

## Determining the Strategic Position of the Development of Children's Physical Activity in Iran

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### Abstract

**Purpose:** The purpose of this research was to determine the strategic position of children's physical activity development in Iran. This research is applied in terms of purpose and mixed method (quantitative-qualitative).

**Methods:** The statistical population of the research included professors of physical education and sports sociology who are knowledgeable about the field of children's physical activity, Provincial physical training assistants of education, heads of talent search committees of sports federations, managers and expert coaches, and experts of children's game and sports clubs, and members of the Children's Sports and Physical Activity Association of the Federation of Public Sports that In the qualitative section, 19 people were selected in a targeted manner until theoretical saturation was reached, and in the quantitative section, 265 people were selected by the method of total count. To collect data, a Review of documents, background literature studies, use of the Delphi method in the qualitative section, strategic council meetings, and tools such as researcher-made questionnaire, internal factors evaluation matrix, external factors evaluation matrix, and strategic positioning matrix were used.

**Results:** According to the research findings, 10 strengths, 11 weaknesses, 13 opportunities, and 10 threats were identified in the field of children's physical activity and its strategic position was located in the WT region.

**Conclusions:** It is suggested that the Federation of Public Sports, as the main guardian of the physical activity development of Iranian children, uses defensive strategies in this field.

**Keywords:**Physical activity, children, SWOT analysis, strategic position, development

## Introduction

Today, due to the importance and necessity of mobility and physical activity as one of the most basic needs of living beings, as well as the spread of replacing humans with machines, the consequences of which include the spread of physical weakness, mental and emotional problems, etc., the need Physical activity is strongly felt in societies (Sayadi et al, 2020). Based on this, the World Health Organization (WHO) has identified inactivity as the fourth cause of death in the world and estimated that this factor causes the death of 2 to 3 million people annually. Therefore, it is clear that mobility and physical activity are of great importance as one of the most basic human needs, and this has caused the issue of physical activity and its expansion and development to become a global phenomenon in the present era. However, there is no doubt that if lifestyle change and the development of active life are considered, this should be considered from childhood. Because the behaviors that form this period will affect the health of the person in the future (Padash, 2021). In other words, paying attention to the category of mobility and physical activity in childhood and trying to promote and develop it is an investment that can solve many problems that arise in the future. As a result, it can be said that the necessity of engaging in physical activity and sports at this age is of double importance (Nemati et al, 2016). Today, the results of studies in different countries of the world, including Iran, indicate the lack of proper physical activity in children and, as a result, the spread of obesity, diabetes in children, overweight, and even lack of vitality among this group (Manochehri et al, 2018). Zhao et al (2019) also believe that in recent years, there has been a significant increase in inactivity among people of growing age, which in turn has a direct relationship with obesity and overweight in children and adolescents. Based on this, it seems that physical activity and sports, if managed in principle and used based

on regular and correct planning, can fulfill many important needs of childhood, adolescence, and even youth, knowledge of healthy social life, and Correcting or preventing many deviant behaviors have an effective role (Nemati et al, 2016).

In today's world, which is changing at a breakneck speed, organizations are forced to constantly monitor internal and external events so that they can adapt to changes as necessary and at the right time by taking advantage of the knowledge of management, which is considered one of the basic factors of progress, development, and economic and social growth in different societies, to adjust their long-term plans and future strategies. Therefore, the use of strategic plans is considered a necessity in organizations, because, with the help of this type of planning, the management can determine its future directions and equip the organization against future changes and developments (Sobhani et al, 2019). Strategic management is the art and science of formulating, implementing, and evaluating decisions that enable an organization to achieve its goals (Aarabi, 2011). One way to know the organization's status is to use the method of environmental investigation, which consists of monitoring, evaluating, and publishing the resulting information about the organizational environment among the key and effective people of an organization. Generally, organizations deal with external factors (opportunities and threats) such as political, economic, social, and technological forces and internal forces (strengths and weaknesses) such as management, marketing and finance, production or services, research and development. One of the common methods of knowing these factors is using SWOT analysis as an important tool that represents the strengths, weaknesses, opportunities, and threats of an organization. By examining and understanding these factors, a list of issues and challenges facing every organization can be obtained and the necessary measures to deal

with them can be predicted and implemented. In the process of SWOT analysis, the internal strengths and weaknesses and the external opportunities and threats of the organization are identified and according to the organization's mission, long-term goals are formulated to achieve these goals, strategic options that include four types of strategies (SO, WO, ST and WT) are identified. Strategies are chosen to eliminate weaknesses and avoid threats by relying on the strengths and taking advantage of the opportunities (Hosseini et al, 2013). SO strategies are the strategies that the organization tries to take advantage of external opportunities using internal strengths. The goal of WO strategies is that the organization tries to improve the effects of internal weaknesses by exploiting the opportunities in the external environment. In implementing ST strategies, organizations try to use their strengths to reduce or eliminate the effects of threats in the external environment and finally, organizations that implement a WT strategy try to avoid threats from the external environment by reducing internal weaknesses (Sobhani et al, 2019).

In the meantime, sports organizations are not exempted from this rule and have used the strategic planning process to achieve their goals according to the conditions. Examining the performance of some sports organizations shows that those organizations that have used strong management based on a strategic plan to fulfill their mission and achieve their goals have been able to achieve significant success in various activities such as public sports, championships, etc (Najafi et al, 2018). The following research can be mentioned in the review of the research literature and the studies done in the field of strategic planning in sports. Haghdar Saheli et al (2022) in research titled "Compiling a Marketing Strategic Plan for Iran's Student Sports" 12 strengths, including communication with millions of students and extensive educational programs, 11 weaknesses (lack of experts, lack of a positive attitude towards the marketing category, etc.), They

