Shahid Bahonar University of Kerman

Journal of New Studies in Sport Management

Online ISSN: 2717 - 4069

Homepage: https://jnssm.uk.ac.ir

Iranian Scientific Association of Sport Management

Integrated Decision-making Method in Performance Evaluation and Rating of Recreational-Sports Pools

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ARTICLE INFO

Article type:
Original article

Article history:
Received: 20 August 2022
Received in revised form: 12 October 2022
Accepted: 16 October 2022
Publish online: 10 November 2022

Keywords:
Balance scorecard
Decision-making methods
Gray clustering
Performance evaluation
Recreational-sports pools

ABSTRACT

The present study is implemented to identify indicators and to provide an optimal evaluation method in recreational-sports pools. The present study is considered practical in purpose, and survey in collecting data. Firstly, by bibliometric research and five professional experts' interviews, 91 indicators were identified for evaluating recreational-sports pools. Secondly, in terms of 4 components or perspectives in the Balanced Scorecard, 57 indicators were established (internal processes (10 indicators), customer (22 indicators), growth and learning (19 indicators), and financial (6 indicators)), from focal group's output which was comprised of 4 prominent professors. The structure was confirmed based on 333 individuals' opinions in the statistical population by employing factor analysis. In order to rate the pools studied, the gray clustering analysis method was applied followed by the structure of the balanced scorecard is confirmed. Principally, 20 homogenous recreational-sports pools were investigated in 15 city regions and boundaries of provinces in Isfahan, Sepahan Shahr, and Baharestan. Based on data analysis and rating of each case study, Araman, Absar, Enghelab, Morvarid, and Golsar pools were ranked first to fifth, respectively. Furthermore, the main purpose of the present study based on calculated indicators is to propose a practical method to provide an accurate evaluation of sports pools.

Introduction

"When we are capable to measure and digitize issues under discussion, we can claim that they are somehow recognized", Lord Kelvin, English physicist discussing the necessity of measurement. On the contrary, our intelligence and knowledge is imperfect and never attain maturity (Kusumawardani & Agintiara, 2015). In addition, as noted in managerial science; whatsoever not measurable, it is not

How to Cite: Jamali, A., Salimi, M., Nasr Esfahani, D. (2022). Integrated Decision-making Method in Performance Evaluation and Rating of Recreational-Sports Pools. *Journal of New Studies in Sport Management*, *3*(4), 590-601. DOI: 10.22103/JNSSM.2022.20102.1118

 Publisher: Shahid Bahonar University of Kerman
DOI: 10.22103/JNSSM.2022.20102.1118

controllable, consequently, what is not controllable, is not manageable. the fundamental topic in all organizational analysis is performance, furthermore, its progress requires measurement; therefore, an organization with no performance assessment system is unimaginable (Abtahi Nia, Mir Kazemi, & Keshti Dar, 2012). Persistent progression in organization performance leads to immense synergistic force which can support the growth and development in scheme, alongside with creation of distinguished opportunities in an organization. In this issue, governments, organizations and institutions make a beneficial progression. Consistent performance improvement is not attainable without assessment and knowledge acquisition of the extent of progression, objective achievement, identifying challenges organization encounters with, obtaining feedback, enforcing formulated policies, and detecting situations requiring crucial improvements. All above mentioned point of views are not feasible without measurement and assessment (Skandari Dastgiri, Amirtash, & Safania, 2018b).

