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The systemic thinking of heads of sports federations for team sports from the point of view of its members

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Abstract

By assessing the systemic thinking of the heads of sports federations in the governorates of the Middle Euphrates, the research was important for identifying the strengths and weaknesses in the federations' performance and work, which contributes to the development of sports work there and benefits our national sport as a whole.

As the following questions (What is the actuality of the systemic thinking enjoyed by the leaders of sports federations in the governorates of the Middle Euphrates, which qualifies them to take the helm of administration there?) demonstrate, the research problem is represented by these questions. And what exactly distinguishes the leaders of the sports federations in the governorates along the Middle Euphrates' levels of competition?

From the above, the researcher identified the objectives of the research in preparing a measure of systemic thinking among the heads of sports federations in the governorates of the Middle Euphrates to identify their levels of systemic thinking and according to the point of view of the members of those federations. Also, identifying the nature of the differences between the levels of sports federations among the heads of sports federations in the governorates of the Middle Euphrates. Through the results reached by the researcher, the most important conclusions were that sports work works to develop the level of systemic thinking among heads of sports federations. The level of systemic thinking possessed by presidents has an impact on increasing and developing their systemic thinking in their sports work. Thus, the researcher recommends training federation presidents to develop systemic thinking skills and use them in their sports work to develop and increase thinking in their work and to benefit from the systemic thinking scale prepared by the researcher in evaluating other sports federation presidents.

Keywords: Systemic thinking, sports federations

1. Introduction

Due to the mutual effect of sport and other social forces on the one hand, and various governments, institutions, and organizations on the other, sport is one of the most significant humanitarian activity that has garnered attention.

The organizational structure in charge of overseeing sports activities throughout all of Iraq's governorates takes the shape of sports federations. The sports federation is a social and administrative organization that contains several human groups inside it, including the sports organization and its members, as well as the coaches, players, and referees that sign up under this designation. And physical resources, such as sports facilities and others that help federations run smoothly. Each sports federation has a president at the top of the sports hierarchy who is directly in charge of managing the work of the organization by setting goals that must be accomplished through planned and organized work, as well as by making decisions that guarantee the success of the established plans, coordination, follow-up, and evaluation. As a result, the Federation President's high levels of sporting proficiency have an impact on the Federation's performance in one way or another in order to raise the caliber of the event it sponsors and raise it in order to perform its role mandated by the federations in the process of promoting team sports at the national level. The process of assessing the systemic thinking of the leaders of the sports federations in the governorates of the Middle Euphrates plays a significant role in identifying the accomplishments and areas for improvement of the federations, which helps to advance sports work there and subsequently has a positive impact on our national sport as a whole.

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1.2 Research Problem

The research problem emerges through the following questions:

- How realistic is the systemic thinking that the leaders of sports federations in the Middle Euphrates governorates possess, and how does it qualify them to oversee administration there?
- How do the leaders of the sports federations in the Middle Euphrates governorates differ from one another in terms of their levels of competition?

1.3 Research objectives

- Preparing a systematic thinking assessment among Middle Euphrates governorates' head of sports federations from the perspective of its constituents.
- Determining the degrees of systemic thinking among the leaders of sports federations in the governorates of the Middle Euphrates from the perspective of their constituents.
- Determining the nature of the disparities in sports federation levels across the governorates along the Middle Euphrates' governorates

1.4 Research hypotheses

- In the governorates of the Middle Euphrates, there are no disparities in the degrees of systemic thinking among the leaders of sports federations.

1.5 Research field

- **Human field:** Heads of sports federations in the governorates of the Middle Euphrates for the 2022-2023 sports season.
- **Spatial field:** Headquarters of sports federations in the governorates of the Middle Euphrates.
- **Time field:** For the period from 10/1/2022 until 29/6/2022.

1.6 Definition of terms

First: Systems thinking:

- Obaid and Afaneh (2003) [3] Systemic thinking is "thinking that focuses on complex scientific contents through integrated systems in which all relationships between concepts and topics become clear, which makes the learner or (the manager) able to perceive the overall picture of the contents of the systems presented to him" (Afana and Nashwan, 2004. p. 6) [2].
- McNamara (2006) [6] defines it as a means to help the individual see the system from a broad perspective that includes a broad structure of the structures that make up the system and its various patterns. (Al-Fail, 2011. p. 3) [1].

2. Field research procedures

2.1 Research methodology

The researcher used the descriptive method in conducting this research because it is the appropriate method for its objectives and nature.

2.2 Research community

The current research community consisted of the heads of sports federations in the Middle Euphrates region, who numbered (231) members (68) from Babylon, (57) from Holy Karbala, (50) from Najaf Al-Ashraf, and (56) from Diwaniyah. They are members of the sports federations that it is staffed by members of the research community.

2.3 Research sample

Psychometrics literature indicates the necessity of following sound scientific foundations to select a sample representative of the research community. The most important of these foundations are:

- Identifying the original community.
- Determine the research objectives.
- Preparing a list of the number of members of the original community. The researcher obtained a list of the complete numbers of sports federations from the Statistics Department by obtaining a representative and sufficient sample to represent the original community with its characteristics that the researcher wants to study.