identified 10 opportunities, including the increase in parents' desire for their children's sports in recent years, and 12 threats (low per capita student sports spaces, weak support of the country's senior managers for student sports, etc.). They stated that the student sports federation is in a ST strategic position. In another study conducted Beheshti et al (2021) under the title of Designing and compiling the strategic plan of the Board of Rural Sports and Local Indigenous Games of Khorasan Razavi Province and presenting development strategies, 16 strong points were identified, including continuous interaction with universities and academic centers, 20 weaknesses (lack of long-term planning, lack of skilled coaches, etc.), 21 opportunities, including the existence of natural capacities and changing attitudes of people and officials towards the positive role of rural sports, and 19 threats, such as the change in the taste of young people towards classic games and the placement of the board Rural sports and native and local games were reported in the WO strategic area. Also, the environmental analysis and development strategies of Mazandaran football conducted by Darzi Kholerdi et al (2022) indicate the existence of 17 strengths, including the existence of expert and experienced managers, 25 weaknesses (lack of continuous monitoring and evaluation, weakness in marketing, etc.), 13 opportunities, including the support of high-ranking managers of the province for football, and 19 threats, including fluctuations in the budget and allocated credits, increasing the tendency to unhealthy entertainment, etc., and placing Mazandaran football in a strategic WT position. Sajjadi et al (2022) in a study determined the Strategic Position and Developed a Strategic Plan for the Deputy of Athletics and Professional Development, in this regard, 6 strengths including the presence of program-oriented thinking in managers, 6 weaknesses including weakness in financial resources and the structure and management of resources

human, 6 opportunities (the presence of scientific and academic experts, the interest and attractiveness of championship sports among the people, etc.) and 6 threats, such as the reluctance of the private sector to invest in this field and to identify this deputy in terms of the strategic position in the situation conservatively identified. In another study titled "Determining the current situation and strategic position of the National Championship Sport" conducted by Sharbatzade et al (2022), the strategic position of championship sports was placed in a WT position and 10 strengths, including the quantitative and qualitative increase of coaches, 14 weaknesses (absence of suitable financial sponsors, insufficient attention to applied research, etc.), 10 opportunities and 12 threats were also identified. According to the results of Hashemi Siavoshani et al (2021), the human resources management of the Ministry of Sports and Youth has 4 strengths, and 27 weaknesses, including the weakness in institutionalizing and promoting sports culture among employees and the lack of a strategic document, 5 opportunities, including the existence of academic and consulting centers, are related to the need for human resources and 7 threats, and are in a WO position in terms of strategic location. Also, Farzan et al (2019) after SWOT analysis and identifying 6 strengths (abundance of expert human resources, improving the level of knowledge and awareness of human resources, etc.), 20 weaknesses, including the lack of spaces and facilities for fencing sports; 5 opportunities and 13 threats (limited government investment in this sport, limited media coverage, etc.) and the formation of the evaluation matrix of the internal and external factors of the fencing federation concluded that this federation should use WT strategies for its development. Another research entitled The Formulation of Marketing Strategies of the wrestling federation, which was conducted by Khademi et al (2019) indicated that the marketing of the wrestling federation was placed in a defensive position

and the use of relevant strategies for its development. In addition, 11 strengths, 25 weaknesses (lack of a specialized camp for holding national team camps, lack of a comprehensive marketing plan, etc.), 19 opportunities, and 22 threats were identified, including economic problems and the small share of sports in the household basket. Kocheryan et al (2022) in their research entitled "Factors of development of children's sports schools in rural areas" identified 8 strengths, including a significant number of suitable infrastructures and experienced coaches, 8 weaknesses, including poor information and advertising, 6 opportunities, and 6 threats. Also, the results of the research titled "Physical activity policies for children and adolescents in Brazil" conducted by Silva and Silva D.A.S (2022) show the identification of 10 strengths, including appropriate educational measures for the development of physical activity and free activities and programs, 9 weaknesses including things such as The lack of a strategic plan focusing on promoting physical activity, 8 opportunities including the role of the media, acceptance of family and friends about the effects of physical activity, and the interest and acceptance of the general public towards the subject of physical activity and 8 points of threat. In the study of SWOT analysis related to the 2korriku football school conducted by Govori et al (2019), using SWOT analysis, strengths (16) such as a significant increase in the number of students, weaknesses (11) such as lack of finances and marketing plan and 9 Opportunities including the ability to cooperate with other sports clubs and centers and 6 threats were identified. In this regard, the SWOT analysis of football training and sports programs and its effect on the physical literacy of female students conducted by Dyakova & Dyakov (2019) showed 6 strengths, 5 weaknesses, 4 opportunities, and 5 threats. Among the most important strengths identified are suitable training facilities and equipment, weaknesses such as the lack of information

about the benefits of women's football and the lack of experts and experienced people, opportunities such as the acceptance and positive attitude towards women's football among female audiences and threats such as the popularity of other sports than women's football and the lack of experienced staff in this field for women. In another study conducted by Altamirano et al (2018) entitled SWOT Analysis of kindergarten staff's Point of View in preventing overweight in preschool children in Brazil, 10 strengths, 9 weaknesses, 6 opportunities, and 8 threats were introduced. Among the most important strengths are access to the necessary infrastructure to increase children's physical activity and the responsibility of childcare centers regarding healthy nutrition; Weaknesses such as neglecting overweight in the preschool period as a health problem and misperception of the possibility of harming the child during physical activity; Among the opportunities, we can mention the desire to reduce the consumption of unhealthy foods and active games of parents with children, and factors such as economic restrictions and lack of access to safe public places were also mentioned as threats.

According to what was mentioned, there is no doubt about the high importance of strategic planning and its role in the development of various categories, including children's sports. However, one of the key stages of developing a strategic plan is determining the organization's strategic position. If this position is not determined correctly, the developed strategies will not be appropriate and will cause the organization to deviate from the right path, and as a result, various resources will be wasted. Determining the current position of an organization can determine future solutions and provide a way to reach the desired situation. In other words, the analysis of the current situation allows the planners to recognize the most important strategic issues that the organization is facing and to determine the priorities (Najafi et al, 2018). Considering the

high importance of developing physical activity and a healthy and active lifestyle in children and its role in the health and vitality of the future society, The current research aims to identify the strengths, weaknesses, opportunities, and threats of this area in the federation of general sports as the current main trustee of the development of children's physical activity in Iran by studying and examining the current situation, and by specifying its strategic position, determining the solutions be forward-looking and correct for the development of this category.