Today, every vivid and hard-working organization objective is development, efficiency, progress, coherence, stability and sustainability in competitive field, and globalization; regarding that complexity, velocity, flexibility, competition, responsibility toward customers and clients are incontrovertible in recent years, also regarding that management knowledge is developed immensely, the presence of an effective monitoring and assessment system is inevitable and principle (Fesanghari, Ramezaninezhad, & Ghorbani, 2021). Evaluation is defined as an assessment. In relation to contemporary education, evaluation is a dynamic process, involving making decisions which lead to changes in student behavior (Kizlik, 2015). Evaluation is the process of giving due consideration to the value and meaning of the thing considered (Moch, 2021). Evaluation involves the functions of control and inspection, meaning that evaluation can be used as information for the leadership on whether the program activities have been carried out properly and brought about the expected results. Evaluation can assume the function of accountability because it can provide information about the use of the budget/funding, and evaluation can also serve in an advisory capacity. The evaluation results can be used to obtain more funds to fund similar programs in the future. By knowing the benefits of evaluation in terms of the various aspects of the education system, it can be said that evaluation functions in a number of ways: 1) selective evaluation; 2) diagnostic evaluation; 3) formative evaluation; and 4) summative evaluation (Stufflebeam & Coryn, 2014). All organizations in order to progress, grow, stability initoday's competitive field require some type of performancee evaluation system to assess their efficiency and effectiveness. Performance assessment leads organization to provide persistent improvement via diminishing weaknesses and enhancing strengths (Honari, Mohammadi, & Ghafouri, 2012). Performance evaluation is specified as distinguishing, measuring and managing individual's performance in an organization, giving feedback, lead them to beneficial and superior performance (Valderrama, García, Rodríguez, & Revuelta, 2013). Performance evaluation as one of the most advantageous instruments in distinguishing organizational competence and controlling work flow, can prepare a context to progress and modify existing the process along with individual and organizational superiority via making improvable context, threats, strengths and opportunities prominent (Fesanghari et al., 2021). The performance evaluation system is utilized as an instrument to attain organizational objectives and strategies; in other words, whether progress toward attaining organization's institutionalized objectives is desired, the most influential manner to assign conduct toward those objectives is to formulate those conducts in performance evaluation indicators framework. Hence, performance evaluation systems need to be deduced from strategic objectives and support them; otherwise, it is probable that is supports functions affecting adversely on them. Furthermore, one needs to bear in mind that strategies being altered over time lead to alternation in some performance indicators; consequently, it requires these systems to be more flexible in order to ensure that the performance evaluation system is in harmony with the objectives of the organization (Skandari Dastgiri et al., 2018b). In the area of management, it is apparent that with the aim of improvement in services quality, the assertion and capital on performance evaluation system is considered more distinguished; it is promising for the managers and policymakers of progression in public region, that paying attention to this concept (performance evaluation) leads to objectives considered fundamental from proponents of management development point of view; characteristics like efficiency, effectiveness, responsiveness, functionalism, and transparency are among those objectives (Karami, Salimi, & Soltan Hosseini, 2022). Organizations are considered

more successful in traversing complicated path of progression, unless they take the development problem into consideration more solemnly, furthermore provide fundamental legal and cultural infrastructures more beneficially; organization which take this concept and process into no consideration and act flimsy in implementation of monitoring and assessment system will encounter gigantic challenges in progression path (Mohammadi, Honari, & 2016). In the requirement and significance of performance evaluation, it should be noted that, assessment leads to scheme growth and consistent performance improvements in organizations, develops excellent force for synergistic increment and creates opportunities for organizational superiority (Karami et al., 2022). Furthermore, Evaluation indicators and standards needs to be possibly logical, objective and acceptable. The evaluation indicators must be capable to clarify the favorable conduct patterns; the performance evaluation system must also contain balanced indicators (Skandari Dastgiri, Amirtash, & Safania, 2018a).

