget deficits and state-sponsored regulations (8), all refer to the fact that the conditions governing sport organizations, and at the head of the provincial youth sports and youth departments, which is the largest sports organization in each province, are dynamic and variable conditions, and organizations operating in such an environment, instead of trying to achieve a constant equilibrium, they have to put themselves in a zone of limited instability, so that straw the

time and money costs will be greatly appreciated. Organizations, especially sports organizations, should welcome the turbulence and chaos in the environment as a friend (9). This means that, they must find the characteristics of their supervisory organization in order to be able to compete with competing organizations (1). Characteristics such as interconnectedness, uncertainty, organizational vigilance, diversity of states, emergence are the characteristics of chaos-order system that manages to achieve them need to be cunning and logical (10). In the Iranian organizations little studies are done about the characteristics of chaos-order system. Among the few researches carried out on this subject, is the study of Ghorbanzadeh and Arab (2010), according to this study, seven characteristics have been recognized by the overseas organizations in Iranian organizations: acceptance of innovation, interconnection, Uncertainty, non-linearity, unexpectedness, unstructured structure, and the attraction of powerful employees (1).

Also, Mirza Zadeh et al. (2014), examined the chaotic management factors in sports organizations based on the model of chaos theory that they announced four factors of staff ability, organizational structure, managerial skill and atmosphere and organizational climate as a source of chaos management in sports organizations. However, the two factors of staff structure and empowerment must be paid attention in order to improve and develop the management of the chaos of sports organizations (11).

Dargahi et al. (2016), also in a research entitled Quantum Management, a Poison Management; A Review study on the framework of the laboratory management system describes the characteristics of chaos organizations that managers need to consider, including dynamism, organizational intelligence, critique, process and teamwork, learner organization, mastery over leverage points, and stability and volatility management simultaneously (12).

Raiden & Dainty (2006), in a study, concluded that discontinuous growth, organizational vigilance, interconnectivity, flexibility, continuous transformation, and self-organizing constitute the characteristics of a chaos-order organization (13). In another study conducted by Nicholas and Vasilius (2013), the readiness for change, persistence of chaos, ability to change, empowered and evolving forces has been introduced by the regulatory agencies (14). Marwan et al. (2016) also presented the characteristics of interconnectivity, organizational learning, interaction, complexity, and innovation for the chaos-order organizations (15).

In this research, seven characteristics of the chaos-order organization in Iranian organizations are examined that are the result of the investigation of the Ghorbanzadeh and Arab (2010). Regarding the features mentioned for the law enforcement agency and the fact that sports organizations are always subject to changes due to the rapid and unpredictable developments that occur in the organization's interior and exterior,

(7), the examination of the presence of any of these features in sports organizations seems necessary, in order that if these features are available, sports organizations will be designed in a custom manner and within their framework mechanisms such as self-organizing, self-referral and self-reliance will be used to management of these complex situations be occurred in a better and more coherent way. The available researches in the field of order-chaos system has often been conducted in non-sports and industrial sectors, and few sports studies have been carried out at clubs and private organizations and manufacturing units, but the review of the characteristics of the chaos-order organization in the government organization is also important, because the results and achievements of government agencies are interesting and admirable. It is clear that the success rate of these organizations is a remarkable figure (approximately 20%) compared to their counterparts in implementing transformational measures (Karzoun et al., 2012). Physical education departments of provinces and cities are public organizations and their structures, processes, and budgets are different from private organizations and sectors in the field of sport, so these organizations can be transformed into dynamic organizations (7). The main issue in the present study is the identification of the characteristics of the chaos-order organization in the General Office of Sports and Youth of West Azerbaijan province, which provides useful information to the various departments in the General Directorate, including the employees,

managers and the environment in which the organization operates. The officials and people who play a key role in the organization's decisions make it more effective and efficient to have an accurate understanding of the current situation, and the image of their future. Examining and identifying the characteristics of the chaos-order organization at the General Directorate of Sports and Youth in West Azerbaijan province will make the organization aware of the changes in the environment and use them in their favor. Sports organizations that are always in turbulent and competitive environments and managers of these organizations must be capable to properly identify their organization's characteristics in order to maintain their competitive edge, and have smart decisions in critical situations. Now, the era of budget-driven management, which called for operational funds to be able to carry out activities has been over, today few executives are successful in the field of competitions and disadvantages and scarcity who are found the secret of, the few to the many (4). Managers must recognize that a successful organization is a non-linear dynamic response system that operates in the boundary of disturbance, and through self-organization that is a feature of chaos-order systems, makes an active adaptability in the functional fields of the organization and its internal sub-systems and its external interactions. Therefore, this research attempts to investigate this relatively new concept at the General Directorate of Sports and Youth of West Azerbaijan, as a sports career in one of the

prone provinces, and has the potential of manpower and empowerment.

