

Introducing the Model of Factors That Influencing on the Success of Elite Sport in Iran

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Abstract: The purpose of this study is to investigate the effect of policies and strategies on the success of elite sport in Iran. In this regard, the effective factors and policies on the success of elite sport in Iran were recognized through the study of the related literature and interviews with the experts; also a questionnaire was prepared. In order to evaluate the reliability of the questionnaire the Alpha Cronbach 0.79 was applied. To achieve the conceptual model, the exploratory factor analysis was used; to test the accuracy of the measurement model of the research, the confirmatory approach was used. The results showed that all the recognized factors are the ones which really affect on the success of elite sport in Iran. We found that among all factors, the human- managerial, supportive- nonstructural and research- development play the most important roles.

Key words: Human- managerial • Supportive-structural • Research-development

INTRODUCTION

Competition between nations has always been one of the most important characteristics of Olympic games. The type and the number of the medals have been the criteria for judging the success of the teams in these competitions based on the media as well as politicians despite the objections by international Olympic committee [1-3].

It has been believed that economical development and the increasing population rate are of two important factors that guaranty the medal numbers in Olympic games. However, nowadays, the effort to achieve medals requires the knowledge about the factors involved in the achievement. Many efforts have been made in this regard to clarify why some countries are more successful in competitions more than others. However, because of the cultural, social, economical and political differences among countries, it is not possible to develop a comprehensive pattern in which all influential factors in athletic success are considered internationally [4-9].

Green (2005), for example, as well as De Bosscher *et al.* (2006) divided the influential factors in athletic success into three groups: Macro level, meso level and micro level. Meanwhile, Morton [10-12], Alexander (2008) and Simon (2008) mentioned that the GNP and population

are more than 50% effective in a country's international success. Nowadays a team's or an athlete's success mostly depends on the professional athletic system and its ability to make use of the available resources in order to improve the elite sports [13-19].

Maguir (1999) considered some of the effective factors in order to be successful as: human resources, practical and coaching methods, effectiveness and efficiency in athletic organizations, profound medical and athletic science [20]. Green and Oakly (2001) mention 10 effective factors that influence the athletic success as follows: 1- A clear understanding about the role of the different agencies involved and an effective communication network that maintains the system. 2- simplicity of administration through common sporting and political boundaries. 3- an effective system for the statistical identification and monitoring of the progress of talented and elite athletes. 4- Provision of sports services to create an excellence culture in which all team members of the team [athletes, coaches, managers, scientists] can interact which one another in a formal and informal way. 5- well structured competitive programs with ongoing international exposure. 6- well developed and specific facilities with priority access for elite athletes. 7- the targeting of resources on a relatively small number of

sports through identifying those that have a real chance of success at world level. 8- Comprehensive planning for each sports needs. 9- a recognition that developing excellence has costs, with appropriate funding for infrastructure and people. 10- lifestyle Support and preparation for life after sport [14-24].

Greenleaf (2001) believes that using supportive services, facilities, elite coaches as well as a good relation between athletes and coaches are of the variables that have positive effect on Olympic games. On the other hand, in his point of view, the negative factors were deviation from regulations, conflicts related to the media and the issue of the coaches [15-26].

Green (2004) mentioned the factors influencing the elite sport as increasing the quality and quantity of the sports facilities, high level coaches, having access to scientific and medical approaches, test matches, the role of educational organizations in training elites, founding sports institutes for young adults, hiring full time coaches and founding sports academies. He published his research in an article called: "policy priorities in the sports of England". Green and Houlihan (2005) suggested four areas for this policy making according to the similarities among elite sports: 1. improving elite sports facilities. 2. The essence of being full time for the athletes. 3. Development of coaching, sports science and sports medicine. 4 Competition opportunities for elite athletes [13-29].

De. Bosscher *et al* (2008), in an article called "sports, culture and society", compared the elite sports policies, the Netherlands and Flanders. The aim of this study was to make clear that if the differences in policies could describe the performances in international competitions. One of the key elements of this study was to involve coaches, managers and athletes in gathering information. The differences in organization and long-term planning of elite sport policies, financial supporting, a holistic approach towards athletic development and opportunities for the development of coaches and athletes were significant.

De. Bosscher *et al.* (2009). while investigating the relation among elite sports systems of Italy, England, Canada, Norway, Belgium and the Netherlands in international competitions suggested that some influential factors in the success of elite sports in successful countries including Italy, England and the Netherlands were: financial resources, athletic and post-career support, training facility and coach development [9].