An evaluation model is a model/design for evaluation made by experts. Such evaluation models are usually named after their creator or the stage of manufacture. These models are considered the standard model or brand and can be said to be the standard of manufacture. Furthermore, there are expert evaluations in accordance with the mission, to include the different interests or emphases, or they may be conducted in accordance with the espoused ideology: this is known as the approach to the evaluation, and includes the points of reference as well as the understanding adopted by the evaluators (Moch, 2021). There are diverse models to evaluate organization performance (Fekete & Rozenberg, 2014), which Balance Scorecard is one of the most prominent and outstanding and implemented in disparate organizations. Kaplan and Norton in 1992 presented this model for first time (Stas, Lenort, Wicher, & Holman, 2015) which look for controlling and developing a balance among financial and non-financial, intrinsic and extrinsic, forward and backward indicators (Sorooshian, 2014) with long-term and short-term indicators (Fekete & Rozenberg, 2014). The fundamental dimensions of the present model are as follows: financial, customer, internal processes and growth and acquisition dimensions (Awadallah & Allam, 2015). One of the original functions of the present model is to segment the principal macro-objectives to micro-ones; also, to determine the executive activities needed to attain those objectives; furthermore, it specifies every individual's duty needed to objective attainment, and how that individual can participate in achievement of organization's determined objectives (Salimi, Khodaparast, & Mohammadi, 2022). However, the utilized method is inefficient in quantitative implementation; in general, information related to decision-makers' priority related to assessment criteria is declared on the basis of their qualitative judgment for multiple reason; in practice, decision-makers' judgments are mostly unclear and they cannot be expressed relying on precise numerical values. Furthermore, one of the most fundamental drawbacks of the present method and other methods of performance evaluation is lack of consensus in the implication of uncertainty in measurement methods (Salimi & Khodaparast, 2019). Accordingly, utilization of novel and interdisciplinary approaches is crucial to encounter with these complications and complexities (Hariri & Sarafpoor, 2014).

Accordingly, in the present study, regarding the strengths of the balance scorecard model in performance evaluation, a composition of gray clustering analysis method is utilized to create a performance evaluation model. The gray system approach is considered beneficial compared to other methods, comprising the necessity for small data rather than massive data and the strength to encounter ambiguity in data, the reason by which in real circumstances the precise value of parameters is not given (Zhang, Cheng, Guo, & Xue, 2016). Gray clustering is considered as one of the components of gray theory (Faraji Sabokbar, Mahmoudi Meimand, Rahimi, & Shadman Roodposhti, 2013), which is proposed and offered by Dang in 1987 originally (Wu, Lin, Peng, & Huang, 2012); a method by which rely fundamentally on whitening functions of gray values (Sung et al., 2014). Gray clustering analysis is a gray statistical method which investigates the value of indicators under study relevant to the intended objectives in gray categories, consequently, it makes judgments and decisions in the pertained objectives in every category (Ke, Xiaoliu, Zhongfu, & Wenyan, 2012).
Considering sports as an influential potency is socio- economic progress, whether directly or indirectly, plays a crucial role in in economics and politics in countries (Mirfakhraddini, Peymanfar, Khatibi Aqda, & Ali Mohammadi, 2013). The social, health and medical functions of sports are developed due to communities being more industrialized and life being more mechanical; also, they

aregregardedaasanecessities inftoday's society. As the result, sports organizations appeared due to the necessity in benefiting from the precious social activity, sports. Performance evaluation in sports can be defined in different fields. The performance of a sports club is related to what extent that club has been able to achieve the goals and strategies which has formulated in various fields such as winning championships in different leagues, the amount of player development, the amount of income and other things (Naderian jahromi & Akhavan, 2021). But Prerequisites are essential in the area of preparation of desirable environment to develop pertainingasport,aamongawhichearetqualifiedcsports'a complex and space. Sports spaces are considered as a sort of social spaces in an individual's settlements, which, surely, are regarded as one of the most fundamentals in providing individuals and society health. Fundamental characteristics of sports spaces may be considered as follows: mobility, leisure time, sports competitions among populated teams, physical encounters, sports and non-sports conferences and gatherings (having socio-political objectives), which cannot be observed in any other urban utilizations. Sports facilities progression and their per capita growth play an essential role in developing individuals' physical activities and community health (Salimi & Khodaparast, 2021).