### Materials and Methods

The current research is a type of strategic study that has been conducted in a combined (qualitative-quantitative) manner in terms of practical purpose, in terms of collecting field information, and in terms of research method. The statistical population of the research included professors of physical education and sports sociology who are knowledgeable about the field of children's physical activity, Provincial physical training assistants of education, heads of talent search committees of sports federations, managers and expert coaches, and experts of children's game and sports clubs, and members of the Children's Sports and Physical Activity Association of the Federation of Public Sports that In the qualitative section, 19 people were selected based on experience and expertise, in a targeted manner (until theoretical saturation), and the quantitative section, to answer the questions of the questionnaire, 265 people were selected by the total number method. To collect data, available sources, upstream documents, research background, opinions of experts, and tools such as survey questionnaires, SWOT analysis, evaluation matrixes of internal and external factors, strategic positioning matrix, and holding strategic meetings were used. To achieve the research objectives in the qualitative part, a list of strengths, weaknesses, opportunities, and threats was prepared using



the Delphi method. It was finalized in 3 stages by experts, and then based on the prepared list, a questionnaire containing strengths (11 questions), weaknesses (12 questions), opportunities (14 questions) and threats (11 questions) with a five-point Likert scale from very high to very low were prepared and provided to the subjects. The validity of the questionnaire was checked and confirmed by 10 expert professors in this field. In addition, Cronbach's alpha method was used to estimate reliability. For this purpose, 30 questionnaires were completed by a part of the statistical population. After data processing, Cronbach's alpha was 0.94 for strengths, 0.95 for weaknesses, 0.89 for opportunities, 0.92 for threats, and finally for the total questionnaire it was 0.91.

In addition, to evaluate the internal factors, the internal factors evaluation matrix (IFE) was used. In this matrix, the final strengths and weaknesses were first listed, according to importance, each factor was given a score, and the sum of these coefficients should be equal to one. Then, according to the degree of influence, a rank (1 to 4) was assigned to each of the factors (rank 1 and 2 for weakness and rank 3 and 4 for strength) and then to determine the final score of each factor, the coefficient given in the rank is multiplied. The external factors evaluation matrix (EFE) was also used to evaluate external factors. In this matrix, the final opportunities and threats were first listed and given a score according to the importance of each of them, the sum of which should be equal to one. Then, according to the degree of influence, a rank (1 to 4) was assigned to each factor (threat rank 1 and 2 and opportunity rank 3 and 4), and then to determine the final score of each factor, the coefficient given in the rank is multiplied. To determine the strategic position, the evaluation matrix of internal and external factors (determination of strategic position) was used, So that the scores of the evaluation matrix of internal factors are placed in the horizontal dimension and the evaluation

matrix of external factors is placed in the vertical dimension to determine the position of the Children's Sports and Physical Activity Development Association of the Federation of Public Sports in its homes. In this matrix, scores are determined in a spectrum including the weak part (1 to 2.5) and the strong part (2.5 to 4), and the strategic position is determined in one of the four regions.

To analyze the data collected in the quantitative part, descriptive statistics methods (mean, standard deviation, frequency percentage) and inferential statistics methods such as Kolmogorov Smirnov test to check the normality of data distribution, one-sample t-test to compare the population average, and confirmatory factor analysis were used to measure the validity of the questionnaire. All statistical procedures were performed using SPSS 22 and AMOS 24 software.

## Result

The results of the descriptive statistics showed that 37.2% of the research samples were men and 62.8% were women, that approximately 14.9% of the samples were between 20-30 years old, 62.8% were between 31-40 years old, 20.7% were between 41-50 years old and 1.7% were over 50 years old. In addition, 16.5% of the educational qualifications of the participants in this research were bachelor's degrees and less, 51.7% were master's degrees, and 31.8% of the educational qualifications of the samples were people with doctoral degrees. The percentage distribution of service experience of the samples also showed that 23.6% have experience of 5 years and less, 20.7% between 6-10 years, 35.1% between 11-15 years, 8.7% between 16-20 years, and 12 percent had more than 20 years of service. In addition, 82.6% of the samples had a physical education field of study and 17.4% had a non-physical education field of study.

In this section, the first strengths, weaknesses, opportunities, and threats are presented and

then matrixes of internal and external factors and the determination of the strategic position of the Children's Sports and Physical Activity Development Association of the Federation of Public Sports have been discussed.

According to what can be seen in Table 1, among the strengths, Establishment of specialized physical activity institutions and children's play and sports clubs with special facilities and equipment with factor loading (0.9) and The Existence of reliable scientific research authorities to increase knowledge and expand activities in the field of children's physical activity, such as "Scientific Center for Children's Games and Sports" and "Children's

Sports and Physical Activity Development Association of the Federation of Public Sports" with factor loading (0.89) were mentioned in the first and second place. Among the weaknesses can be mentioned respectively to the non-uniformity of urban services provided and available for children in different regions of the country compared to children living in Tehran and big cities with factor loading (0.77) and Lack of a coherent and applicable program to attract private and non-governmental financial resources in the field of children's physical activity with factor loading (0.76).

**Table 1:** Internal factors (strength and weakness) of children's physical activity development

<b>R o w</b>	<b>Strengths</b>	<b>Factor Loading</b>	<b>Mean</b>	<b>M.D</b>
1	Establishment of specialized physical activity institutions and children's play and sports clubs with special facilities and equipment	0.90	3.66	1.43
2	The existence of reliable scientific research authorities to increase knowledge and expand activities in the field of children's physical activity, such as "The Scientific Center for Children's Games and Sports" and "Children's Sports and Physical Activity Development Association of the Federation of Public Sports"	0.89	3.60	1.25
3	Holding educational courses, knowledge enhancement and coaching of children's sports and physical activity by national and international teachers	0.87	3.68	1.39
4	Cooperation with graduates interested in coaching children's games and sports in the field of physical education and other fields related to children	0.87	3.81	1.33
5	Increasing the awareness of the officials in the fields related to children regarding the high importance of mobility and physical activity and its role in the all-round development of the golden and sensitive period of childhood	0.86	3.78	1.27
6	Interaction and cooperation with experienced and specialized physical education faculties and professors in the field of sports and physical activity of children with different trends (motor behavior, sports physiology, sports psychology, etc.) as a significant and relevant scientific and academic resource	0.85	3.64	1.35
7	significant increase in the number of exercise classes, physical activity programs, games, and sports in kindergartens and sports clubs, due to the presence of more children	0.84	3.73	1.21
8	Holding native and local competitions and games with the combination of fun sports programs to introduce and motivate children to do physical activity and sports	0.80	3.52	1.29
9	Having expert, experienced, and knowledgeable managers in the field of children's physical activity	0.79	3.69	1.31
10	Increasing the number of children in kindergartens, preschool centers, and children's sports and game clubs	0.65	3.80	1.02
<b>R o w</b>	<b>Weaknesses</b>	<b>Factor Loading</b>	<b>Mean</b>	<b>M.D</b>

