Identifying Factors of Co-Creation of Value and Brand Effectiveness of Knowledge-based Companies in the Field of Health

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ABSTRACT

Background: Knowledge-based companies are private or cooperative companies that aim to enhance the synergy of science and wealth, promote knowledge-based economy, and achieve scientific and economic goals.

Methods: The present study is an applied research with a cross-sectional perspective, utilizing a qualitative and exploratory approach. The grounded theory method, specifically the Glaserian approach, is employed for data analysis. Semi-structured and in-depth interviews were conducted until theoretical saturation was achieved. The collected data was transcribed and imported into the MAXQDA software for analysis.

Results: After conducting the interviews, various theories within similar conceptual groups were identified and open-coded. The interviews were transcribed in docx format and analyzed line-by-line. Codes were assigned to relevant sections of the interviews, leading to the formulation of models and insights.

Conclusion: In this study, we explored the co-creation factors of value and effectiveness for the brands of Iranian sports knowledge-based companies. The findings shed light on the importance of knowledge, innovation, skills, and continuous learning in these companies. It is evident that in knowledge-based economies, a range of supporting institutions is necessary to facilitate and promote innovation and dynamism.

Keywords: Knowledge-based companies, Sports industry, Brand value, Effectiveness, Co-creation factors, Innovation, Skills

Background

Knowledge-based companies are private or cooperative enterprises that are formed to enhance the synergy between science and wealth, develop a knowledge-based economy, achieve scientific and economic goals, and encompass the expansion, application, and commercialization of research and development outcomes in the field of technology with high added value. In knowledge-based companies, knowledge, innovation, skills, and continuous learning play a crucial role. This implies that in knowledge-based economies, a range of institutions should exist in society to support and facilitate innovation, learning, and dynamism (Ahmadian, 2012).

According to Sarnko (2014), technology-based firms refer to companies that employ university graduates as their main workforce, and knowledge is the primary source of income in these companies. Shurman and Burl (1988) argue that the term technology-based company should be used only for companies that independently seek to create a new (industry) sector. The field of sports, which is considered a lucrative and popular industry, has also received attention from knowledge-based companies. Today, sports plays a fundamental role not only practically and in terms of entertainment but also in the production and consumption of sports goods and services and the economic development of various societies. Just as sports has a fundamental role in human development, it also has a significant impact on economic development. The capacity of sports becomes prominent through its economic function in activities such as the production of sports goods, sports events, and the provision of sports services and media. For example, in the UK, the value added by sports activities accounts for about 17% of the gross domestic product, which is comparable to the income generated by the automotive and food industries (Mohammadi & Kalatehsafari, 2019).Considering the vital nature of sports in the country, which requires the development and expansion of high-level employment, the development of knowledge-based companies can be considered a crucial and fundamental issue. Therefore, the branding of knowledge-based companies, given its importance, can be examined. Rapid advancements and increasing reliance on technology continuously reshape the competitive market. Organizations must embrace modern technologies or be vulnerable to disruptions when rival entities discover and implement them first (Cassio, 2016). Organizations have been pursuing market-oriented approaches to develop products that are aligned with the preferences of their individual customers (Ramaswamy, 2014; Vargo, 2011). To ensure the compatibility of new products with customer preferences, organizations have adopted market-driven methods for product development, including involving users in the development of new products and inviting them to provide innovative ideas (Dijk, Antonides, & Scholten, 2014). Prahalad and Ramaswamy (2004) referred to this approach as co-creation. Co-creation is a collaborative effort between the company and its customers in developing new products, where consumers actively participate in shaping the innovation path of the product. This strategy is capable of reducing research and development costs, making products and functionalities more tailored and compatible, and opening up new markets for the company (Dijk & colleagues, 2014). Co-creation between companies and customers is one of the most promising areas in virtual consumer environments and a relatively emerging research domain, which has not been extensively studied, especially in Iran. Limited empirical studies in this field (Herstatt & colleagues, 2010) have hindered the proper utilization and validation of co-creation structures

and conceptual frameworks (Minkiewicz, Evans, & Bridson, 2017). Therefore, there is a need for further investigations to understand the phenomenon of co-creation from the customer's perspective (Oehren & Rindfleisch, 2019; Jacob & Rettinger, 2019). Despite the importance of co-creation for companies, it must be acknowledged that the true value of what is offered in the market can only be evaluated by customers (Vittal, Kristensson, Gustafsson, & Lofgren, 2010). If co-creation is not perceived as valuable by customers, they will not accept it, and the company will not reap any benefits from this strategy. Furthermore, examining the impact of co-creation on customer behavioral intentions can provide assurance of its benefits for companies. The customer perspective refers to how the perceived value of the seller's offer compares to the available alternatives. The supplier perspective considers the need to consider customers as a key asset of the company and emphasizes attracting and retaining customers through customer capital management.