On the other hand, swimming is one of the most attractive and popular sports in the country, which, in addition to interested young people, due to the presence of water and its therapeutic aspects, compared to other sports, this field is also very popular among middle-aged and elderly people. has been Nowadays, it is rare to find a city in Iran that does not have an indoor or outdoor swimming pool for public use, so the technical standards, safety and overall management of indoor swimming pools are known as one of the most important aspects of sports facilities management (Salimi & Soltan Hosseini, 2018). Water sports and leisure activities exposed in water situations develop various conditions in recreation, sports, and economics, medical and educational fields; consequently, establish an active area in investment, employment, recruitment and tourism. Usually, pools and water situations are regarded as resorts for leisure time, recreation and fitness. Swimming and water sports, considering that it has many enthusiasts, can involve a significant population of the society in physical activity and sports. In today's era when lack of activity and inactivity causes chronic and mental diseases, exercise can make our body and mind healthy, and of course relaxation is one of the important benefits of exercise and swimming fun. Swimming pools are considered as one of the leisure bases of a large segment of the society, and without a doubt, the development of these centers, while increasing profitability for their owners, is very important in spreading culture and the importance of sports in filling leisure time; According to the mentioned point, swimming pools will have a good competitive position among other businesses when their performance is accurately evaluated and by strengthening their strengths and covering their weaknesses, they can be put on the path of growth and development (Moodi & Talebpoor, 2019). Also, the quality of swimming pools is regarded principal in the sport under study, therefore, managers and executives notice them due to athletes and users' major attention. It is evident that compared to other sport complexes, swimming pools' evaluation is arduous due to multiple indicators be investigated; therefore, in the present study, a model is proposed in order to rate swimming pools corroborating on recreational-sport pools, via presenting evaluation indicators incorporating balance score cards and gray clustering analysis.

Methodology

The present study is considered practical in purpose; survey in collecting data; and descriptive-analytical in type. The present study in conducted via incorporating two general sections; the first comprises indicators associated with every quadrisect of balanced scorecard (BSC); the second consists of rating pools under study relying on gray clustering analysis. Balanced scorecard is the one of instruments utilized to evaluate performance, which its efficiency have confirmed in developed countries (Daneshfard, Vahdani, & Aghaz, 2010); furthermore, regarding that gray clustering analysis can be considered as balance scorecard's complementary; also, it can cover its drawbacks such as lack of consensus in implications of uncertainty in measurement methods, being qualitatively judged in information pertaining decision-makers' preferences in evaluation criteria, uncertainty in decision-makers' judgmentse ande incapabilitye in convertinga themc intok preciseo digitization (Salimi & Khodaparast, 2018); consequently, the present study incorporates balance scorecard and gray clustering analysis in order to evaluate performance and rank indoor pools.

The first step was to specify factors and indicators in recreational sport pools' evaluation. Accordingly, along with bibliometric and literature review, instructions and documentaries attainable in sports and youth office, as well as, reviewing textbooks related to sports complexes and equipment, interviews with five professional experts were conducted which led to 91 indicators. The interviews were conducted face-to-face at the interviewee's workplace, and according to the process of the interviews, approximately 30 to 45 minutes were spent for each one. The demographic characteristics of the participants at this stage are shown in Table 1.

Second step, a focal group comprising 4 instructors was developed to classify and adjust indicators, which led to merge or eliminate indicators being overlapped or capable of depletion; as the result, 57 indicators in 4 components or perspectives were classified as internal processes (10 indicators), customer (22 indicators), growth and learning (19 indicators), and financial (6 indicators). The demographic characteristics of the focus group are presented in Table 1.

Afterwards, in order to specify structure validity as well as affirm concluding structure of four perspectives of BSC, the method of confirmatory factor analysis was utilized. The statistical population of the present study included professionals in field of study, pools and water complexes, pools' managers, specialists and inspectors of the sports and youth departmentcin the field of distinction and specialized review of pools, and university professors and proficient. The study questionnaire was electronically distributed among 400 accessible individuals; consequently, 333 questionnaires were entirely referred (rate of return: 0.83).

The gray clustering analysis was utilized following balance scorecard being verified, in order to rate the pools under study. Indoor recreational- sport pools located in province of Isfahan are the present case study. Recreational pools are classified as recreational-entertainment and public. Recreational-entertainment pools like water park and aqua centers having no determined size or diagram are solely utilized for users' recreation, bath and having fun. Public pools can be regarded recreational; however, their size is predetermined and users refer to have fun and entertain. Another classification of pools is sports pools which are championship and professional pools in predetermined and legal obligatory sizes, specialized for sport fields like swimming, diving, water polo, scuba diving, etc. Also, the above-mentioned pools are utilized in educational, scientific, and even recreational benefits. In the present study, 20 homogenous recreational-sports pools were investigated in 15 city regions and boundaries of provinces of Isfahan, Sepahan Shahr and Baharestan.