1	The non-uniformity of urban services provided and available for children in different regions of the country compared to children living in Tehran and big cities	0.77	4.26	0.95
2	Lack of a coherent and applicable program to attract private and non-governmental financial resources in the field of children's physical activity	0.76	4.06	0.88
3	Little attention to children with special needs (children with autism, mental and physical disabilities, etc.) by the relevant bodies	0.70	4.33	0.99
4	Lack of safe and suitable space for children's physical activity	0.69	4.29	0.94
5	Very little use of the results of research and studies done in the field of children's physical activity	0.68	3.98	1
6	Weakness in creating culture, informing and raising the knowledge and awareness of families regarding the necessity and positive effects of appropriate and targeted physical activity on the all-round development of children	0.67	4.15	0.85
7	Deprivation of a large percentage of children from regular and organized presence among peers due to lack of access to suitable facilities such as specialized sports and game clubs for children	0/66	4.10	0.99
8	Lack of specialized and trained coaches in the field of children's games and sports, and as a result, the activity of a large number of coaches without sufficient experience and expertise in the relevant centers	0.65	4.01	1.01
9	Lack of strict and continuous monitoring of sports facilities that organize children's game and sports classes	0.64	4.03	0.98
10	The absence of a suitable strategic plan in the field of children's physical activity and sports, and as a result, lack of proper use of upcoming opportunities	0.62	4.07	0.90
11	Lack of scientific and applied research in the field of children's physical activity	0.58	3.79	0.98

According to what can be seen in Table 2, among the available opportunities, Special attention of the national media and social networks to the category of guaranteeing the health of children in the shade of proper and standard physical activity, especially during the period of the Covid-19 disease with factor loading (0.80) and Considering special pages for children and adolescents in some media and press with factor loading (0.79) were mentioned in the first and second place. According to the reports presented, among the threat points are respectively, reducing the share of sports from the household basket due to economic problems

and cultural poverty with factor loading (0.81) the excessive tendency of children to play computer games, and the expansion of the digital nanny phenomenon with factor loading (0.78).

**Table 2:** External factors (opportunity and threat) of children's physical activity development

Row	Opportunities	Factor Loading	Mean	M.D
1	Special attention of the national media and social networks to the category of guaranteeing the health of children in the shade of proper and standard physical activity, especially during the period of the Covid-19 disease	0.80	4	1.04
2	Considering special pages for children and adolescents in	0.79	3.31	1.26



	some media and press			
3	The possibility of the presence of artists and popular figures of children in competitions and sports programs as a motivating factor and driving children to physical activity	0.76	3.43	1.32
4	The possibility of using the capacity, equipment and facilities of organizations and institutions through the arrangement of a memorandum of cooperation between	0.75	3.70	1.10
5	Existence of efficient laws as a result of physical activity in childhood, including paragraph 1 of the statute of the preschool period: development of physical capabilities and children's motor skills	0.74	3.73	1.15
6	The activity of a branch of the International Play Association (IPA)in Iran	0.73	3.57	1.13
7	Creating new perspectives and effectiveness from the country's key organizations in the field of children's physical activity, and as a result, planning and increasing individual and organizational motivations in the relevant institutions regarding the development of children's physical activities	0.72	3.73	1.01
8	Positive and growing acceptance by parents of physical activity and sports as a healthy pastime for their children	0.67	4.10	1.02
9	Emphasis on free education and physical training for all people at all levels, in the third paragraph of the third principle of the Constitution of the Islamic Republic of Iran	0.66	3.85	1.20
10	Increasingly accepting of Global, national and general societies to sports as an essential and constructive physical, mental, cultural, educational and moral factor	0.62	4.06	0.94
11	The potential of the private sector to invest in children's physical activity	0.60	3.61	1.08
12	The possibility of using human resources and expert forces in various other fields and sciences, including psychology, educational sciences, occupational therapy, etc. in this field	0.59	3.99	0.98
13	The richness of the country in resources and natural places that can be used by children, including plains, low hills, etc., for play and movement	0.52	3.85	1.16
<b>Row</b>	<b>Threats</b>	<b>Factor Loading</b>	<b>Mean</b>	<b>M.D</b>
1	Reducing the share of sports from the household basket due to economic problems and cultural poverty	0.81	4.48	0.90
2	The excessive tendency of children to play computer games and the expansion of the digital nanny phenomenon	0.78	4.69	0.72
3	High prevalence and multiplicity of obesity, overweight and inactivity in children	0.76	4.35	0.94
4	Increasing the costs of treating children's physical and mental illnesses due to immobility and reduced physical activity	0.69	4.20	0.96
5	The low share of physical activity of children from the government funds of the Ministry of Sports and Youth	0.67	4.29	0.89
6	Little and insufficient knowledge of the country's sports officials to potential capacities of children's physical activity	0.64	4.07	0.95
7	Indirect prevention of children's movement activity as a result of living in apartments and shrinking the space of houses	0.63	4.49	0.89
8	The place of not having children's physical activity in the organizational chart of any of the main sports decision-making institutions of the country	0.62	4.13	0.95
9	Lack of necessary motivation in the private sector to invest and develop places and promote physical activity of children in the country	0.61	4.21	0.91
10	Very limited media coverage of children's sports and related festivals	0.58	4.02	1.05

The results of the evaluation matrix of internal factors (Table 3), which is the result of examining internal factors (strength and weakness), showed that the final score of the evaluation matrix of internal factors is equal to 2.43 and since the sum of the weighted points of internal factors is less than 2.5, it indicates the dominance of weaknesses over strengths in the field of children's physical

activity development.

