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Formulation and Determination of the Strengths, Weaknesses, Threats, and Opportunities Governing Swimming in Iraq

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ABSTRACT

The present study aimed to formulate and determine the strengths, weaknesses, opportunities, and threats governing children's swimming in Iraq in order to provide practical strategies for the development of this fundamental and medal-winning sport. This applied descriptive-analytical study included sport managers, coaches, young swimmers, and physical education students in Iraq. A total of 134 participants were selected purposively. Data were collected through documentary studies, expert interviews, and a researcher-made questionnaire. The face and content validity of the questionnaire were confirmed, and its reliability, measured by Cronbach's alpha, ranged from 0.85 to 0.92. Descriptive statistics, the Friedman test, Internal and External Factor Evaluation matrices, the Internal-External matrix, and SWOT analysis were used for data analysis. The results showed a significant difference among the four SWOT factors. The most important strengths included the existence of educational institutions related to physical education, the presence of specialized sport managers, and the existence of talented children and adolescents. The most important weaknesses included insufficient attention to children's needs and interests, limited access to standard facilities, and lack of financial resources. The existence of potential talents, increased participation of children in sport activities, and expansion of sport events were identified as the most important opportunities. In addition, the increased cost of swimming pool maintenance, the rising price of equipment, and children's tendency toward sedentary leisure activities were among the most important threats. Based on SWOT analysis, 11 strategies were formulated in four groups: aggressive, competitive, conservative, and defensive. The development of children's swimming in Iraq requires strategic planning, coordination among sport and educational institutions, sustainable investment, and serious attention to children's age-related needs. It is suggested that establishing an integrated talent identification system, training specialized coaches, and standardizing equipment and swimming pools for children should be prioritized in executive programs.

Keywords: Children's swimming; Iraqi sport; SWOT analysis; strategic planning; sport development



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Introduction

Considering characteristics such as the enjoyable nature of swimming, religious and cultural recommendations regarding learning it (Lazari et al., 2022), and its essential role in protecting human life in water-related accidents, swimming is recognized as one of the important sports both in individual life and in the international sport arena (Razavi et al., 2012).

Swimming ranks second among medal-winning sports in the Olympic Games and includes various events such as freestyle, backstroke, breaststroke, butterfly, individual medley, medley relay, freestyle relay, marathon swimming, and artistic swimming for women, all of which distribute a large number of medals (Firouzi et al., 2012). After athletics, swimming is considered one of the most popular Olympic sports. However, despite religious emphasis and the potential social interest in this sport, swimming in Iraq has not yet achieved its deserved status at the Asian or global levels and has not won even one Olympic medal. This situation indicates that fundamental and targeted measures by the government, the relevant federation, and the media are necessary to improve the current conditions (Firouzi et al., 2012).

An examination of Iraqi swimmers' performance, despite the long history of the federation, shows that no medals have been won in official and prestigious international events such as Asian Championships, World Championships, Asian Games, Olympic Games, and World University competitions. This clearly reflects structural weaknesses and challenges in this sport. In this regard, Mirdar (2002) showed that comparing the records of Iranian male swimmers with the records of different male age groups in Asia and the world revealed a significant difference; in some cases, recorded performances were even weaker than those of 14-15-year-old Asian boys and Asian women (Firouzi et al., 2012). These findings indirectly demonstrate the considerable gap between regional countries, including Iraq, and international swimming standards.

The history of swimming as an organized sport in many countries of the region, including Iraq, is relatively short, and its growth has not been remarkable compared with other sports. However, given Iraq's geographical position and access to water resources, as well as cultural and religious emphases, this sport is expected to have a higher status (Azizebrahim & Behloul, 2013). Sport policymakers are well aware that achieving podium success at the Asian Games is impossible without targeted investment in foundational and medal-winning sports such as swimming, athletics, gymnastics, and medal-diverse disciplines such as fencing, shooting, rowing, and boxing. Achieving this goal requires accurate planning, continuous attention, and long-term investment in these disciplines (Firouzi et al., 2012).

In recent years, some sports such as athletics and, to some extent, shooting have paved their way toward medal success in Asian and Olympic competitions. In contrast, swimming in many regional countries, including Iraq, still has no share in these achievements and merely observes the medal-winning success of other countries. Among high-medal sports, swimming, diving, and water polo in the men's section together include approximately 78 gold, silver, and bronze medals, 26 of which are gold. Strategic reliance on these sports can place countries among the leading Asian powers (Hosseini et al., 2013).