Results

As mentioned, after identifying 91 indicators from library studies and interviews, 57 final indicators of the qualitative section were determined as the output of the focus group based on Table 3, thus Firstly, according to focal group point of view, 57 indicators arrived in factor analysis phase, out of initial indicators. The demographic characteristics of interviewees and the focus group are presented in Table 1.

Table 1. The demographic characteristics of the interviewees and the focus group

	Numbers	Job	Education	Work Experience
Interviewees	1	Faculty member	Ph.D.	9
	1	Faculty member	Ph.D.	28
	1	Sport place expert	Ph.D.	16
	1	Sport place expert	Ph.D.	18
	1	Sport place expert	Ph.D.	25
Focus Group	4	Faculty member	Ph.D.	Ave 17

Kaiser-Mayer-Olkin test (KMO) to measure the sample adequacy as well as Bartlett's test to specify permissibility are taken into consideration in order to perform the factor analysis. Table 2 represents two above-mentioned test results.

Table 2. Bartlett test and sample adequacy

KMO	0.786	
Bartlett's Test of Sphericity	Approx. Chi-Square	355.746
	df	21
	Sig.	0.000

Regarding the KMO value higher than 0.7, 333 samples is sufficient; also, regarding the Bartlett's test being significant, it is concluded that utilization of factor analysis is permissible. Table 3 represents characteristics of the participants in quantitative phase.

Table 3. The demographic characteristics of the participants in quantitative phase

	Character	Executive Managers in Pools	Sport place Experts	Universities Masters	Sport Management Students
Job	Frequency	71	47	75	140
	Percentage	21%	14%	23%	42%
	Character	Diploma	Bachelor	M. A	Ph. D.
Education	Frequency	6	80	136	111
	Percentage	2%	24%	41%	33%
	Character	< 5 years	5-9 years	10-20 years	> 20 years
Work Experience	Frequency	96	150	50	37
	Percentage	29%	45%	15%	11%

In table 2 Also, no indicators were obtained being less than 0.5 in collected data pertaining Extraction communal, consequently were not eliminated.

Table 4 represents rotated matrix of the components including factor loads of every post- rotated indicator. In the present table, every indicator is linked with factor based on correlation magnificence.

Table 4. BSC quadrisect perspective and approved indicators in evaluation of recreational sport pools

indicator	Factor loads		indicator	Factor loads	
Depth of pool bowl	0.901	A30	Customer perspective		
Facilities regarding safety and lifeguarding	0.711	A31	General hygiene of the pool	0.812	**A1**
Obtained ISO and enormous hygiene, management, functional, etc. standards	0.871	A32	Specifying pathways inside the pool	0.774	**A2**
Installation of ethical and behavioral charter at pool	0.865	A33	Encompassing guide signs in internal and external areas of the pool	0.816	**A3**
considering green waste management by managers	0.832	A34	Signs and banner declaring hygiene and managerial instructions all over the pool	0.753	**A4**
Pool vacuum cleaner	0.856	A35	Presence of fire notification and extinguishing systems	0.911	**cA5**
Pool water supply source	0.912	A36	Having emergency exit door	0.834	**A6**
Having equipment around the pool	0.804	A37	Encompassing foot disinfectant basin	0.791	**A7**
Kind of Filtration and disinfection system	0.813	A38	Number of bathrooms	0.755	**A8**
Presence of appropriate and planned stereo audio/video	0.785	A39	Containing sauna	0.699	**A9**