**Table 3: Internal Factors Evaluation Matrix (IFE) of children's physical activity development**

**Table 3: Internal Factors Evaluation Matrix (IFE) of children's physical activity development**

Strengths	Strengths	Strengths	Strengths
S1. Establishment of specialized physical activity children's play and sports clubs with special equipment	S1. Establishment of specialized physical activity children's play and sports clubs with special equipment	S1. Establishment of specialized physical activity children's play and sports clubs with special equipment	S1. Establishment of specialized physical activity children's play and sports clubs with special equipment
S2. The existence of reliable scientific research to increase knowledge and expand activities in children's physical activity, such as "The Children's Games and Sports" and "Physical Activity Development Association of the Federal Public Sports"	S2. The existence of reliable scientific research to increase knowledge and expand activities in children's physical activity, such as "The Children's Games and Sports" and "Physical Activity Development Association of the Federal Public Sports"	S2. The existence of reliable scientific research to increase knowledge and expand activities in children's physical activity, such as "The Children's Games and Sports" and "Physical Activity Development Association of the Federal Public Sports"	S2. The existence of reliable scientific research to increase knowledge and expand activities in children's physical activity, such as "The Children's Games and Sports" and "Physical Activity Development Association of the Federal Public Sports"
S3. Holding educational courses, knowledge coaching of children's sports and physical and international teachers	S3. Holding educational courses, knowledge coaching of children's sports and physical and international teachers	S3. Holding educational courses, knowledge coaching of children's sports and physical and international teachers	S3. Holding educational courses, knowledge coaching of children's sports and physical and international teachers
S4. Cooperation with graduates interested in games and sports in the field of physical fields related to children	S4. Cooperation with graduates interested in games and sports in the field of physical fields related to children	S4. Cooperation with graduates interested in games and sports in the field of physical fields related to children	S4. Cooperation with graduates interested in games and sports in the field of physical fields related to children
S5. Increasing the awareness of the officials to children regarding the high importance of physical activity and its role in the all-round golden and sensitive period of childhood	S5. Increasing the awareness of the officials to children regarding the high importance of physical activity and its role in the all-round golden and sensitive period of childhood	S5. Increasing the awareness of the officials to children regarding the high importance of physical activity and its role in the all-round golden and sensitive period of childhood	S5. Increasing the awareness of the officials to children regarding the high importance of physical activity and its role in the all-round golden and sensitive period of childhood
S6. Interaction and cooperation with experienced physical education faculties and professors and physical activity of children with different behavior, sports physiology, sports psychology, sports physiology, sports psychology, etc. significant and relevant scientific and academic resources	S6. Interaction and cooperation with experienced physical education faculties and professors and physical activity of children with different behavior, sports physiology, sports psychology, sports physiology, sports psychology, etc. significant and relevant scientific and academic resources	S6. Interaction and cooperation with experienced physical education faculties and professors and physical activity of children with different behavior, sports physiology, sports psychology, sports physiology, sports psychology, etc. significant and relevant scientific and academic resources	S6. Interaction and cooperation with experienced physical education faculties and professors and physical activity of children with different behavior, sports physiology, sports psychology, sports physiology, sports psychology, etc. significant and relevant scientific and academic resources
S7. significant increase in the number of physical activity programs, games and sports and sports clubs, due to the presence of more children	S7. significant increase in the number of physical activity programs, games and sports and sports clubs, due to the presence of more children	S7. significant increase in the number of physical activity programs, games and sports and sports clubs, due to the presence of more children	S7. significant increase in the number of physical activity programs, games and sports and sports clubs, due to the presence of more children
S8. Holding native and local competitions combination of fun sports programs to introduce children to do physical activity and sports	S8. Holding native and local competitions combination of fun sports programs to introduce children to do physical activity and sports	S8. Holding native and local competitions combination of fun sports programs to introduce children to do physical activity and sports	S8. Holding native and local competitions combination of fun sports programs to introduce children to do physical activity and sports
S9. Having expert, experienced and knowledgeable in the field of children's physical activity	S9. Having expert, experienced and knowledgeable in the field of children's physical activity	S9. Having expert, experienced and knowledgeable in the field of children's physical activity	S9. Having expert, experienced and knowledgeable in the field of children's physical activity
S10. Increasing the number of children in preschool centers, and children's sports and game clubs	S10. Increasing the number of children in preschool centers, and children's sports and game clubs	S10. Increasing the number of children in preschool centers, and children's sports and game clubs	S10. Increasing the number of children in preschool centers, and children's sports and game clubs
Weaknesses	Weaknesses	Weaknesses	Weaknesses
W1. The non-uniformity of urban services available for children in different regions compared to children living in Tehran and big cities	W1. The non-uniformity of urban services available for children in different regions compared to children living in Tehran and big cities	W1. The non-uniformity of urban services available for children in different regions compared to children living in Tehran and big cities	W1. The non-uniformity of urban services available for children in different regions compared to children living in Tehran and big cities
W2. Lack of a coherent and applicable program and non-governmental financial resources in children's physical activity	W2. Lack of a coherent and applicable program and non-governmental financial resources in children's physical activity	W2. Lack of a coherent and applicable program and non-governmental financial resources in children's physical activity	W2. Lack of a coherent and applicable program and non-governmental financial resources in children's physical activity
W3. Little attention to children with special needs (children with autism, mental and physical disabilities, etc.) by the authorities, the relevant bodies	W3. Little attention to children with special needs (children with autism, mental and physical disabilities, etc.) by the authorities, the relevant bodies	W3. Little attention to children with special needs (children with autism, mental and physical disabilities, etc.) by the authorities, the relevant bodies	W3. Little attention to children with special needs (children with autism, mental and physical disabilities, etc.) by the authorities, the relevant bodies
W4. Lack of safe and suitable space for children's physical activity	W4. Lack of safe and suitable space for children's physical activity	W4. Lack of safe and suitable space for children's physical activity	W4. Lack of safe and suitable space for children's physical activity
W5. Very little use of the results of research in the field of children's physical activity	W5. Very little use of the results of research in the field of children's physical activity	W5. Very little use of the results of research in the field of children's physical activity	W5. Very little use of the results of research in the field of children's physical activity