By contrast, costly and controversial team sports such as football, basketball, volleyball, and handball, despite extensive media coverage, have a very limited share in the Asian Games medal table and are usually limited to a single medal. Meanwhile, disciplines such as athletics with 120 medals, swimming with 60 medals, gymnastics with 50 medals, and fencing with 48 medals have high medal diversity and capacity. Therefore, improving the position of countries at continental and global levels is possible only through investment in these disciplines (Yousefian, 2022).

Razavi et al. (2012), in a study on the barriers and challenges of swimming development in Iran, emphasized coherent planning at the level of federations and sport boards as the most important factor in swimming development and identified the absence of strategic and long-term planning as the main challenge of this sport (Razavi et al., 2012). Foundational sports such as swimming provide a suitable platform for the development of other sports and can play a decisive role in medal success and the improvement of countries' positions in the Asian Games and Olympic Games. Success in swimming requires

proper and long-term planning, systematic talent identification, clear visions, and effective use of existing facilities and resources (Yousefian, 2022).

Accordingly, the development and promotion of foundational sports such as swimming, athletics, and gymnastics are among the main priorities of sport policy-making, because the growth of these disciplines strengthens other sports as well. The experience of developed countries shows that sustainable success in the international arena results from the implementation of codified long-term strategic programs, and all well-known sport nations possess such upstream documents. Australia and the United Kingdom are prominent examples in this field.

Australia's macro vision in strategic swimming documents provides a clear model for the development of this sport in Iraq. Australia has defined its ultimate goal as becoming the "strongest nation in swimming." To this end, Australia has built the foundations of sustainable swimming development through elite development, targeted talent identification, continuous support for elite swimmers, improvement of coach education quality, and the organization of high-level national and international competitions (Alder & Ward, 2001; Lerner, 1999). The Australian Swimming Association (1998), by critically examining existing problems, identified challenges such as weakness in including swimming education in schools, high coaching costs, lack of connection between private and public sectors, excessive focus on a limited number of talents, fragmented policy-making, unfair distribution of facilities and swimming pools, and neglect of strategic development approaches (Firouzi et al., 2012).

The United Kingdom has also adopted a broad and long-term approach and has developed specific strategic plans for different Olympic periods from 1998 to the London 2008 Olympic Games and later horizons. Its vision is to become the best nation in swimming by 2020. Key strategies include world-standard education through international coaches, establishment of scientific-practical specialized centers for aquatic disciplines such as swimming, diving, and water polo, reduction of costs through the use of expert volunteers, hosting prestigious international events, effective presence of British representatives in international bodies such as FINA, and broad national talent identification (Green, 2007; Wilkinson & Keech, 2026).

Structural and managerial weaknesses are among the most important obstacles to swimming development in countries such as Iraq. Tavakoli (2006) argues that lack of familiarity of federation officials with modern sport management, absence of a realistic perspective, lack of long-term planning, unwillingness to create fundamental changes, and failure to use competent coaches are persistent factors in the backwardness of this sport (Firouzi et al., 2012).

In addition, shortages of infrastructure and equipment are major barriers to success. Kargar et al. (2004) reported that the number of standard swimming pools does not meet the needs of competitive swimming and that most pools have only recreational functions. Moreover, the uneven distribution of pools across different regions and the fact that nearly half of them are outdoor facilities prevent effective use during cold seasons ((Ghahreman Tabrizi et al., 2017). In the area of talent identification, Gaeini et al. (2005) showed that the current system lacks a scientific and coherent mechanism for identifying and directing top talents toward swimming; many elite swimmers entered the sport by chance rather than through scientific indicators. Furthermore, neither federations nor provincial boards have so far developed clear strategic plans for the growth of swimming, although in recent years committees have begun to form in some provinces for this purpose (Moran et al., 2012).

The strategic planning process in swimming, as in other organizational fields, is based on predicting future objectives, identifying required actions for responding to change, and reducing the risks caused by uncertain factors. The main aim of

this program is to reduce the probability of error and increase the alignment of actions with environmental opportunities. In this process, alignment between internal organizational resources and external opportunities is considered, and decision-making is carried out through a “strategic window” so that the best opportunities for resource allocation are selected. The domain of strategic decisions includes the operational environment, mission, and macro-objectives of the organization (Bryson, 2018).