The basic research sample, which numbered (100) members from the research community, which numbered (232) members, was chosen randomly for the unions and intentionally for the unions, as they constitute a percentage of (43%) of the original research community.

2.4 Search tools

The researcher prepared the systemic thinking scale prepared by (Dolansky & Moore 2013) [7] to measure the level of quality of work in sports institutions. The researcher used the statistical package (SPSS) to process the statistical data. Below is a presentation of the steps for preparing the three tools:

2.5 Preparing the systems thinking scale

The researcher did not find a measure of systems thinking that suits the nature of the research sample and achieves its objectives. Therefore, he chose the systems thinking scale prepared by (Dolansky & Moore 2013) [7] to improve the quality of work in sports institutions. The systemic thinking scale consists of (4) four areas. For the first area (the president of the federation and the problems of sports work) (13) items, for the second (the president of the federation and the federation's laws and regulations) (13) items, for the third (the president of the federation and members of the sports body) (4) items, and for the fourth (President of the Union and its members) (4) Paragraph. Thus, the number of its paragraphs becomes (34), with (5) alternatives in front of each paragraph (never, rarely, sometimes, often, always). Appendix (5) shows the systems thinking scale in its initial form. The researcher established the validity and reliability of the scale by following the following steps:

2.5.1 Testing the clarity of instructions and paragraphs for the Systemic Thinking Scale

The exploratory experiment for the Systemic Thinking Scale took place on (2/2/2022). The researcher chose (20) members from the federations of the Middle Euphrates region to apply the tool to them. The objectives of the survey application are to ensure the clarity of the scale's items and instructions and to find the average time required to answer its items. Table (1) shows the names of the unions whose members had the measure applied in an exploratory manner.

Table 1: Names of the sample unions for the exploratory application of the systemic thinking scale:

Governorate	Total	Sample application	Exploratory sample
Babylon	68	29	5
Kerbala	58	26	5
Najaf	50	21	5
Al-Qadisiyah	56	24	5
Total	232	100	20

After analyzing the results of the survey application of the scale, it became clear that all of its instructions and paragraphs are clear and understandable from the point of view of the survey sample members, and the time period for the sample response ranged between (20-30) minutes, with an average of (25) minutes. Therefore, no amendment was made to any paragraph, as it remains composed of (36) paragraphs.

2.5.2 Psychometric properties of the systems thinking scale

First: The apparent validity of the scale

In order to determine the validity of the tool, face validity was adopted, because the validity of the items is achieved by a group of experts examining the items and assessing their suitability to the measured trait. Therefore, the researcher presented the scale with its instructions, fields, and alternatives to (12) experts (arbitrators) from the heads of sports federations in the Middle Euphrates region, because the scale is specialized in sports work. Each of them was asked to state his opinion on the validity of the paragraphs and add other comments. Based on their opinions, all (36) items were considered valid, and Appendix (1) shows the scale in its final form. Because all the Chi-square values calculated for each of them were statistically significant, because they are greater

than the tabulated value of (3.84) at a level of statistical significance (0.05) and a degree of freedom (1).

2.6 Statistical analysis of the items of the systemic thinking scale

The scale was applied to a sample of (100) union members who were randomly selected from the Middle Euphrates region, other than the main research sample. The scale's items were statistically analyzed using the two-tailed group method, in addition to calculating the internal consistency of the items (construct validity) by combining the correlation coefficient of each item with the total score of the scale, as follows.

2.6.1 Construct validity (internal consistency)

The link between the test result and the theoretical notion, such as the concept of intellect, anxiety, creativity, etc., is what the test seeks to assess. The association between each scale item and the sum of all the items' scores was discovered in order to determine the validity of the scale. Finding the association between the scores of each scale item and the scale's overall score on the participants in the statistical analysis sample of (100) using the Pearson correlation coefficient equation will help assess the validity of the scale, as shown in Table (2):

Table 2: The correlation of the item with the total score of the scale:

N	The correlation of the item with the total score of the scale	N	The correlation of the item with the total score of the scale
1	0.366	19	0.670
2	0.273	20	0.354
3	0.342	21	0.667
4	0.410	22	0.395
5	0.614	23	0.435
6	0.636	24	0.260
7	0.557	25	0.448
8	0.431	26	0.297
9	0.546	27	0.456
10	0.377	28	0.306
11	0.456	29	0.412
12	0.584	30	0.485
13	0.316	31	0.559
14	0.488	32	0.343
15	0.575	33	0.662
16	0.405	34	0.374
17	0.316		
18	0.488		

The table above demonstrated that there is a link between the scores of each scale item and the sum of the scale scores, indicating that all items are statistically significant at a significance level of (0.05) and a degree of freedom (99).