## 2. Materials & Method

This article is a result of a research that is a type of developmental purpose and is descriptive. The method of collecting data is a field approach, for this purpose, the questionnaire of characteristics of chaos-order of Ghorbanizadeh and Arabs (2010) have been used. The content validity method was used to measure the validity of the questionnaire and its reliability was measured using Cronbach's alpha, the calculated alpha value is 0.76 and is acceptable. The statistical population of the research is all employees of the General Directorate of Sports and Youth of West Azerbaijan Province, all of which were 89 employees and managers (community equal to the sample). In this research, 20 items related to the characteristics of the chaos-order organization were reviewed and the views of managers, experts and consultants about the amount of variables were collected at the General Office of Sports and Youth of Azerbaijan Province. In this research, the Kolmogorov Smirnov test was used in order to check the normality of the data. According to the normality of the distribution, one-sample t-test was used to test the hypotheses and descriptive statistics including mean, standard deviation. The SPSS 22 software was used and the questionnaires were completed by all employees of the General Department of Sports and Youth of West Azerbaijan Province.

## 3. Results

In order to verify the normality of the data, Kolmogorov Smirnov test was used that according to Table 1, in the variables studied, the significance level is more than 0.05, which assumes that the data are inaccurate. Therefore, the data have normal distribution as can be seen in Table 2, the average of respondents to questions related to the variables of innovation, coherence, unstructured structure, uncertainty, non-linearity, unexpectedness, the mean theoretical value (3 middle responses”) is higher, but the variable of the absorption of empowered employees was lower than the average theoretical value. As well as other results, the table shows that the variables of cohesion and unstructured structure are statistically significant, but in the variables of innovation, uncertainty, non-linearity, uncertainty, was not significant.

According to the results of Table 3 and the available evidence, we conclude that the degree of realization of the characteristics of the chaos-order organization in the General Department of Sports and Youth of West Azerbaijan Province is desirable and is more than the average of the community and statistically is meaningful.

**Table1.** The results of Kolmogorov Smirnov test.

Variable	Kolmogorov Smirnov statistics	The decision criterion
Innovation	0.846	0.471
Interconnectedness	0.874	0.430
Uncertainty	1.13	0.156
Non-linearity	1.06	0.209
Unpredictability	0.725	0.534
Uneven structure	0.931	0.364
Attracting capable staff	1.87	0.107
The features of chaos-order organization	1.01	0.288

**Table2.** Descriptive statistics indexes and one sample t related to the research hypotheses.

Variable/index	Count	T	Mean	DE from mean	SD	Mean difference	Significance
Innovation	89	0.91	3.12	0.13	1.23	0.12	0.363
Interconnectedness	89	7.01	3.42	0.06	0.56	0.42	0.001
Uncertainty	89	0.56	3.08	0.14	1.33	0.08	0.579
Non-linearity	89	0.59	3.06	0.11	1.01	0.06	0.56
Unpredictability	89	1.49	3.16	0.11	0.99	0.16	0.14
Uneven structure	89	6.40	3.54	0.09	0.80	0.54	0.001
Attracting capable staff	89	-0.54	2.95	0.09	0.89	-0.05	0.59

**Table 3.** Descriptive statistics indexes and one sample t of the main hypothesis.

Variable/index	Count	T	Mean	DE from mean	SD	Mean difference	Significance
Characteristics of a chaos-order organization	89	3.83	3.19	0.001	0.19	0.47	0.05