In today’s world, where economic and sport activities occur in a competitive environment, all organizations must use strategic planning approaches for survival and progress. If this planning is conducted scientifically and accurately, it can serve as an effective tool for achieving sustainable success in the global competitive environment. Given structural differences among sport organizations in size and capacity, the formulation and implementation of strategic programs must be adapted to the characteristics of each country and sport institution. The main objective is to use successful global experiences, such as those of Australia and the United Kingdom, and adapt them to the domestic conditions of Iraq so that swimming success can be achieved sustainably and strategically (Bryson, 2018; Green, 2007).

Strategic planning in swimming is a dynamic, continuous, and complex process of organizational change. If certain key characteristics are met, it can function as a successful and comprehensive model for the development of this sport. This type of planning is future-oriented and seeks to identify and manage the differences between the current and future conditions of swimming in Iraq over the next five to ten years.

In strategic planning, the focus is on creating a desirable future for the sport organization - a future shaped not merely by existing conditions but also by probable trends, environmental changes, and potential capacities. This approach is flexible and, by drawing a macro-image of the desired state of swimming, enables purposeful orientation of managerial decisions. From this perspective, strategic planning helps Iraqi swimming authorities create a logical alignment among goals, resources, and environmental conditions.

Strategic planning also provides the necessary ground for adapting swimming to internal and external environments and, through a coherent framework, determines the path toward macro-objectives. This framework, by relying on a precise analysis of the current situation, internal strengths and weaknesses, external opportunities and threats, and potential capacities, prepares the ground for sustainable competitive advantage in Iraqi swimming. Under such conditions, the management system will be able to respond to changes, challenges, events, and opportunities on the basis of the insight and mission defined in the strategic planning process (Bryson, 2018; Williams & Clowney, 2007).

It should be emphasized that the real value of any strategic planning process is realized when the main decision-makers in swimming can institutionalize strategic thinking and action at different managerial levels. Strategic planning is not an end in itself; rather, it is a set of concepts, tools, and approaches that help managers make more informed and effective decisions. If strategic thinking and behavior become organizational habits, the formal planning process can even be simplified. Accordingly, using strategic planning in Iraqi swimming can provide the basis for precise identification of strengths, weaknesses, opportunities, and threats and can pave the way for gradual development through realistic strategic documents. Such an approach can enable Iraqi swimming to move closer to higher levels of competitiveness among regional and Asian countries and, in the long term, gain the ability to participate effectively in continental and international competitions, including world championships and the Olympic Games.

Methodology

This applied study used a descriptive-analytical approach and was conducted with the aim of formulating a strategic plan for the development of children's swimming in Iraq. Its focus was on improving the managerial structure and long-term performance of this foundational sport. Data Collection Tools: Documentary studies, including library resources, articles, and theses, were used to formulate the theoretical framework (Bryson, 2018; David et al., 2020). Expert interviews were conducted with physical education professors, sport management specialists, and active managers to determine SWOT components (Bryson, 2018). A researcher-made questionnaire based on a five-point Likert scale was used. Its face and content validity were confirmed, and its reliability was appropriate, with Cronbach's alpha ranging from 0.85 to 0.92. Statistical Population and Sample: The population included managers, coaches, young swimmers, and physical education students in Iraq. A total of 134 individuals were purposively selected as the sample to cover both managerial and technical perspectives.

Instruments

Three instruments were used: (1) a current-status assessment form containing 127 questions in the areas of human resources, infrastructure, finance, and communication; (2) an internal factors questionnaire containing 32 items with a Cronbach's alpha of 0.86; and (3) an external factors questionnaire containing 23 items with a Cronbach's alpha of 0.85.