The customer-supplier perspective emphasizes the creation of value through relationships, collaboration, harmony, and unity. In the process of value co-creation, the resources of the company are combined, and new combinations of capabilities are developed, enabling the company to achieve results that each resource alone could not create. Recent research has emphasized the significant role of value co-creation through bilateral interactions between buyers and sellers (Zhang et al., 2015). According to Porter's (1985) concept of the value chain, the customer is not outside the value creation process and is not considered a passive recipient of value but rather actively participates in value co-creation through interactions with the company and partners (Chang et al., 2018). Value co-creation refers to the collaborative actions and requirements of organizational and customer participation that provide solutions for meeting customer needs and creating brand value. Co-creation is one of the most effective opportunities in forward-thinking organizations to create win-win situations in the business world, and the role of the customer in this collaboration is undeniable (Bahalla, 2011). Based on innovative approaches, customers and suppliers will be able to collaborate and create shared value that enhances the organization's brand value. Creating shared brand value is considered a desirable goal for economic enterprises, as it allows organizations to pay attention to customer perspectives and achieve greater value by identifying their desires and needs (Ballantyne, 2004). The mere transfer of services to customers cannot create value on its own. Organizations cannot provide value; instead, they can only present value propositions, and it is the customers who play a role in creating shared brand value (Vargo & Lusch, 2008). Furthermore, research has shown that true value does not reside within the product or service itself but rather exists in the minds of actual and potential customers (Alvarez & Fournier, 2016). The emerging concept of value co-creation has received increased attention from both a conceptual and empirical standpoint in service management research (Kim & Byun, 2018). Value co-creation and value destruction can occur simultaneously (Gronroos & Voima, 2013). Sports, due to its unique nature, provides a distinct platform where diverse actors contribute to brand coexistence and value creation. These actors include sports stars, media outlets, commercial partners, financial supporters, charitable organizations, and, of course, fans (Calyps & Spark, 2018). In this regard, Kim et al. (2019) stated in their research on golf fans that fans play a significant role in both brand value creation and brand value destruction. The results of this study also demonstrated that

fans create value through their interactions with each other and that perceptual brand values (emotional, cognitive, and affective) significantly influence the creation of shared brand value by fans. However, economic values did not show a meaningful impact. Every organization strives to manage strong and well-known brands. Brands offer unique advantages that cannot be obtained from other brands and are presented to consumers. Brand advantages are perceived as brand value by customers. Therefore, brand value increases the likelihood of brand preference, leads to consumer loyalty, and protects against competitive threats. In order for brands to enter the market and create value for consumers, companies need to consider consumer needs. One approach to engage consumers in value co-creation is involving them in the process. The concept of value co-creation implies that brands are not solely created by organizations but are interpreted and revitalized by numerous stakeholders who interact with the brand through events, social media, and online communities (Haug, 2010). Customers engaged in value co-creation for commercial brands not only provide the necessary information to organizations but also assist them in creating brands that align with consumer needs. Consumer interaction with a brand can lead to the creation of emotional value for the consumer. The more brands align with consumers' needs and social values, the more consumers are inclined to engage with the brand (End et al., 2020). The inclination of organizations to engage and involve current and potential customers has garnered attention for several reasons. Firstly, organizations have realized that customers are not passive recipients of what organizations offer; rather, they possess expertise and knowledge that can actively contribute to generating and developing new and relevant ideas (Von Hippel et al., 2010). As Wargny and Larcher (2008) stated, organizations cannot create value; instead, they can only provide value propositions, and it is customers who play a role in creating shared brand value. Ghaselfar (2020) focused on competitive strategies, company performance, and social responsibility as the third strategy. The selected sample consisted of 16 companies listed on the Tehran Stock Exchange. The results of the study indicated that competitive strategies have a direct and significant impact on performance. Social responsibility also has a direct and significant impact, but with increased disclosure, the differentiation strategy has a greater impact on performance compared to cost reduction. Saha et al. (2021) demonstrated in their research on strategic capabilities, competitive strategy, and performance among retailers in Argentina, Peru, and the United States that there is a significant relationship between a focus strategy mediated by marketing capabilities and a differentiation strategy mediated by technological capabilities and their impact on performance. Furthermore, research has shown that true value does not reside within products or services but rather exists in the minds of actual and potential customers (Alvarez, 2016). Second, the move towards globalization has expanded organizational boundaries and compelled organizations to innovate in their services (Kim, 2019). Third, with increased connectivity through preferred networks, organizations have recognized new ways to connect, engage, and interact with fans (Escordor, 2016). Organizations can ask customers to become testers and interpreters of their brand and actively participate in the development of products and services. Instead of assuming what customers might want, managers can meet with them, learn together, cultivate co-identity, and create networks for increased interaction (End et al., 2021). Vratčić et al. (2019) examined the loyalty and satisfaction of fans from the perspective of co-creation of value. Their research provided a framework that explains how customer