system at pool					
Convenient ventilation system function	0.844	A40	Containing massage room	0.902	**A10**
Having specific talent identification and development programs	0.867	A41	Possessing grandstand for spectators and external garden	0.733	**A11**
Internal process perspective			Adjacency of the pool to public transportation terminals	0.769	**A12**
Trainer records	0.861	A42	Consisting of recreational equipment and facilities	0.711	**A13**
Lifeguards' records	0.767	A43	Presence of a fashionable and elegant atmosphere for the customers at the pool	0.786	**A14**
Having massager	0.843	A44	Cold and hot showers	0.843	**A15**
Having qualified employees	0.684	A45	Containing lockers (wardrobe and equipment) suitable for the number of users	0.761	**A16**
Human work force and staff in the pool need to be under insurance	0.777	A46	Proper conditioners	0.755	**A17**
education, profession and sport records of founder and managers (male and female)	0.754	A47	Shoe keeping section	0.788	**A18**
Managers, trainers and lifeguards need to have certificates of professional training	0.781	A48	Utilizing colorful and lively environment to attract customers in and outside the pool	0.751	**A19**
Enjoying sport consultant and planner	0.801	A49	Safety (local safety of the pool)	0.691	**A20**
Enjoying sport-nutritional consultant	0.842	A50	The extent of light in various parts of the pool	0.858	**A21**
Establishing sport physician at the pool	0.677	A51	The quality and temperature of the pool water	0.766	**A22**
financial perspective			Growth perspective		
Reasonable ticket price	0.681	A52	IT and information desk	0.882	**A23**
Considering strategies of cost control	0.695	A53	The existence of a fully mechanized and electronic registration system	0.890	**A24**
Considering strategies in revenue earning	0.718	A54	Utilizing novel technologies in pool management	0.870	**A25**
In time payment and salary to work force	0.649	A55	The presence of an intelligent temperature and humidity control system	0.732	**A26**
Offering significant discounts to regular customers	0.703	A56	Possibility of pool complex having a special website and activity in cyber space	0.746	**A27**
Presenting educational services at reasonable fees	0.723	A57	Possibility of multiple utilization of pool	0.923	**A28**
-	-	-	Having equipped electronic house	0.934	**A29**

Table 4 indicates that the structure of study instrument is approved, besides, all extracted indicators support quadrisects of BSC perspectives. Therefore, the priority of the pools under study are

investigated based on BSC structure. Table 5 represent harmonic normalized matrix. All BSC perspectives are considered equal in this weight matrix.

Table 5. Weight vector and harmonic normalized matrix (RW)

Pool	Costumer		Growth & Learning		Internal Process		Financial	
Behtavani	0.5119	0.5871	0.4967	0.5502	0.5239	0.6188	0.3912	**0.4671**
Abouzar	0.4429	0.5092	0.6430	0.7266	0.5104	0.5819	0.2560	**0.3276**
Sahel	0.4219	0.4893	0.4919	0.5612	0.4115	0.4893	0.4155	**0.4871**
Nour	0.4367	0.4788	0.3018	0.3489	0.5991	0.6709	0.3001	**0.3689**
Nasr	0.4510	0.5198	0.6121	0.6702	0.4652	0.5195	0.1734	**0.2204**
Mahtab	0.5777	0.6573	0.6216	0.6850	0.4331	0.5091	0.6101	**0.6783**
9 Dey	0.3900	0.4362	0.6365	0.7831	0.6004	0.6756	0.4687	**0.5797**
Morvarid	0.5914	0.6566	0.4166	0.4797	0.74908	0.8196	0.7154	**0.7423**
Bahar	0.6118	0.6781	0.7054	0.7849	0.6016	0.6735	0.3878	**0.4598**
Bakhtiar	0.4996	0.5552	0.6019	0.6829	0.7110	0.7620	0.3016	**0.3759**
Ghasr Moj	0.4663	0.5103	0.3892	0.4313	0.3178	0.3981	0.4890	**0.5551**
Setare	0.5471	0.6008	0.4111	0.4621	0.4820	0.5771	0.6527	**0.6744**
Azadi	0.3679	0.4095	0.7983	0.8765	0.4517	0.5430	0.4766	**0.5497**
Ferdous	0.6388	0.6931	0.5202	0.5646	0.5288	0.5808	0.5533	**0.5971**
Fajr	0.7401	0.5928	0.2781	0.2981	0.6333	0.7035	0.5999	**0.6834**
Nemouneh	0.4568	0.5482	0.5972	0.6509	0.3828	0.4349	0.6081	**0.6598**
Enghelab	0.6797	0.7560	0.7190	0.7842	0.6891	0.7659	0.3645	**0.4650**
Golsar	0.7005	0.7772	0.4824	0.5345	0.6237	0.6820	0.5742	**0.6593**
Araman	0.7599	0.8012	0.8009	0.8731	0.7124	0.7931	0.4601	**0.5655**
Absar	0.4617	0.4981	0.7203	0.7800	0.7290	0.8107	0.5902	**0.6778**