Data Collection and Analysis Procedure

To formulate the strategic plan for children's swimming in Iraq, data collection was carried out in several systematic stages. First, through document review, current-status analysis, and expert opinions, the SWOT analysis was developed. For this purpose, 57 items were identified, and after the questionnaire was distributed, strengths, weaknesses, opportunities, and threats were ranked using the Friedman test. In the next stage, the External Factor Evaluation (EFE) matrix was used to evaluate the external environment. In this matrix, opportunities and threats were scored according to weight and rating from 1 to 4. By calculating the final score, the general state of the external environment of children's swimming was determined; a score above 2.5 indicated the dominance of opportunities, while a score below 2.5 indicated the dominance of threats. To evaluate internal factors, the Internal Factor Evaluation (IFE) matrix was applied. In this matrix, strengths and weaknesses were scored according to importance coefficients and ratings from 1 to 4. The total final score indicated the overall internal position of children's swimming, with scores above 2.5 representing a desirable internal situation and scores below 2.5 indicating dominant weaknesses. After separately evaluating internal and external factors, the Internal-External (IE) matrix was used to determine the strategic position of children's swimming. The scores obtained from the IFE and EFE matrices were placed on the horizontal and vertical axes, respectively, and the strategic position of children's swimming was identified in one of the IE matrix areas. Finally, strategies were formulated using the SWOT matrix. In this process, by simultaneously comparing internal and external factors, strategies were extracted in four categories: aggressive (SO), conservative (WO), competitive (ST), and defensive (WT). The selection and finalization of executable strategies were carried out using Delphi methods, brainstorming, and the participation of the strategic council.

Data Analysis Method

Descriptive statistics, including frequency, percentage, tables, and charts, were used for data analysis. In the inferential statistics section, the Friedman test was applied to rank factors and determine priorities. All statistical analyses were performed using SPSS version 25. In addition, IFE, EFE, IE matrices, and SWOT analysis were used as the main strategic analysis tools.

Research Findings

After examining and analyzing the current status of children’s swimming in Iraq and identifying components related to strengths, weaknesses, opportunities, and threats in this field, the nonparametric Friedman test was used to prioritize and rank the extracted factors. Accordingly, the Friedman test was conducted separately for each of the four SWOT dimensions - strengths, weaknesses, opportunities, and threats - in order to determine the relative importance of each item. The results of the statistical tests are presented in Table 1. As the results show, in all four lists related to strengths, weaknesses, opportunities, and threats, the obtained significance level was lower than the test error value. Therefore, it can be concluded that there was a statistically significant difference among the items of each list. These findings provide the necessary basis for ranking internal and external factors affecting children’s swimming in Iraq and play an important role in formulating the strategic plan for this field.

Table 1. Determining the Current Status of SWOT Factors Related to Swimming Development in Iraq

Row	Chi-square	df	Significance level	Test error	Result
Strengths	53.10	8	0.05	0.001	Significant
Weaknesses	45.69	22	0.05	0.002	Significant
Opportunities	25.73	7	0.05	0.001	Significant
Threats	64.33	14	0.05	0.001	Significant

Table 2. Ranking Results of Strengths of Children’s Swimming in Iraq

Strengths	Mean	Mean rank	Overall rank
Existence of educational institutions and structures related to physical education and sport	4.18	6.63	1
Presence of specialized sport managers familiar with executive affairs	3.66	5.40	2
Existence of talented children and adolescents with an appropriate level of physical activity	3.61	5.17	3
Possibility of using the capacity of elite and national team athletes	3.54	5.07	4
Availability of suitable sport spaces and facilities, especially swimming pools	3.52	4.99	5
Achievement of notable titles and results in sport competitions	3.49	4.99	6
Relatively suitable access of children to sport facilities	3.43	4.82	7
Sending girls’ and boys’ teams to domestic and international competitions	3.21	4.20	8

Table 3. Ranking Results of Weaknesses of Children’s Swimming in Iraq

Weaknesses	Mean	Mean rank	Overall rank
Insufficient attention to children’s needs and interests in designing grassroots swimming programs	4.48	13.80	1
Limited access of children to standard facilities and equipment for swimming instruction	4.16	14.70	2
Lack of sufficient budget and financial resources for the development of children’s swimming	3.97	13.44	3
Absence of a suitable incentive and motivational system for children participating in swimming programs	3.90	13.55	4
Lack of supplementary and specialized educational courses for children’s swimming coaches	3.90	13.36	5
Limited financial credits allocated to grassroots swimming	3.89	13.52	6
Absence of a codified and targeted strategy for the development of children’s swimming	3.77	11.90	7
Weak support by responsible institutions for children’s swimming programs	3.74	12.19	8
Absence of a system for continuous planning, monitoring, and evaluation in children’s swimming education	3.74	11.26	9
Shortage of standard and safe children’s swimming equipment in educational and sport centers	3.74	12.12	10
Weakness in providing suitable facilities and equipment for talent identification in children’s swimming	3.72	12.09	11
Absence of specified indicators and standards in children’s swimming education facilities	3.72	11.58	12