satisfaction and loyalty are formed in general and in specific areas. They identified three dimensions, namely "stadium service quality," "perceived team performance," and "influencing factors of spectators," as constituent factors of brand co-value. Kolić Roksandić et al. (2019) also examined the role of fans in brand co-creation, and the results indicated that fans evaluate, redefine, and reshape value propositions in various sports environments. They have three roles: attractors, identity builders, and moderators in value creation. Furthermore, co-creation of value leads to marketing benefits for organizations. Kim et al. (2020) also investigated the role of customers in the destruction and creation of brand value in sports events. The results indicated that customer enthusiasm has a positive impact on economic, social, emotional, and cognitive values of core customers (e.g., customer-to-customer co-value). Inefficient customer behaviors towards emotional customer values (e.g., customer-to-customer destruction of value) had a negative relationship. Social, emotional, and cognitive values had positive effects on word-of-mouth advertising. Sports organizations can play a significant role in society as they have a large customer base and extensive media coverage, which attracts people, including youth, in the community (Montazeri et al., 2017). When the effectiveness of goals is properly considered and implemented in organizations, it creates special value for the sports organization, not only generating a positive perception of the organization among stakeholders but also enhancing job performance and employee productivity. Organizational commitment reflects an individual's attachment to the organization. Various concepts such as conscience, work ethics, willingness, and responsibility, despite their differences, are equivalent to commitment (Rabi'i, 2015). Creating improvements in any organization requires evaluating organizational performance and planning and goal-setting for performance enhancement. Therefore, the need to understand the factors influencing organizational effectiveness is crucial. Awareness of organizational effectiveness is among the important factors that can impact various processes, such as strategy implementation and decision-making in future years (Schneider et al., 2017). On the other hand, managers and organizational leaders are always seeking to enhance and improve the performance of their organizations. Previous findings have not examined the role of co-creation variables and organizational effectiveness. Facilitating tasks has led to increased competition among organizations. The level of this competition is such that if an organization deviates even slightly from users' interests, it must inevitably leave the scene. One characteristic of today's world is the rapid and continuous changes in the global economic environment, resulting in intense competition in the global economy. Although countries and industries are often in search of key factors for economic success, it is better to focus more on the source of these factors. In other words, they should seek answers to questions such as what characteristics lead to the creation of successful company environments and how they can provide the necessary grounds and platforms to create competitive capabilities and maintain them. Therefore, considering the importance of customers for companies and their economic prosperity, identifying the influential factors on the effectiveness of products for customers and their consequences is of great significance. Another importance of this research is to find a clear picture of the co-creation components of value on brand effectiveness, which can be beneficial for future decision-makers of organizations. There is a research gap in this area. Finally, this study aims to identify the key

factors of value co-creation and brand effectiveness in sports organizations and to explain an appropriate model for it.