2.6.2 The reliability of the systems thinking scale

The reliability of the scale means the degree of consistency or reliability between the results of its application in two different periods, with the period between the two applications not being less than two weeks. The researcher verified the reliability of the systemic thinking scale using Cronbach's alpha method:

2.6.2.1 Cronbach's alpha method

This method, which was subjected to statistical analysis on a sample, deals with test items that result in scores with multiple values (such as: zero, 1, 2,...), that is, it is used in the event that there are more than two answer alternatives, and

given that the "alpha coefficient" has For wider applications, it has become the preferred statistical measure for estimating internal consistency (Reynolds, & Livingstone, 2013: 175) ^[5]. The reliability value of the scale appeared in this way (0.922), and this reliability is considered high.

2.7 Final application

The researcher distributed questionnaires to participants in sports federations on 10/4/2022 in order to achieve the goals of the current research and after confirming the validity and reliability of the research tools. The researcher then applied the research tools to the basic research sample of (100) participants from the Middle Euphrates region.

2.8 Statistical methods

The researcher used the statistical package (SPSS) to process the data as follows:

- T-test

- Person's correlation coefficient:
- Spearman-Brown formula:
- Cronbach's Alpha Coefficient:
- K_i^2 :
- Bilateral analysis of variance for heterogeneous and unequal samples.

3. Presentation and discussion of results

3.1 The first goal - to identify the level of systemic thinking among members of sports federations in the Middle

Table 3: The calculated and tabulated T-value for the significance of the difference between the arithmetic mean and the hypothetical mean for the systemic thinking scale:

Sample	Mean	Hypothetical Mean	Std. Deviation	Freedom Degree	T value		Sig level
					Calculated	Tabular	
70	134.03	101	10.887	99	20.002	2.000	0.05

4. Discussion

Table (3) shows that the level of systemic thinking among the members is high, because the arithmetic mean is higher than the hypothetical mean, and the calculated T-value is greater than the tabulated value. The researcher attributes the reason for the increase to the field experience that the members of the research sample acquired during their work in federations, because it includes federation management, tests, and time, in addition to their sports experience.

5. Conclusions and recommendations

5.1 Conclusions

- Sports work works to develop the level of systemic thinking among heads of sports federations.
- The level of systemic thinking possessed by presidents has an impact on increasing and developing their systemic thinking in their sports work.

5.2 Recommendations

- Training federation presidents to develop systemic thinking skills and use them in their sports work to develop and increase thinking in their work.
- Utilizing the systems thinking scale prepared by the researcher in evaluating the heads of other sports federations.

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The results of the statistical analysis of the data on the Systemic Thinking Scale showed that the arithmetic mean of the scores was (134.03) degrees, the hypothetical mean was (101) degrees, and the standard deviation was (10.887) degrees. It was found that the calculated T value was (20.002) degrees, which is higher than the value of (T) Tabulation (2.000) at significance level (0.05) and degree of freedom (99), and Table (3) shows this.

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Appendix

Systems thinking scale

N	Scale paragraphs	Ever	Rarely	Sometimes	Often	Always
1	Looking for the opinion of others on the situations I face					
2	He thinks deeply about the hidden causes of sports and sports problems					
3	He believes that recurring patterns in sports work are more important than any one specific management style					
4	The educational problem is viewed as a series of interconnected causes					
5	He tries new solutions that no one before me had thought of in sports work					
6	It is believed that continuous changes or modifications in sports and sports work come through personal effort with moral and material incentives					
7	He believes that success is not about working hard, but rather about working intelligently and thoughtfully					

8	It is believed that the way work is organized for development is more important than unorganized individual efforts				
9	Focuses on my first idea because it is often the best				
10	The main reason for success is constantly changing those responsible for performing sports work in the sub-units				
11	He believes that the suggestions he provides are very useful for success in sports work				
12	I think the union leaders have the best ideas				
13	I believe that understanding the way events are connected and sequenced is crucial to the success of sports work				
14	It takes into account the cause and effect of anything happening				
15	He believes that it is better for systems to change constantly				
16	Proposes solutions that affect the improvement of the environment as a whole and not specific individuals				
17	I keep in mind that the changes proposed by me will affect the entire systems				
18	He believes that a simple change in the system can produce big results				
19	It takes into account that multiple changes in systems will affect each other				
20	It takes into account the culture and history of the surrounding community in which I work				
21	It is believed that a single sporting activity has different effects across time and space				
22	He believes that sincerity, hard work and motivation are secondary things				
23	He believes that initial reactions are the best in solving problems				
24	I think the union president has the best ideas				
25	I think making regular adjustments is more important				
26	Involve union heads in finding solutions to any problem				
27	The members' relationships with each other are taken into consideration when forming committees				
28	It is believed that success depends on making changes that involve more than one member				
29	I focus primarily on the opinions of distinguished members in their work				
30	I believe that the best sports strategy is the one that works gradually from the lowest level to the highest				
31	I believe that most bosses need success in their work				
32	Thinks about how members will be affected by the improvements being made				
33	It is believed that the members who participate most in the work are the most successful				
34	He believes that members who do not work hard will not get the desired results				