Absence of appropriate procedures for evaluation, supervision, and control of children's swimming programs	3.70	11.52	13
Failure to hold specialized educational, refereeing, and coaching courses in children's swimming	3.67	11.43	14
Absence of a coherent and specialized database in the field of children's swimming	3.66	11.52	15
Managerial instability in the executive and administrative structure of children's swimming	3.66	11.70	16
Failure to make effective use of the capacity of public institutions and units in promoting children's swimming	3.66	11.39	17
Improper distribution of human resources in coaching, refereeing, and educational roles for children's swimming	3.62	11.20	18
Limited use of trained specialists in the field of children's swimming	3.61	11.80	19
Absence of material support and incentive systems for coaches and executive agents of children's swimming	3.56	11.12	20
Mismatch between organizational structure, human resources, duties, and volume of activities in children's swimming	3.54	10.60	21
Traditional attitude of some decision-makers toward the development of children's swimming	3.28	9.34	22

Table 4. Ranking Results of Opportunities of Children's Swimming in Iraq

Opportunities	Mean	Mean rank	Overall rank
Existence of potential talents among children for identification and development in swimming	3.84	5.63	1
Increasing reception and participation of children in organized sport activities	3.30	4.54	2
Increase in the number of sport events and competitions that provide children with opportunities for participation and competitive experience	3.29	4.52	3
Expansion of sport culture and attractiveness of sport activities among children and adolescents	3.28	4.59	4
Existence of supportive laws, policies, and programs in upstream documents related to foundational sport development	3.26	4.40	5
Support of sport managers and officials for talent identification and development programs in children's swimming	3.11	4.40	6
Emphasis of cultural and social teachings on the importance of sport and physical activity at foundational ages	3.08	4.13	7

Table 5. Ranking Results of Threats of Children's Swimming in Iraq

Threats	Mean	Mean rank	Overall rank
Increase in the costs of maintaining and operating pools and indoor spaces for children's swimming instruction	4.66	7.43	1
Increase in the price of specialized equipment, supplies, and necessities required for children's swimming instruction	4.36	9.72	2
Increasing tendency of children toward unhealthy and sedentary leisure activities instead of participating in sport activities, including swimming	4.21	9.17	3
Weakening of the role of foundational sport education as the main infrastructure for children's swimming development	4.18	9.04	4
Decrease in children's motivation, patience, and willingness to participate continuously in regular swimming education programs	4.16	8.95	5
Lack of necessary coordination and coherence among educational, sport, and executive institutions in children's swimming	4.10	8.48	6
Unregulated acceptance of children in programs without considering physical readiness and facility capacity	4.03	8.35	7
Prevalence of sedentary and inactive lifestyles among children	3.98	8.28	8
Weak position of champions and sport role models in promoting the culture of children's swimming through the media	3.97	8.16	9
Increase in costs related to cooling, heating, and facility systems of children's swimming pools	3.96	7.84	10
External interventions and pressures on the executive structure of children's swimming programs outside specialized frameworks	3.93	7.76	11
Weakness in effective advertising and information activities for attracting and retaining children in swimming	3.92	7.66	12
Insufficient attention by upstream institutions to the position of specialized children's swimming education centers in training expert human resources	3.72	7.13	13

Based on the SWOT analysis, a total of 11 strategies were formulated for children's swimming in Iraq. These strategies are presented in Tables 6 to 9.

Table 6. SO Strategies and Executive Programs

Internal factors: Strengths (S)	External factors: Opportunities (O)	SO strategies
Children's swimming in Iraq possesses diverse and identifiable talents in foundational age groups; limited but reliable achievements in domestic and regional competitions for children's age groups; possibility of using active coaches, young forces, and interested human resources in grassroots swimming; existence of educational centers and spaces related to physical education and aquatic activities in some Iraqi provinces.	Existence of laws and structural support for foundational sport and children's sport in Iraq's sport system; emphasis of official and educational institutions on the role of aquatic sports in children's physical and mental health; support of some managers and policymakers for development programs in children's swimming; cultural interest of children and families in sport and recreational aquatic activities; positive managerial view of children's sport as a long-term social investment.	Strengthening organized children's participation in grassroots swimming programs and competitions by relying on existing talents; developing children's swimming infrastructure and spaces by using legal and managerial support.