#### 4. Discussion

Today in our country, the Ministry of Sports and Youth, is the highest authority in dealing with sports and youth issues and is considered as the main trustee of the country's sport and the youth and sport ministries in the provinces are also under the supervision of the ministry at the provincial level, which have a very important role in the country's sport, and improvement the performance of these offices leads to more progress in the sports of our country (16). Sports and youth departments of the provinces have different sports facilities and different culture and tastes. The events that take place in these organizations are so complex and dynamic that they seem to be chaotic, but in fact have an underlying order, and this is the order that this hidden order has been identified by the definition of the dimensions of the organization (17). Organizations in such a dynamic environment must recognize their capabilities in order to manage their capabilities appropriately and design a flexible structure for unpredictable conditions so that to find a new way to achieve organizational goals in a chaotic situation (18). The findings of this study which are obtained using one sample test showed that in the General Directorate of Sports and Youth of West Azerbaijan province, the innovation feature exists with an average of 3.12 and a standard deviation of 1.32.  $T$  is 0.91, the significance is 0.363 and the mean difference is 1.26, As a result, the feature of innovation at the General Directorate of Sports and Youth of West

Azerbaijan Province is in a favorable position but have no statistically significant difference with the mean of community. This is consistent with the findings of Mirzazadeh et al. (2014), Ghorbanid Zadeh and Arab (2010), Ryan and Denty (2006), and Marwan et al. (2016). This feature of the chaos-order organization states that despite the fact that there is no way to consider a specific career path for these organizations, but because the use of new technologies is a necessity for this organization, there is a need for more creative and innovative people and more likely to reach the goals of the organization than other employees (1). Innovation is an important factor in the success and competitive advantage of organizations (5). Shaykh Ali Zadeh and colleagues suggest that in the sports organizations must be created an environment in order to develop new ideas for managers and staff, and using innovative managers in the organization, cause significant changes in the educational institutions in the Physical exercise and sport offices (19). Regarding this finding, it can be said that the Sports and Youth Department of West Azerbaijan, which has an innovative character, should try to strengthen this important feature in order to achieve a distinct competitive advantage over its competitors, and surpass its rivals based on the dynamics and development which it has. Strengthening innovation in this organization by creating opportunities for the environment and attracting creative and innovative staff is possible through the creation of these individuals; it is possible to plan the necessary health and sports

competitions nationally and internationally. Also, based on the findings of this study, there is a feature of coherence attribute of the General Directorate of Sports and Youth of West Azerbaijan province with a mean of 3.42 and standard deviation of 0.56.  $T$  is 7.01, its significance is 0.001 and the mean difference is 0.42. As a result, the coherence attribute in the General Office of Sports and Youth of West Azerbaijan Province is in the optimum level and has a statistically significant difference with the mean of society. The results in this section are consistent with the findings of Ghorbanzadeh and Arabi (2010), Dorkhey et al. (2016), Ryan and Denty (2006), and Marwan et al. (2013). The feature of the chaos-order systems, even though it is an independent system, considers a section and the subdivision of a larger system of itself.

The components of each system are dependent on that system, and without this dependency, there is no possibility of component life, and a comprehensive system cannot exist independently from its members. Each part of a system can be considered as a whole, although it is also part of a larger whole (17). In other words, individuals and different parts of an organization, while being a whole system, interact with each other with the right tools and form a larger whole system (1). As a result, sport and youth departments of the provinces are recommended to pay a special attention to the characteristics of interconnection and interaction of the components by minimizing the boundaries and sectors in their organization,

because the provincial departments of sport organizations are organizations that cannot achieve their goals, lonely, and in fact they are as a part of the chain to achieve their main mission, which is the development of health in the community and the development of sports heroes, and as a mediator between the level of exercise strategic planning is considered and should always communicate effectively with upstream and downstream levels.

Another result of this study is that, there is uncertainty in the General Office of Sports and Youth of West Azerbaijan province with an average of 3.8 and a standard deviation of 1.33.  $T$  is 0.56, its significance is 579.0 and the average is 0.08. As a result, the uncertainty in the General Office of Sports and Youth of West Azerbaijan province is in a good position, but has no statistically significant difference in terms of statistics. These finding are consistent with the results of Dargahi et al. (2016), Mirza Zadeh et al. (2014), Ghorbanzadeh and Arab (2010), Ridan and Danti (2006). According to the uncertainty feature the program oriented of the organization is not appropriate, because the future is ambiguous and cannot be accurately identified, so it should be flexible in all aspects of the organization and must be ready for any change instead of long planning duration and constant readiness (6). In the chaos-order organizations, as the future is unpredictable, the plan may not be able to meet the desired results (1). As a result, the organization needs to be prepared to welcome change, rather than

focusing on planning for change (13). The managers of sport organizations by increasing oral communication between staff and high risk-taking can increase the attention to the uncertainty element in their organizations. When the environment is constantly changing, it's no longer possible to manage the organization with traditional methods. As a result, provincial sports departments need to accept change as an inevitable necessity, given the presence of a dynamic environment, and as a separate section and consider as an integral part of their organization and this culture is institutionalized among the employees of the organization in order to increase the power of adaptation to changes and the existence of developments does not prevent the organization from achieving its goals.