Table 6 represents the degree of gray relation and final rate for every pool investigated followed by calculation of gray relation coefficient based on harmonic weight matrix.

Table 6. Degree of gray relation and rate considering every pool investigated

Pool	Γ_{0i}	Rank	Pool	Γ_{0i}	Rank
Behtavani	0.41469	15	**Ghasr Moj**	0.35571	**19**
Abouzar	0.39976	16	**Setare**	0.44073	**13**
Sahel	0.37677	a17	**Azadi**	0.44732	**12**
Nour	0.35052	20	**Ferdous**	0.46767	**8**
Nasr	0.36316	18	**Fajr**	0.45292	**e10**
Mahtab	0.47722	7	**Nemouneh**	0.43387	**14**
9 Dey	0.45702	9	**Enghelab**	0.52234	**3**
Morvarid	0.51707	4	**Golsar**	0.50338	**5**
Bahar	0.49029	6	**Araman**	0.57662	**1**
Bakhtiar	0.44901	11	**Absar**	0.52678	**2**

Based on results of data analysis as well as every item's rate studied in table 6; Araman, Absar, Enghelab, Morvarid and Golsare are ranked first to fifth, respectively**.**

Discussion and Conclusion

It can be declared profoundly that performance evaluation system is not performed or they are not utilized accurately in most territory's organizations (Salimi & Khodaparast, 2018). Scrutinizing the issues and obstacles of performance evaluation leads to intersection in them all, as they lack monitoring and performance evaluation system (Mahapatra, Mukherjee, & Bhar, 2015). Furthermore, performance evaluation is considered fundamental for all investors; as the law regarding outsourcing executed by government agencies like sports and youth department, education, municipalities, etc., propose that the final objective in investing for every investor in the area of sports, is enlargement or protection of their capital. Therefore, the performance of a corporation does not display any satisfactory outcomes following accurate and integrated evaluation, results in investors find it illogical to pursue investing in, however, they may maintain investment by the performance being improved based on the identified drawbacks, sometimes those investors transfer it thoroughly and terminate their investment (Nasiri & Soleymani Amiri, 2020). Furthermore, the principal reason for maintenance of a sport complex and spaces, especially recreational-sports pools, are sport customers and athletes. Customers receiving services develop revenue for the investors; therefore, the above-mentioned complexes need to absorb more customers, further maintain the present ones, and due to absorbance expenditure, and attempt to miss less. Dissatisfaction leads to customer missing and conveying dissatisfaction to other individuals; therefore, departure of displeased customer, sports pools enjoy less revenue as well as fewer number of individuals in the community gain from the benefits of swimming and water sports. The significance of revenue growth from the presence of customers as the fundamental factor for the maintenance of swimming pools, along with competition in the field of sports and providing sports services, results in sports complexes to encounter an indignant competition with a massive number of customers with diverse tastes and needs, striving they being pleased and loyal. Among recreational-sports centers, centers associated with water sports activities are placed among the priorities of customers. Water activities create sense of livelihood and joyfulness in individuals, which leads most families to experience the presence in these centers, along with find them a proper resort to spend leisure time as well as moving toward health and beneficial social outcomes. Competition in customer absorbance and supreme services are developing along with growing the number of pools and water centers. Therefore, regarding the increment, competition to absorb and maintain customers pleased is indicated on the agenda of chief managers. Accurate evaluation, recognition of drawbacks and strengths, positing distinct obligations and persistent monitoring of the implementation of the functions, are regarded as the most principal methods in developing and maintaining qualities in sports complexes. The above-mentioned points of view represent the crucial role of performance evaluation system in sports complexes.