Table 7. ST Strategies and Executive Programs

Internal factors: Strengths (S)	External factors: Threats (T)	ST strategies
Limited but effective achievements in children's swimming competitions at local and national levels in Iraq; possibility of sending talented grassroots swimmers to domestic and regional competitions appropriate to their age groups; use of active coaches and young human resources in developing children's swimming; existence of educational centers, swimming pools, and physical education spaces in some regions of Iraq; presence of coaches familiar with principles of children's swimming instruction and sport education.	Prevalence of sedentary lifestyles and reduced participation of children in aquatic sport activities; increasing costs of equipment, pool maintenance, and children's swimming supplies; rising investment costs and high prices of aquatic sport infrastructure; deterioration or shortage of standard pools for children; weakness of targeted advertising in children's swimming; lack of effective coordination among educational-sport institutions and families.	Developing managerial interactions among institutions responsible for children's swimming and Iraqi sport organizations; improving human resource management with emphasis on recruitment, education, and retention of children's swimming coaches; attracting governmental and private support to reduce financial pressures in children's swimming.

Table 8. WO Strategies and Executive Programs

Internal factors: Weaknesses (W)	External factors: Opportunities (O)	WO strategies
Shortage of standard and safe equipment for children's swimming instruction; limitation in holding educational, retraining, and professional development courses for children's swimming coaches; absence of coherent talent identification and supplementary grassroots swimming education programs outside the formal framework; absence of a comprehensive and updated database in children's swimming; inappropriate use of non-specialized personnel in managing and implementing children's swimming programs.	Existence of supportive laws and regulations for children's sport in Iraq's development programs; emphasis of educational, social, and health-oriented institutions on the importance of aquatic sports for children; support of some managers and policymakers for continuation and expansion of children's swimming programs; spread of sport-oriented culture and children's tendency toward aquatic and recreational activities; positive attitude of senior officials toward the role of children's sport in improving public health.	Designing a coherent management system for directing and evaluating the performance of children's swimming; revising the method of implementing programs and reforming grassroots swimming educational structures; developing cooperation among educational, sport, and social institutions to achieve children's swimming objectives; aligning children's swimming programs with macro-policies for foundational sport development.

Table 9. WT Strategies and Executive Programs

Internal factors: Weaknesses (W)	External factors: Threats (T)	WT strategies
Shortage of standard and safe equipment for children's swimming instruction; failure to hold workshops, retraining classes, and knowledge-upgrading programs for grassroots swimming coaches; lack of opportunities for coaches to participate in supplementary educational courses outside domestic centers; absence of a coherent database on children's swimming education and talents; incorrect or insufficient use of the opinions of specialists and experts in children's swimming education.	Expansion of sedentary lifestyles and reduced presence of children in aquatic sport activities; continuous increase in the costs of equipment, maintenance, and children's swimming supplies; rising costs of constructing and operating educational and recreational swimming pools; deterioration or insufficiency of children's pools in some provinces of Iraq; weak coordination among sport, educational, and media institutions in promoting grassroots swimming.	Reforming and renovating children's swimming educational equipment through governmental and private support; creating effective relationships and cooperation among educational centers, clubs, and institutions related to children's sport; improving the planning system for coach education and developing standards for grassroots swimming instruction; formulating supportive policies for the maintenance and optimal productivity of children's pools; paying attention to sustainable financing through private-sector participation in children's swimming programs.

Discussion and Conclusion

The main objective of this study was to determine and formulate the strengths, weaknesses, threats, and opportunities governing swimming in Iraq using the SWOT model. For this purpose, by systematically identifying and analyzing internal factors (strengths and weaknesses) and external factors (opportunities and threats), the current status of children's swimming was examined in the real, executive, and institutional context of Iraq. Then, based on the results obtained, four groups of strategies - SO, ST, WO, and WT - were formulated.

The results of the internal factor analysis showed that children's swimming in Iraq possesses some reliable strengths, including diverse talents in foundational age groups, limited but meaningful achievements in domestic and regional competitions, the possibility of using active coaches and interested human resources, and the existence of educational centers and spaces related to aquatic activities in some provinces. These findings are consistent with studies emphasizing the role of human resources, specialized coaches, and educational platforms in improving the quality of swimming education and children's health (Balyi et al., 2013; Moran et al., 2012).