Bohlke and Robinson (2009) suggested that the society that supports the athletes in all aspects increases the possibility of being successful internationally. They believed that the services provided by sports systems are: talent identification structures, athletic improvement paths, scientific supports, coaching educations, having access to facilities and equipment, anti doping approaches, supporting the athletes after being retired and competitive structures [5]. Kalliopi and Sotiriadou (2008) suggests that talent identification, sufficient facilities, qualified coaches and good national competition structures as well as the chance to enter international competitions are success factors [18].

Tondnevis and Ghasemi (2007), in a research called "comparing perspectives of athletes, coaches and authorities about success approaches of gymnastics in Iran suggest that improving science level of coaches, talent identification in young talent, improving gym facilities and equipment are the most important factors in success of elite gymnastics competitions [29]. Since the policies and strategies are controlled only by sports policy makers and also because the young population of Iran has the opportunity to be champion in sports, the present study is searching for an answer to the question what policies and strategies are influential in Iranian elite sports success. Other words, this study tries to make use of the opinions by experts, managers, coaches and athletes in order to develop a model to be used while trying to make plans.

MATERIALS AND METHODS

The present study is a descriptive research that has been done as a field study. It is also a practical one. The statistical universe in this study includes high level managers of the physical education organization, the chief and the secretary of the national committee of Olympic and the federations of elite sports, university professors, elite coaches and athletes, that 131 of them were chosen by using aimed sampling (Table 1).

A questionnaire was used to gather the information. This questionnaire included 63 questions according to a seven-level scale [1= very low to 7=very high]. The reliability of the questionnaire was proved by 15 physical educations university professors. Also, divergent reliability [the exploratory factors analysis] and convergent reliability [the confirmatory approach] were used to certify the reliability of the questionnaire.

Table 1: descriptive indexes related to statistical samples

Sample	Index			Type of sport		Degree of education				
	Frequency	Relative frequency	Cumulative frequency	Individual	Group	Diploma	A.S	B.A	M.A	PhD
University specialists	32	24.4	24.4	10	22	-	-	-	4	28
Federation manager	15	11.5	35.9	13	2	-	-	12	2	1
Coaches	14	10.7	46.6	13	1	1	2	7	4	-
Athletes	70	53.4	100	50	20	7	25	30	8	-
Total	131	100	-	86	45	8	27	49	18	29

The researcher aims to discover infrastructures for a relatively big set of variables. The pre assumption of the research is that each variable can have a correlation with any factor. In other words, there is no primary theory in this research [27]. Therefore, for each of the 63 questions, the exploratory factors analysis was used. In this method KOM was equal to 0.81. This shows that the sampling is reliable. The significance coefficient was equal to zero which shows that the exploratory factors analysis was appropriate to recognize the structure. In this analysis the basic pre assumption of the researcher is that each factor is in relation with a specific subset of variables. After the assumed model was set, the confirmatory approach was used to approve the reliability. The results showed that all factors were over 0.5 that confirms the convergence. The reliability of the questionnaire was confirmed by Alpha Cronbach equal to 0.79.

In order to clarify the normal distribution of the data, K- S test was used and the results were normally distributed. In order to analyze the data from the questionnaire the exploratory factors analysis was used to extract the predominant elements. The confirmatory approach was used to evaluate the measurement factors in this research.

RESULTS

The results of the exploratory factors analysis could identify 11 factors. The factors 10 and 11 were omitted along with the questions themselves because they included only two questions. Five other questions were also omitted because of the low correlate with the indigenous variables. The 9 remaining factors expressed the 63% variance related to the grades. In the exploratory factors analysis of the second order, the nine factors were summarized into 3 areas. Area number one included athletic participations, talent identification and coaching and was called the area of human-managerial. Area number two included scientific researches and comprehensive approach towards the elite sports development and was called research-development. The third area included competition, job and sports support, financial resources and facilities was called the

supportive- structural area. Then, in the exploratory factors analysis of the third order, these three areas were summarized under the title of sports policies and strategies (Tables 2 to 5). According to the results of the exploratory factors analysis of the conceptual model was formed (Figure 1). Then by making use of the confirmatory approach the results of the researches were evaluated.