Objectives

Identifying factors of co-creation of value and brand effectiveness of knowledge-based companies in the field of health

Methods

The present study, considering its objective, is applied in terms of temporal and cross-sectional dimensions. In terms of the research strategy, it is a qualitative exploratory study, and in terms of the research execution method, it utilizes grounded theory approach (Glaser, 1992). Grounded theory encompasses various styles, and in this study, the Glaserian approach to data analysis is employed. This approach is challenging, but the resulting modeling takes place in a highly extensive space and expands the researcher's horizons for data analysis. In the grounded theory framework, this approach does not have predetermined assumptions, but rather it discovers the main concerns of participants and how to address those concerns in the field of study. The data collection tool in the present study was a semi-structured and in-depth qualitative method, which continued until theoretical saturation was achieved. After conducting the interviews, various theories within consistent conceptual groups are open-coded, and the transcribed interviews in the form of docx files are imported into MAXQDA software. Then, through line-by-line analysis, the codes are assigned to specific segments of the interviews.

Table 1 - Research Onion Structure

Component	Type
Research Nature	**Exploratory - Applied**
Research Approach	**Mixed Approach**
Dominant Paradigm	**Interpretive - Constructivist**
Research Design	**Inductive**
Research Strategy	**Grounded Theory**
Data Collection	**depth Interviews**
Data Analysis	**Grounded Theory**

Component	Type
Method	**(Glaserian)**

In this study, the qualitative population consisted of faculty members in the field of sports management, managers, and experts from sports-related knowledge-based companies who had at least 5 years of experience. The characteristics of the population are provided in Table 2. The sampling method for selecting the sample was initially purposive and then snowball sampling, where members were selected based on a specific criteria and then additional participants were identified through referrals. The sampling process continued until theoretical saturation was reached.

Table 2 - Research Sample

Number	Field of Study	Rank	Position
4	Sports Management	Assistant Professor, Associate Professor	**University Faculty**
6	Ph.D. in Economics and Sociology	Assistant Professor, Associate Professor	**University Faculty**
4	Physical Education and Non-Physical Education	Ph.D., M.Sc.	**Knowledge-based Company Managers**
14			**Total**

Results

The interviews were coded following the grounded theory approach in Glaser's methodology, consisting of three stages of coding. In the first stage, initial coding was conducted, and quotes were assigned conceptual labels. In the second stage, emergent concepts were identified through the coding of similar conceptual labels (Glaser, 2008, p.30). In the third stage, categories and logical connections among concepts, themes, and conceptual

frameworks were identified. The coding results for all stages can be observed in Table 3.Table 2. Description of Demographic Characteristics of Interviewees.

Table 3 - Research Sample

Interview Code	Gender	Age	Education Level	Work Experience	Field of Activity			
					Sports Coach and Instructor at Medical Universities	Sports Organization Managers and Experts	Faculty Members in the field of Sports Management.	Physical Education Managers and Experts at Universities
P_1	Female	42	Master's in Injury Prevention and Correction	17				
P_2	male	45	Master's in Sports Management	22				●
P_3	Female	40	PhD in Sports Management (student)	12				●
P_4	male	53	PhD in Sports Management	18			●	●
P_5	male	38	PhD student in Sports Physiology	10		●		
P_6	male	35	PhD student in Sports Management	7				●
P_7	male	32	Master's in Sports Management	7	●			
P_8	male	50	Master's in Physical Education	23		●		
P_9	male	53	PhD in Sports	21			●	

			Management					
P$_{10}$	male	41	PhD in Sports Management	8			●	
P$_{11}$	Female	45	PhD in Medical Physics	10				●
P$_{12}$	Female	35	PhD in Sports Physiology	11	●			
P$_{13}$	male	29	Bachelor's in Physical Education and Sports Science	3				●
P$_{14}$	male	38	PhD in Sports Management	4			●	

The results of Table 2 show that there were 14 interviewees, consisting of 11 males (78.57%) and 3 females (21.43%). In terms of age, 14.29% (1 person) were under 30 years old, 35.71% (5 people) were between the ages of 30 and 39, 35.71% (5 people) were between the ages of 40 and 49, and the remaining 21.43% (3 people) were over 49 years old. In terms of education level, 7.14% (1 person) had a Bachelor's degree, 28.57% (4 people) had a Master's degree, 21.43% (3 people) were PhD students, and 42.86% (6 people) had a PhD. Furthermore, 35.71% (5 people) had less than 10 years of work experience, 42.86% (6 people) had between 10 and 20 years of work experience, and the remaining 21.43% (3 people) had over 20 years of work experience. The field of activity of the research sample included 42.86% (6 people) as Physical Education Managers and Experts at Medical Universities, 28.57% (4 people) as Faculty Members in the field of Sports Management, 14.29% (2 people) as Sports Organization Managers and Experts, and 14.29% (2 people) as Sports Coach and Instructor at Medical Universities. In order to obtain the research data, in the first stage, after reviewing and studying the documents, the researcher used the method of face-to-face interviews with the interviewees.