Another part of the results of this study is that the nonlinearity feature in the Sports and Youth Department of West Azerbaijan province has a mean of 3.6 and a standard deviation of 1.01. T is equal to 0.59, its significance is 0.56 and the mean difference is 0.06. As a result, the degree of realization of non-linearity in the General Office of Sports and Youth of West Azerbaijan province is desirable but, there is no statistically significant difference with the mean of society. These findings are also consistent with the findings of the Ghorbanizadeh and Arab (2010). The nonlinearity feature refers to the fact that an effect can have different causes. So the right to choose is quite probable. A nonlinear system can be much more than the sum of its components. Nonlinear

systems create neither behavior that are neither fixed nor unstable (stable in instability), they are continually new and creative (20). This attribute shows that the organization does not comply with procedures that were in the past, and that employees' responsibilities are not necessarily equal to their authority, and that there is no correlation between them, employees have the right to exercise their responsibilities, payments do not follow much performance, a feature of traditional organizations that unity of management is less common in this system, and administrators should spend a lot of time studying technical content so that they can master the existing conditions (21). This feature, which denies the limitations of traditional organizations such as management unity or the insistence on following a particular method for achieving goals, promotes results far better in an organization and among its employees and will be more valuable. Therefore, sports managers can increase the level of organizational development by increasing their studies in their technical and organizational contexts, and by giving them more responsibility for the staff, of course, develop the non-linearity and the consequent organizational development.

The presence of the unexpected attribute in the General Office of Sports and Youth of West Azerbaijan Province is another result of this research. According, the unexpected attribute of the general department of sports and youth of West Azerbaijan Province is with an average of 1.39 and standard deviations of 0.99. t is 1.49, its

significance is 0.14 and the mean difference is 0.16. As a result, the degree of realization of the unexpected attribute in the General Office of Sports and Youth of West Azerbaijan province is in the optimum level but has no statistically significant difference with the mean of society. These findings are consistent with the results of Mirza Zadeh et al. (2014), Ghorbanizadeh and Arab (2010) and Nicholas and Asilaus (2013). The attribute of unpredictable is related to unusual issues that may occur for the organization. Severe changes, irregular behaviors, unpredictable changes, critical movements, all lend up with a pattern that finding it is an art management (4). In these organizations, because of the unusual and unpredictable issues of managers, they have to spend a lot of time co-coordinating individuals and solving problems in the organization (1). Abnormal and unexpected events that can occur at any time in the environment and sports organizations, such as economic changes and the impact on athletes, laws and changes in international organizations governing sport, political change, etc. requires sports managers to be prepared to deal with all these changes as well as how to resolve them and manage all organizational resources. In order to have such readiness, managers of sports organizations are encouraged to spend sufficient training and spend enough time to coordinate people who work together and report each other.

Another feature of the study, which the results of research confirmed the existence of it in the

Sports and Youth Department of West Azerbaijan Province, is the characteristic of the unevenly structure, which according to the findings revealed the unstructured structure of the General Office of Sports and Youth of West Azerbaijan province with an average of 3.44 And the standard deviation is 0.80. T is 6.40, its significance is 0.001 and the mean difference is 0.54. As a result, the degree of realization of the unevenly structure at the General Directorate of Sports and Youth of West Azerbaijan province is in the optimum level and has a statistically significant difference with the mean of society. This result is also consistent with the findings of Mirza Zadeh et al. (2014) and Qorban Zadeh and Arab (2010). Based on the features of unevenly structure, the hierarchical structure of the traditional organizations is confused and that each employee must be responsive to a manager, and each employee may simultaneously be responsible for several managers. Managers also, in order to create more coordination between units have to spend more time on meetings (1). The existence of cumbersome rules in hierarchical organizations, in addition to being an obstacle to the full and proper implementation of activities in organizations and sports events, can be a factor in preventing creativity in employees and their lack of expression. Exercise and sporting environments that always carry on with dynamism and aggressiveness do not achieve desirable results under the formal and impersonal systems, so it is suggested to managers of sports organizations not to conform to the structure of traditional hierarchy

and by holding numerous and long meetings with staff to pay more attention to the unstructured structure of the unit for further coordination in the units.