In contrast, the identified weaknesses indicate that the development of children's swimming in Iraq faces important structural and managerial challenges. Shortage of standard and safe equipment, limitations in holding educational and

retraining courses for coaches, absence of a comprehensive database in children's swimming, absence of a coherent talent identification system, and inappropriate use of non-specialized personnel at some managerial levels are among the most important internal weaknesses in this field. These results are consistent with the findings of Tabrizi et al. (2017), who introduced managerial and planning barriers and lack of standard infrastructure as main factors preventing the development of swimming (Ghahreman Tabrizi et al., 2017).

In the external environment analysis, considerable opportunities were identified for the development of children's swimming in Iraq. The existence of supportive laws and policies for foundational sport and children's sport, the emphasis of official and educational institutions on the role of aquatic sports in improving children's physical and mental health, the support of some managers and policymakers, and the cultural interest of children and families in aquatic activities were among the most important environmental opportunities. These findings are aligned with Liu et al. (2023), who considered supportive policies and positive managerial attitudes to be decisive in sustainable development of the sport education market (Liu et al., 2023).

At the same time, notable external threats were also identified that may weaken the effectiveness of children's swimming programs. The expansion of sedentary lifestyles, increasing construction, maintenance, and operation costs of pools, rising prices of equipment and supplies, deterioration of aquatic infrastructure in some regions, weak targeted advertising, and lack of effective coordination among educational, sport, and media institutions were among the most important threats facing this field. These results are consistent with the findings of Pelletier et al. (2021) regarding the reduction of structured physical activity among children and changes in activity patterns under specific social and economic conditions (Pelletier et al., 2021).

Based on the combination of these factors and the results of SWOT analysis, a set of four-category strategies was formulated for children's swimming in Iraq. SO strategies emphasized the maximum use of existing strengths to take advantage of environmental opportunities. These included strengthening organized children's participation in grassroots swimming programs and competitions, developing children's swimming festivals and events, identifying and attracting top talents, expanding girls' swimming, and developing and equipping child-specific infrastructure. This approach is consistent with previous research on the role of events, competitions, and educational platforms in increasing children's sport participation (Balyi et al., 2013; Moran et al., 2012).

ST strategies were formulated with the aim of using internal strengths to reduce or neutralize external threats. Developing managerial interactions among institutions responsible for children's swimming and national sport organizations, improving human resource management through education, retention, and development of specialized coaches, and attracting governmental and private support to reduce financial pressures were among the most important axes of this group of strategies. These findings are consistent with Chen (2022) and Huang (2021), who emphasized the need for managerial reform, human resource strengthening, and institutional support when facing environmental threats.

WO strategies focused on using environmental opportunities to compensate for internal weaknesses. Designing a performance management system, revising the implementation of educational programs for children's swimming, developing intersectoral cooperation, and using scientific research results to reform structures were among the most important strategies in this section. This approach is consistent with Seyed Karimi and Fatehi (2016), who emphasized the role of strategic planning, performance evaluation, and the use of David's model and SWOT analysis in improving educational and sport systems (Seyed Karimi & Fatehi, 2016).

Finally, WT strategies, as defensive strategies, were formulated to simultaneously reduce internal weaknesses and avoid external threats. Constructing and renovating children's swimming pools with priority for girls, reforming and standardizing educational equipment, formulating supportive policies for the maintenance and productivity of infrastructure, and establishing a system for implementing the strategic plan at local, provincial, and national levels were among the most important axes of this group. These results are consistent with research related to WT situations and the need for reconstruction, structural reform, and conservative interventions (Liu et al., 2023). Overall, the results of this study show that the development of children's swimming in Iraq requires a realistic strategic approach based on simultaneous analysis of internal and external factors. Successful implementation of the proposed strategic plan requires institutional commitment, intersectoral coordination, targeted investment in human resources and infrastructure, and continuous attention to the needs, interests, and age-related characteristics of children and families. If these requirements are fulfilled, children's swimming can function as one of the foundations for improving health, social capital, and sustainable sport development in Iraq.

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Authors' Contributions

Authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

AI use statement

Artificial intelligence tools were used only to support language editing, translation refinement, formatting, and consistency checks. The authors take full responsibility for the accuracy of the data, analyses, interpretations, citations, and final content of the manuscript.

Ethical Considerations

This study was conducted using interview and questionnaire data. Participation was voluntary, and the confidentiality of participants' responses was preserved. The research procedure was designed to avoid harm to participants and to respect the principles of informed participation and academic integrity.

Transparency of Data

Reasonable requests for research materials should be directed to the corresponding author, subject to university policies and participant confidentiality.

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