As shown in Table 3, from the analysis of qualitative data, factors affecting sports in medical universities in the country were identified in three categories: Ali (internal), Zamini (contextual), and Madakhlagar (interventionist). In the Ali factor, 13 subtopics were identified in 4 main topics: individual, managerial, health, and infrastructural. In the Zamini

factor, 45 subtopics were identified in 7 main topics: personal and family backgrounds, women's status, economic, structural, infrastructural and equipment, managerial and supportive. In the Madakhlagar factor, 34 subtopics were identified in 8 main topics: informational and media activities, organizational, motivational activities, accreditation, human resources, educational and curricular programs, monitoring and evaluation, and categorization.

Table 4. Factors Affecting the Development of Sports in Medical Universities of the Country

Topic(s)	Topic Sub	Concept Main
Causal factors	individual factors	Low student participation in sports
		Low participation of managers and employees in sports
		Lack of sports as a daily habit among students and employees
	Management factors	Confusion among senior managers of the Ministry of Health
		Lack of a regular and consistent sports program in the Ministry of Health
		Multiplicity of organizations and managers
		Gap between the implementers and top managers
	Health factors	Spread of diseases due to lack of exercise
		Spread of overweight and obesity
		Increase in skeletal abnormalities among students
		Psychological pressures on students due to reasons such as being away from family
	underlying factors	Existence of sports talents among students
		Existence of necessary equipment and facilities for sports
		Sports culture in the families of students

Background factors	Individual and family contexts	Sports literacy of students and employees
		Understanding the benefits and necessity of exercising
		Status of physical and skill abilities of students and employees
		Sports patterns in the minds of students
		Sports goals, needs, and expectations of students and employees
		Level of social skills of students and employees
		Level of awareness of students and employees about the achievements of participating in sports activities
		Sports needs, criteria, and expectations of students and employees
		Parents' attitudes towards sports of students
		Attention to sports infrastructure for women
		Society and university acceptance of women's sports
	The position of women	Women's share of the university sports budget
		Dedicated budget for women's sports
		Women's position in sports management positions in universities and ministries
		Sports participation rate in medical universities
		Pricing of sports services based on perceived value
		Inflation rate in the country
		Attention of benefactors to financial support for university sports
		Level of attention of families to the cost and investment in sports

	Economic fields	Cost of sports equipment and supplies
		Structure of sports in medical universities
		Country policies in developing educational and sports equity in all parts of the country
Consequence	Structural fields	Position of sports and physical activity in the priorities of ministries and universities
		Separation of universal and championship sports sections
		Society's values and norms regarding physical sports activities
		Comprehensive plans for sports development in the country
		Suitable space for physical education during school hours
		Existence of health stations in green spaces of universities
	Infrastructural fields	Quantity and quality of sports facilities
		Attractiveness of sports spaces (design, color, architecture)
		Attention to sports infrastructure for people with disabilities
		Special sports spaces for women
		Status of natural spaces promoting sports activities in the region (mountains, forests, rivers)
		Justice in the distribution of sports facilities and equipment in universities across the country.
		Safety and security of sports facilities.
		Attitudes of ministry and university managers towards sports.
		Level of sports literacy among managers, employees, and professors.
		Thinking and philosophy of university sports planners.

	Management fields	Level of support from local and regional media for university sports activities.	
		Level of support from municipalities, governors, and city councils for physical education in universities.	
	Supporting fields	Support from Ministry of Sports and Youth.	
		Level of support from parents for the development and promotion of sports activities.	
		Amount of charitable and local support for the promotion of physical education and sports in universities.	
		Signage or announcements installed in university spaces related to the necessity and benefits of sports.	
		Documentary films about the quantity and quality of student sports.	
Interventionist	Information and media activities	Number of sports journals available in medical universities.	
		Media coverage of student sports competitions and activities.	
		Cooperation between the Ministry of Health and Radio and Television in broadcasting educational programs and sports events for students and employees.	
		Number of recreational-sports camps dedicated to employees and students.	
		Hosting universities in championship competitions.	
	an event	Number of conferences and competitions.	
		Level of communication between universities and all stakeholders involved in student sports.	
		Cooperation between medical universities and local relevant organizations (such as municipalities and sports clubs).	