<b>W6.</b> Weakness in creating culture, informing knowledge and awareness of families regarding positive effects of appropriate and targeted the all-round development of children	<b>W6.</b> Weakness in creating culture, informing knowledge and awareness of families regarding positive effects of appropriate and targeted the all-round development of children	<b>W6.</b> Weakness in creating culture, informing knowledge and awareness of families regarding positive effects of appropriate and targeted the all-round development of children	<b>W6.</b> Weakness in creating culture, informing knowledge and awareness of families regarding positive effects of appropriate and targeted the all-round development of children
<b>W7.</b> Deprivation of a large percentage of and organized presence among peers due suitable facilities such as specialized sports children	<b>W7.</b> Deprivation of a large percentage of and organized presence among peers due suitable facilities such as specialized sports children	<b>W7.</b> Deprivation of a large percentage of and organized presence among peers due suitable facilities such as specialized sports children	<b>W7.</b> Deprivation of a large percentage of and organized presence among peers due suitable facilities such as specialized sports children
<b>W8.</b> Lack of specialized and trained coaches children's games and sports, and as a result, number of coaches without sufficient experience the relevant centers	<b>W8.</b> Lack of specialized and trained coaches children's games and sports, and as a result, number of coaches without sufficient experience the relevant centers	<b>W8.</b> Lack of specialized and trained coaches children's games and sports, and as a result, number of coaches without sufficient experience the relevant centers	<b>W8.</b> Lack of specialized and trained coaches children's games and sports, and as a result, number of coaches without sufficient experience the relevant centers
<b>W9.</b> Lack of strict and continuous monitoring that organize children's game and sports classes	<b>W9.</b> Lack of strict and continuous monitoring that organize children's game and sports classes	<b>W9.</b> Lack of strict and continuous monitoring that organize children's game and sports classes	<b>W9.</b> Lack of strict and continuous monitoring that organize children's game and sports classes
<b>W10.</b> The absence of a suitable strategic children's physical activity and sports, and proper use of upcoming opportunities	<b>W10.</b> The absence of a suitable strategic children's physical activity and sports, and proper use of upcoming opportunities	<b>W10.</b> The absence of a suitable strategic children's physical activity and sports, and proper use of upcoming opportunities	<b>W10.</b> The absence of a suitable strategic children's physical activity and sports, and proper use of upcoming opportunities
<b>W11.</b> Lack of scientific and applied research children's physical activity	<b>W11.</b> Lack of scientific and applied research children's physical activity	<b>W11.</b> Lack of scientific and applied research children's physical activity	<b>W11.</b> Lack of scientific and applied research children's physical activity

**Table 3: Internal Factors Evaluation Matrix (IFE) of children's physical activity development**

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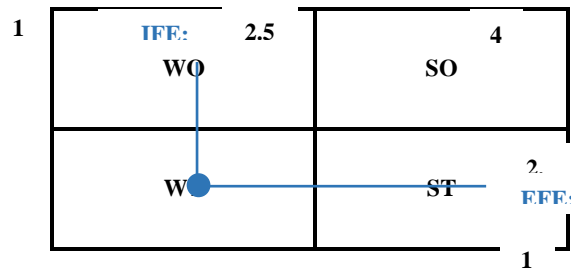
Also, the results of the evaluation matrix of external factors (Table 4), which is the result of examining external factors (opportunity and threat), showed that the final score of the evaluation matrix of external factors is equal to

2.48 and since the sum of the weighted points of external factors is less than 2.5, it indicates the dominance of threats over opportunities in the field of children's physical activity development.

**Table 4: External Factors Evaluation Matrix (EFE) of children's physical activity development**

Opportunities	Importance Coefficient	The Severity of the Factor	Score
<b>O1.</b> Special attention of the national media and social networks to the category of guaranteeing the health of children in the shade of proper and standard physical activity, especially during the period of the Covid-19 disease	0.03	3	0.09
<b>O2.</b> Considering special pages for children and adolescents in some media and press	0.02	3	0.06
<b>O3.</b> The possibility of the presence of artists and popular figures of children in competitions and sports programs as a motivating factor and driving children to physical activity	0.04	3	0.12
<b>O4.</b> The possibility of using the capacity, equipment and facilities of organizations and institutions through the arrangement of a memorandum of cooperation between	0.08	4	0.32
<b>O5.</b> Existence of efficient laws as a result of physical activity in childhood, including paragraph 1 of the statute of the preschool period: development of physical capabilities and children's motor skills	0.03	3	0.09
<b>O6.</b> The activity of a branch of the International Play Association (IPA)in Iran	0.04	3	0.12
<b>O7.</b> Creating new perspectives and effectiveness from	0.04	3	0.12

the country's key organizations in the field of children's physical activity, and as a result, planning and increasing individual and organizational motivations in the relevant institutions regarding the development of children's physical activities			
<b>O8.</b> Positive and growing acceptance by parents of physical activity and sports as a healthy pastime for their children	0.04	4	0.16
<b>O9.</b> Emphasis on free education and physical training for all people at all levels, in the third paragraph of the third principle of the Constitution of the Islamic Republic of Iran	0.04	3	0.12
<b>O10.</b> Increasingly accepting of Global, national and general societies to sports as an essential and constructive physical, mental, cultural, educational and moral factor	0.03	4	0.12
<b>O11.</b> The potential of the private sector to invest in children's physical activity	0.05	3	0.15
<b>O12.</b> The possibility of using human resources and expert forces in various other fields and sciences, including psychology, educational sciences, occupational therapy, etc. in this field	0.06	4	0.24
<b>O13.</b> The richness of the country in resources and natural places that can be used by children, including plains, low hills, etc., for play and movement	0.04	3	0.12
<b>Threats</b>			
<b>T1.</b> Reducing the share of sports from the household basket due to economic problems and cultural poverty	0.04	1	0.04
<b>T2.</b> The excessive tendency of children to play computer games and the expansion of the digital nanny phenomenon	0.08	1	0.08
<b>T3.</b> High prevalence and multiplicity of obesity, overweight and inactivity in children	0.05	1	0.05
<b>T4.</b> Increasing the costs of treating children's physical and mental illnesses due to immobility and reduced physical activity	0.02	2	0.04
<b>T5.</b> The low share of physical activity of children from the government funds of the Ministry of Sports and Youth	0.07	2	0.14
<b>T6.</b> Little and insufficient knowledge of the country's sports officials to potential capacities of children's physical activity	0.04	2	0.08
<b>T7.</b> Indirect prevention of children's movement activity as a result of living in apartments and shrinking the space of houses	0.04	1	0.04
<b>T8.</b> The place of not having children's physical activity in the organizational chart of any of the main sports decision-making institutions of the country	0.06	1	0.06
<b>T9.</b> Lack of necessary motivation in the private sector to invest and develop places and promote physical activity of children in the country	0.04	2	0.08
<b>T10.</b> Very limited media coverage of children's sports and related festivals	0.02	2	0.04
<b><math>\Sigma=1</math></b>			<b>2.48</b>



*Figure 1.* Internal External evaluation matrix of children's physical activity development

For the simultaneous analysis of internal and external factors, a tool called internal external matrix (IE) was used. This matrix shows the position of the Children's Sports and Physical Activity Development Association of the Federation of Public Sports. To form this matrix, the scores obtained from the evaluation matrices of internal and external factors should be placed in the horizontal and vertical dimensions of this matrix so that the desired position in this matrix is determined and able to specify a suitable strategy for it. As shown in Figure 1, considering that the internal factors evaluation matrix score was 2.43 and the external factors evaluation matrix score was 2.48, the desired position was placed in the WT area, which means the dominance of weaknesses over strengths and the inability to use opportunities and ward off possible threats.