The present study followed two fundamental objectives; identifying and classifying evaluation indicators in recreational-sport pools is regarded as initial objective. By doing so, 91 indicators were identified initially; afterwards, 57 indicators were organized by factor analysis in quadrisect aspect of balance scorecard. Objectivity in the area of an organization's activities is presented by indicators; also, they are regarded as an influential instrument in evaluating plans and activities in a management system, by which attainment of predetermined objectives can be realized. Profound consideration in the outcomes of performance indicators in further identification and comprehension of gaps, inadequacies and drawbacks can be helpful in improving planning, quantitatively and qualitatively. Performance indicators are of three fundamental perspectives: firstly, they assist evaluation system to merge functions according to accurate factors, which is indeed represented as the reflection of valuation; secondly, they provide a pathway to persuade managers to recognize performance; thirdly, they identify plan gaps via valuation. Surely, performance evaluation systems which are based on only one organization's aspect or more, cannot maintain in today's competitive and complicated environment; insomuch, organizations to outmatch their competitors must consider all aspects, financially and non-financially, as a result be prepared for them (Mahapatra et al., 2015).

Salimi & Khodaparast (2021) propose that inadvertency to proper provision and rating, standards of design and construction criteria, zoning, land utilization, locating and determining the adequate

adjacency criteria along the construction of sports complexes and facilities lead to lose time, budget, and energy resources; most critically, they affect detrimentally on future performance and quality of sports plans and healthful entertainment (Salimi & Khodaparast, 2021). Cleland *et al*. (2010) infer that aesthetics and charming environment may affect individuals' health conduct; consequently, link positively between individuals' tendency toward work out in their leisure time with environmental variables like aesthetics; by which indicators and criteria are confirmed in the present study (Cleland et al., 2010).

Organizations are capable to measure their efficiency and effectiveness via digitization organization's functions, utilizing a profound and beneficial performance evaluation system; consequently, they could further control the present circumstances, realize accurate future path, and pattern influentially other organizations (Chiesa, Frattini, Azzarotti, & Manzini, 2008). The balance scorecard model, among diverse performance evaluation models, is a performance assessment framework utilizing a set of financial and non-financial scales, which view profoundly organization's performance as well as can evaluate the organization's strategic plans via particular operational plans; consequently, assist organizational managers to implement strategies prosperously (Faraji Sabokbar et al., 2013). Also, Fooladvand, Yarmohammadian & Shahtalebi (2015) declare that strategic objectives transform it to performance scales as well as assess it via four perspectives as financial, customer, internal processes, and growth and learning (Fooladvand, Yarmohammadian, & Shahtalebi, 2015). The present model alters strategic plans from a massive composition to a set of concise operational stages, observes implementation outcomes on the daily basis, also determines planners' evaluation and abandonment of certain issues; consequently, it assists chief managers to implement strategies prosperously. Along with above-mentioned advantages, some inefficiencies can also be stated, by which researchers are aroused to adapt them with other decision-making methods to overcome the drawbacks; one of the methods is gray clustering analysis utilized in the present study. The gray system approach is beneficial compared to other methods, like small data needed instead of a massive data and the capability to encounter obscurity in the data; insomuch, the precise value of parameters is not determined in actual conditions (Zhang et al., 2016).

Based on data analysis and rating each case study, Araman, Absar, Enghelab, Morvarid, and Golsar pools were ranked first to fifth, respectively; however, the fundamental purpose of the present study wasn't ranking the pools under investigation; the main purpose of the present study based on calculated indicators, is to propose a utilized method to provide an accurate evaluation of the sport complexes of this type to decision-making chief managers, as managers of departments of sports and youth, municipalities, education system, etc., alongside managers of the pools, employ it beneficially.

Acknowledgments

We sincerely and honorably thank all the interviewees and experts and all the people who help us to do this research.

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