However, the lack of the capability of attracting qualified staff at the General Office of Sports and Youth in West Azerbaijan province is another finding based on the results of this study that shows the attraction of capable staff at the General Office of Sports and Youth of West Azerbaijan province with a mean of 2.95 and standard deviation 0.89.  $T$  is equal to -0.54, its significance is 0.59 and the mean difference is -0.05. As a result, the recruitment of capable staff at the General Directorate of Sports and Youth of West Azerbaijan Province is lower than the average of the community but is not statistically different from the average of the community. These findings are not consistent with the results of Mirza Zadeh et al. (2014), Ghorbani Zadeh and Arab (2010), and Nicholas and Asilaus (2013).

The structure of the chaos-order organization is constantly changing due to its characteristics, such as interconnectedness, uncertainty, non-linearity, acceptance of innovation and, accordingly, some of the jobs that were formerly in the organization may be eliminated and other businesses replaced. Therefore, the attraction of human resources to these occupations is based on the competencies and capabilities of the organization, and equal opportunity is available to all applicants in order to respect the merits and select the right people, (1). As a result, it is

recommended to the managers of sport organizations should be in a position to work because of the fact that in these types of organizations, manpower is subject to psychological stress and stress in terms of specific organizational features and type of work, and conflicts and contradictions among them there are many, sports organization managers should be engaged in recruiting human resources based on the competencies and capabilities of the organization, and to give all applicants the right to equal opportunity.

However, in reviewing the chaos-order of the General Directorate of Sports and Youth of West Azerbaijan Province, it was observed that all seven characteristics of the chaos-order organization at the General Directorate of Sports and Youth of West Azerbaijan province with a mean of 19.3 and a standard deviation of 0.47.  $T$  is 3.83, its significance is 0.001 and the mean difference is 0.19. As a result, the degree of realization of the characteristics of the chaos-order organization in the General Directorate of Sports and Youth of West Azerbaijan Province is in a favorable position and is more than the average of the society and has a statistically significant difference with the mean of society. As a result, the General Directorate has the characteristics of the chaos-order organizations and is considered as a chaos-order authority. It should be noted that the results of this study are consistent with the findings of Mirza Zadeh et al. (2014) (11). Regarding the above, managers of sports

organizations should provide the readiness of the organization with the institutionalization of more dimensions of the culture of the chaos-order systems in the organization, for self-organization, creativity and innovation, continuous learning and all-around, team-oriented process-driven activities creative environment, identifying critical points and levers, etc. (21). Based on the results of this research, the General Directorate of Sports and Youth of West Azerbaijan has the characteristics of a chaos-order organization and is in fact considered as an oversight organization. With these interpretations for the management of this organization, methods should be developed. The traditional management is to be abandoned and managed on the basis of the characteristics of innovation, interconnectivity, unstructured structure, non-dependence, uncertainty, non-linearity, and recruitment of employees. Regarding the proximity of West Azerbaijan province with Turkey and the interaction of the General Office of Sports and Youth of this province with sports organizations of abroad and also the offices inside the country, the association with government agencies and other sports organizations, sponsors, political affairs, cultural and has made the organization a dynamic and changing environment and requires a management with the program and its specific characteristics. As a result, in order to maintain excellence, competitive advantage and success in its organizational mission, which promotes the health of the community and the development of professional athletes in various fields of sport, it

must by take advantage of the benefits of chaos-order system, strengthen its performance. Based on the findings of this study, it is suggested that managers of sport organizations in general and administrators of sport departments of the provinces, in particular with a new and dynamic attitude, adapt their mental models to the conditions and characteristics chaotic systems change in that they will be able to differentiate the entire world of organizations with its past, rather than follow the old principles of their activities based on the assumptions that represent the models far away from stable and dynamic equilibrium, because managers, using these creative and dynamic models, can upgrade their ability to face unpredictable future and phenomena with nonlinear relationships.

## 5. Acknowledgments

I am very thankful to all the staff and managers of the West Azerbaijan Department of Sports and Youth who have made this research work as good as possible.

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