## Discussion

Strategic thinking, as one of the most important management skills in today's world, examines changes in the existing situation and preparation to reach the desired situation by considering the conditions (Arabzadeh et al, 2022). In other words, strategic planning tells where the organization currently stands by analyzing the current situation, and by analyzing the desired situation, it says where the organization intends to reach for this purpose, it examines the internal and external factors of the organization. However since every organization has its unique environment, Therefore, discussing the results of different strategic research and comparing them in terms of alignment or non-alignment with each other, considering the separate and various variables

around them, The unprincipled comparison made has many contradictions. What can be compared and investigated in this type of studies are the models used in strategic planning (Sharbatzadeh et al, 2022). However, in this regard, children as the most important future capital and assets of any land need study and research in the form of identifying opportunities, threats, strengths, and weaknesses. Therefore, getting informed about the current situation in this field can help to create strategies to improve and develop children's physical activity ability and reach a favorable future.

Based on the findings of the research, the field of children's physical activity has strong points such as expert and experienced managers; Holding educational, knowledge-raising, and coaching courses for children's sports; establishment of specialized physical activity institutions and children's play and sports clubs; an increase in the number of children in kindergartens and children's play and sports clubs that These results are in agreement with parts of the research of Haghdar Saheli et al (2022), Sajjadi et al (2022), Darzi Kholerdi et al (2022), Sharbatzadeh et al (2022), Silva and Silva D.A.S (2022) and Dyakova and Dyakov (2019). For example, Haghdar saheli et al (2022) in developing the strategic marketing plan of the Student Sports Federation, mentioned the increase in the number and dealing with millions of students as well as educational programs among the strengths of their research. Silva and Silva D.A.S (2022) in their research titled "Physical activity policies for children and adolescents in Brazil"



introduced the provision of materials and training courses for the development of physical activity as one of the most important strengths. Therefore, it can be said that the existing strengths are valuable capacities that, if paid attention to by the managers of children's physical activity and used favorably, can improve the level of children's physical activity from the current situation to a more suitable position.

Also, the findings of the research showed that the field of physical activity of children with weaknesses such as the lack of specialized and trained coaches; Weakness in informing, creating culture, and raising the knowledge and awareness of the audience; lack of targeted strategic plan; The lack of safe and suitable space for children's physical activity. The mentioned cases with parts of the research results of Beheshti et al (2021), Sajjadi et al (2022), Haghdar sahelii et al (2022), Sharbatzadeh et al (2022), Khademi et al (2019), Kacheryan et al (2022), Govori et al (2019) and Dyakova and Dyako (2019) agree. In this regard, Beheshti et al (2021) in their research mentioned things such as a lack of long-term planning, poor performance, insufficient advertising in the introduction and promotion of local indigenous games, and the low number of skilled coaches as weaknesses. In addition, Kocheryan et al (2022) in the study of the development factors of children's school sports in rural areas also mentioned the lack of young and experienced coaches as a weakness.

After the investigation in the current research, it was found that the field of children's physical activity has opportunities such as the increasing acceptance of sports by societies as a basic and constructive physical, mental, and cultural factor; Special attention of the national media and social networks to the category of guaranteeing the health of children in the shade of standard and appropriate physical activity; The possibility of using human resources and specialist forces in various fields and sciences;

Parents' positive and growing acceptance and reception of physical activity and sports as a healthy pastime for their children and... These findings agree with parts of the research of Darzi Kholerdi et al (2022), Beheshti et al (2021), Haghdar sahelii et al (2022), Sajjadi et al (2022), Silva and Silva D.A.S (2022) and Dyakova and Dyakov (2019). In this context, Sajjadi et al (2022) in determining the strategic position and developing a strategic plan for the development of championship and professional sports introduced the interest and attractiveness of sports among the public and the presence of academic experts as opportunities. In addition, Dyakova and Dyakov (2019) stated the creation of a positive attitude towards sports and the spread of sports in general among the audience as among the opportunities of their research. As the findings of the research show, there are significant opportunities for the development of children's physical activity in the country, which can be used to strengthen the strength points and reduce the weaknesses.

The findings of the research show that some of the threats to children's physical activity include reducing the share of sports in the household basket due to economic problems and cultural poverty; lack of motivation in the private sector to invest and develop children's sports facilities; Indirect prevention of children's motor activity as a result of apartment living; The excessive tendency of children to play computer games and the spread of the phenomenon of digital nanny and... These results are in agreement with parts of the research of Govori et al (2019), Altamirano et al (2018), Darzi Kholerdi et al (2022), Beheshti et al (2021), Sajjadi et al (2022), Haghdar sahelii et al (2022), Sharbatzadeh et al (2022) and Farzan et al (2019). For example, Beheshti et al (2021) in their research mentioned the reluctance to participate and invest in the private sector, changing the taste of young people towards classic games and virtual entertainment, livelihood, economic, and apartment living problems as threats. In

addition, Govori et al (2019) stated the effect of economic and social crises on the reduction of living standards as one of the threat points in their research entitled SWOT Analysis of the football school.

Regarding the strategic location of children's physical activity, the results of the research showed that the final score of the internal factors evaluation matrix is less than 2.5 (equal to 2.43). Therefore, it can be said that it has weaknesses in terms of internal factors (strengths and weaknesses). In addition, the final score of the evaluation matrix of external factors is less than 2.5 (equivalent to 2.48), which shows the superiority of threats over opportunities. In general, based on the internal and external evaluation matrix, it was determined that the area of children's physical activity is located in the WT area and the defensive strategic position is the dominant strategy in this section. The location of children's physical activity in the defensive area in the present study is in agreement with the findings of Darzi Kholerdi et al (2022), Sharbatzadeh et al (2022), Farzan et al (2019) and Khademi et al (2019) and it is inconsistent with the results of the research of Haghdar saheli et al (2022), Sajjadi et al (2022), Beheshti et al (2021), and Hashemi siavoshani et al (2021).