		Existing laws regarding mandatory sports for students and employees.
	organizational	Access of individuals to sports facilities.
		Existing incentive plans to increase the sports participation of employees and students.
		Introducing special days in the year named "University Sports Day."
		Purchasing facilities and sports equipment specifically for students and employees.
		Symbolic presence of national sports elites at university sports programs.
Strategies	Persuasive activities	Presence of interested media.
		Presence of university professors in university sports programs.
		Health validation of sports by university managers.
		Justice in the distribution of sports facilities and equipment in universities across the country.
		Safety and security of sports facilities.
	Validation	Utilizing sports elites and famous athletes in teaching physical education courses.
		Presence of national sports elites at operational levels of the ministry.
		Presence of famous sports figures as coaches and sports experts in universities.
	Manpower	Motivated and accessible specialized coaches.
		Number of specialized coaches.
		Quality and quantity of physical education programs for students.

		Type of sports offered to students.
		Low cost or free sports education classes.
		Number of sports education classes for employees.
	Educational program and curriculum	Talent identification system.
		Teaching method of sports professors and coaches.
		Existing evaluation system.
	Monitoring and evaluation	Assessment standards for evaluating students.
		Sports feedback system.

Based on research studies, some of the contextual factors that can affect the development of sports in medical universities include: Low student participation in sports: Lack of interest and participation among students can hinder the development of sports in medical universities. Confusion among senior health ministry managers: Lack of clarity and direction among senior managers can negatively impact the development of sports in medical universities. Increase in skeletal abnormalities among students: Lack of physical activity and exercise can lead to an increase in skeletal abnormalities among students. Presence of talented athletes among students: Identifying and supporting talented athletes can contribute to the development of sports in medical universities. Attitudes towards women's sports: The acceptance and support of women's sports within society and universities can affect the development of sports in medical universities. Financial support for sports: Financial support from donors and the government can contribute to the development of sports in medical universities. Prioritization of sports: The prioritization of sports within the ministry and universities can affect the development of sports in medical universities. Accessible sports facilities: Providing accessible sports facilities for students with disabilities can promote the development of sports in medical universities. Fair distribution of sports equipment and facilities: Ensuring fair distribution of sports equipment and facilities can promote the development of sports in medical universities. Philosophy of sports planning: The planning and philosophy of sports within universities can affect the development of sports in medical universities. Government support: Support from the Ministry of Sports and Youth can contribute to the development of sports in medical universities. Quality and quantity of physical education programs: The quality and quantity of physical education programs offered to students can affect the development of sports in medical universities.

Media coverage of sports events: Media coverage of sports events can promote the development of sports in medical universities. Hosting national sports events: Hosting national sports events can promote the development of sports in medical universities. Collaboration with local organizations: Collaboration with local organizations, such as municipalities and sports clubs, can contribute to the development of sports in medical universities.

Disscussion

The aim of the present study was to identify the causal factors affecting the development of sports and health in the medical universities of the country. Thirteen sub-variables were obtained from qualitative data analysis, which were grouped into four main categories: individual, managerial, health, and infrastructural. These factors were summarized in the concept of "causal factors affecting sports development in medical universities of the country." According to the research samples, factors such as low student participation in sports, confusion among senior managers of the Ministry of Health, increased skeletal abnormalities among students, existence of sports talents among students, etc., are among the causal factors affecting sports development in medical universities of the country.

In this regard, Vafaei Moghadam and colleagues (15) conducted a study entitled "Analysis of Universal Sports Development Factors Based on Data Foundation Theory." In this research, in the causal factors category, factors such as low participation of different groups due to implemented programs, prevalence of various diseases due to lack of participation in universal sports in the country, lack of national unity to increase participation in universal sports in the country, lack of universal sports as a daily habit, and the existence of great opportunities for universal sports in the country and confusion in macro management of universal sports in the country were mentioned.