## Conclusion

Finally, it should be noted that the results of the current research compiled the strategic position of children's physical activity with a scientific approach, and since the correct determination of this position is of great importance, The results can help the Public Sports Federation (Association for the Development of Children's Sports and Physical Activity) in formulating effective strategies and preventing the wastage of various resources in this sector. But what is clear about this research so far is that the stages of determining the strategic position of different organizations all follow the same rules, However since every organization has a

unique internal and external environment, the findings of this research provide results by identifying the current situation and the strategic position of children's physical activity That the relevant organization can facilitate the process of executing its strategic plan well and achieving the goals set in the vision.

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## References

1. Aarabi, M. (2011). *The Handbook of Strategic Planning*, 11th Ed, Tehran: Iranculturestudies.
2. Arabzadeh Tafti, S. M. A., Goodarzi, M., Jalali Farahani, M., & Alidoust, E. (2022). Designing and Preparing the Strategic Development Plan for Yazd Province's Public Sport. *Sport Management Journal*, 14(1), 68-90.
3. Beheshti, R., Samiyi, S., Heydari, R., & Kashtidar, M. (2021). Designing and compiling the strategic plan of the Board of Rural Sports and Local Indigenous Games of Khorasan Razavi Province and presenting development strategies. *Applied Research in Sport Management*, 11(1), 75-105.
4. Darzi Kholerdi, R., Hami, M., Shojaei, V., & Sanaei, M. (2022). Prioritize the development of Mazandaran football strategies using the QSPM approach. *Sport Physiology And Management Investigations*, 14(2), 67-85.
5. Dyakova, G., & Dyakov, T. (2019). SWOT-Analysis of organization for including A Football game in the educational Programm on physical culture and sport for female students. *Trakia Journal of Sciences*, 17(1), 652-656.
6. Farzan, M., Hajianzahai, Z., Nikaein, Z., & Bagheri, Y. (2019). Developing a Strategic Plan for Iran Fencing Federation with SWOT Analysis

- Method. Sport Physiology And Management Investigations, 11(3), 105-115.
7. Haghdar Saheli, M., Mahmoudi, A., Ghorbani, M. H., & Hallaji, M. (2022). Compiling a Marketing Strategic Plan for Iran's Student Sports. *Quarterly Journal of Education*, 38(3), 105-124.
  8. Hashemi Siavoshani, M., Javadipour, M., & Ghorbani, M. H. (2021). Codification of Strategic Human Resource Management Plan in Ministry of Sports and Youth. *Human Resource Management in Sports*, 8(2), 237-253.
  9. Hosseini, S. S., Hamidi, M., Rajabi, A., & Sajjadi, S. N. (2013). Identification of Strengths, Weaknesses, Opportunities and Threats for Talent Identification in Iran Championship Sport and Its Bottlenecks and Challenges. *Sport Management Journal*, 5(2), 29-54.
  10. Khademi, A., Majedi, N., & Naderinasab, M. (2019). Codification of I.R.I Wrestling federation marketing strategies. *Sport Management And Development*, 7(4), 18-39.
  11. Kocheryan, M., Vashlyeva, I., & Volovik, T. (2022). Factors of development of children's sports schools in rural areas. Paper presented at the BIO Web of Conferences, England.
  12. Lllagevic-Govori, A., Tahiraj, E., Gashi, A., & Llagjaj, D. (2019). Swot analyse of football school "2 korriku". *Sport Mont*, 17(1), 87-90.
  13. Manochehri, M., Hemati Nezhad, M., Rahmati, M. M., & Sharifiyan, E. (2018). Identification and Analysis effective factors of institutionalize sport culture in children and adolescence in view of physical education teachers. *Sport Management Journal*, 10(1), 163-179.
  14. Najafi, A., Hamidi, M., Sajjadi, S. N., & Rajabi, H. (2018). Determination of the Strategic Position of the Sport Chancellor in Islamic Azad University. *Sport Management Studies*, 9(45), 93-114.
  15. Nemati, T., Ayram, M., & Ramzi, J. (2016). Management of sports for children and adolescents. Tehran: Farhikhtegan-d-pub.
  16. Ortega-Altamirano, D. V., Rodríguez-Oliveros, G., González-Unzaga, M. A., & Reyes-Morales, H. (2018). Perceptions of childcare staff for preventing overweight in Mexican preschool children: A SWOT analysis. *salud pública de méxico*, 60, 166-174.
  17. Padash, D. (2021). Active girls today, healthy mothers tomorrow. The growth of physical education, 21(2), 6-7.
  18. Sajjadi, S. N., Rahmati, T., Hamidi, M., & Khabiri, M. (2022). Determining the Strategic Position and Develop Strategic Plan of the Deputy of the Athletics and Professional Development. *Sport Management Journal*, 14(1), 1-25.
  19. Sayadi, M. A., Mangashti Joni, Y., & Ahmadi, N. (2020). The most effective indicators of children's sports education at the beginning of life by the family. The growth of physical education, 70(20), 57-62.
  20. Sharbatzade, R., Naderinasab, M., & Alidoust, E. (2022). Determining the current situation and strategic position of the National Championship Sport. *Journal of Development Evolution Management*, 13(47), 115-125.
  21. Silva, D. A. S., & Silva, C. F. d. (2022). Physical Activity Policies for Children and Adolescents in Brazil: Analysis for the Report Card Brazil on Physical Activity for Children and Adolescents. *International Journal of Environmental Research and Public Health*, 19(16), 10152.
  22. Sobhani, A., Eghballi, K., Alishahi, M., & Mansouri, H. (2019). Determining

- Strategic Position of University Students Sport in Public Universities of Iran. *Applied Research in Sport Management*, 7(3), 85-96.
23. Zhao, N.-N., Dong, G.-P., Wu, W., Wang, J.-L., Ullah, R., & Fu, J.-F. (2019). FTO gene polymorphisms and obesity risk in Chinese population: a meta-analysis. *World journal of pediatrics*, 15, 382-389.