The results of Saif and colleagues (16) showed that health and psychological factors, social and cultural deficiencies, and economic factors are among the most important causal factors affecting the growth and development of universal sports among healthy elderly men and women in Ilam province. The findings of Rahimi and colleagues (17) regarding the causal factors affecting the development of universal sports in student dormitories showed that all factors had a significant impact on the development of universal sports in student dormitories. The prioritization of factors by hierarchical analysis method for boys was in the order of: structural factors, time, managerial factors, individual and cultural factors, and for girls were in the order of: structural factors, managerial factors, time, cultural and individual factors.

Chal-e Eshtari et al (18) identified the main barriers to the development of sports activities as management barriers, infrastructural barriers, and barriers related to athletes and competitions, in that order. In addition, factors such as cultural, economic, lack of suitable sports facilities, management and cultural weaknesses, lack of diverse and attractive programs, inadequate and inappropriate sports equipment, high volume of daily activities, lack of coaches and specialized human resources, lack of information and awareness of the

benefits of universal sports, and inattention to the appropriate time for holding universal sports were also mentioned. Another study identified organizational and managerial factors, environmental constraints, time constraints, lack of social support, intrapersonal and psychological factors as barriers (19).

Furthermore, Ganbari et al. (20) conducted a study titled "Designing a Model of Factors Affecting Elementary School Students' Orientation towards Sports: A Mixed-Methods Research". The results of the code grouping showed 54 components at three levels of contextual (society and environment), organizational (school and physical education teacher), and behavioral (individual factors and family). Based on the model derived from the study, it can be said that physical education teachers, individual factors, families, the environment, society, and schools had the greatest impact on students' orientation towards sports in schools. The contextual variable, in addition to its direct impact on students' orientation towards sports, had a significant effect on individual factors, school, family, and physical education teachers' variables. The environmental variable also had a significant effect on family, school, and individual factors' variables, in addition to its direct impact on students' orientation towards sports. The family and school variables also had a significant effect on individual factors and physical education teachers' variables, respectively.

The limitations of the research include the non-random and purposeful selection of the study participants, the use of interviews to collect the required information, and external limitations beyond the researcher's control, such as the unavailability of some high-ranking officials for interviews due to work-related busyness, lack of cooperation, and broken promises. Additionally, some of the research participants may have had difficulty understanding some interview questions, and the researcher did not have access to documents and files related to sports programs in medical universities, which were proposed as suggestions. In conclusion, based on the identified influential factors in the talent identification management process of Iranian wrestling, it is recommended to control some of the negative factors and use the beneficial ones. Overall, it is necessary to better control these factors to improve the talent identification management process. Furthermore, organizations and relevant individuals are advised to take steps towards implementing the proposed solutions to improve the policy-making process in talent identification management. Given the role and responsibilities of relevant organizations in improving the talent identification management in wrestling in the country, policymakers are recommended to pay special attention to the share and role of these organizations when setting policies. It is suggested to create a unified procedure among executive bodies to improve the talent identification management in wrestling in the country. Group media, especially national media, should play their role in improving the talent identification management in wrestling in the country (particularly in culture-building). Finally, it is recommended to disseminate the obtained model to relevant organizations, especially the Ministry of Sports and Youth and Wrestling Federation.

For future research recommendations:

It is recommended to investigate the role and position of each specialized organization in the field of wrestling and talent identification in adolescents, such as the Ministry of Sports, Ministry of Education, and the National Olympic Committee in the process of developing wrestling in schools.

A comparative study should be conducted on the talent identification management process in Iranian wrestling with other wrestling countries.

The current research should be performed using mixed or quantitative methods.

It is recommended to examine the effective factors in identifying and developing wrestling talents at different levels, including primary, intermediate, and advanced.

The role of coaches, experts, and various organizations in the talent identification management process in wrestling should be analyzed.

The environmental and social effects on the talent identification management process in wrestling, including culture, economy, and physical development, should be investigated.

The effects of various educational and training methods on the development and improvement of wrestling talents in adolescents should be examined.

The effects of innovations and new technologies on the talent identification management process in wrestling and the development of adolescent talents should be investigated.

The economic and financial role and effects in the talent identification management process in wrestling and the development of adolescent talents should be investigated.

The relationships between various bodies and their effects on the talent identification management process in wrestling and the development of adolescent talents should be examined.

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