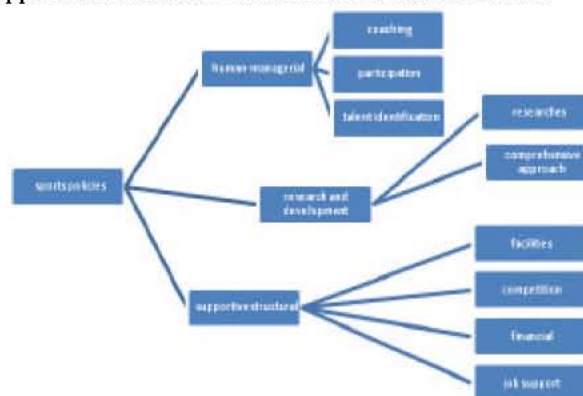


Fig. 1: Conceptual model of the research

Table 2: the result of the qualification model of the second level

KMO		0.873
Bartlett's test of Sphericity	Approx. chi- square	695.806
	df	36
	sig	0.000

Table 3: the result of the qualification model of the third level

KMO		0.885
Bartlett's test of Sphericity	Approx. chi- square	204.916
	df	3
	sig	0.000

Table 4: Rotated component matrix. Rotated method: Varimax with Kaiser normalization

Factor	Area		
	1	2	3
Coaching	0.885	0.185	0.384
participation	0.897	0.354	0.215
Talent identification	0.738	0.200	0.247
scientific	0.370	0.659	0.162
Comprehensive approach	0.304	0.890	0.140
facility	0.177	0.206	0.773
competition	0.313	0.195	0.840
financial	0.240	0.263	0.796
support	0.104	0.102	0.838

Table 5: Rotated component matrix

Area	Level 1
Supportive structural	0.903
Human managerial	0.908
Research and development	0.788

In this study the exploratory factors analysis of the first, second and third orders were used. In the confirmatory approach of the first order we arrived at the indigenous that were used for the reliability of the questionnaire. Because of the limitations in the article, just analyses of the second and third order are discussed. As it is shown in Table 6, the standard factor means the binary cohesion values and these are used to compare the effects of the elements of the model. The more these factors are, the more the effects are from the independent factors towards the dependent ones. The meaningfulness means that the meaningful number has to large than 1.96 and, or smaller than -1.96 by 0.05 steps. The larger the meaningfulness number is, compared to 1.96, the more powerful the effect of the independent value is on the dependent one. Therefore, according to the findings of the research, the three areas have high meaningfulness numbers and standard factors. The areas of human-managerial and supportive-structural have the highest effects on the athletic success in Iran. As for the factors, among the ones related to the area of human- managerial, the factor of athletic participation, among the ones related to the area of supportive-structural, the factor of job and sports support and among the ones related to research-development, the factor of comprehensive approach towards elite sports had the highest effects.

CONCLUSION

As it can be seen in Table 6, the relations between all variables are significant and meaningful. Because the human-managerial area had the most effect on the athletic success in Iran, it is necessary that a great amount of attention is paid to the planning and policy making of the elite sports in our country. In the case of participation rate as the most important factor in this area, it should be noted that as Shilbury *et al.* (2006) mentioned, a pyramid is considered for sports development in which sport for all is located at the base and the elite sport is located at the tip. In order to improve and develop elite sport, the base part that is sport for all should be developed [17]. According to the studies by Ghafouri *et al.* (2008), the active population in public sports includes less than 20% of the total population i.e. 14 million people [17]. It is not

an acceptable number when compared with countries like France [36 million people in 2005) Spain [16.7 million people in 2004]. Although the sport for all is considered as an infrastructure for the elite sport, the athlete population as well as direct participation in organized sports is more influential in developing elite sport. In Australia, 11.9% of the population is active as elite athletes. This population is 12% in Canada, 23% in Scotland and 2.5% in Iran [24]. This is one of the weak points of our country in sports and has to be considered as an important issue by the authorities.

The second factor in the area of human-managerial is coach. One of the most important factors that plays an undeniable role in the sports development is the coach. They have a direct effect on the improvement of the athletes' performance. Gould *et al.* (1999) found that coaches are of the most important factors in being successful [10]. The Softball Federation of Australia (2001) claimed that the difference between the loser and winner teams in the highest levels of the competitions is determined just by an elite coach. The Basketball Federation of Australia (2000) claimed that the head coach of this team had a significant role in the success of the team. He made the team achieve the silver medal in Sydney Olympic. The same person made the same team achieve the third place in world games of 1998 and second place in Olympic games (1996). In most countries there is an organized structure for developing and expanding the coaches' knowledge [17]. Therefore, according to the above mentioned findings it is necessary that policy makers in sports fields pay special attention to this factor and try to have their coaches attend out of country classes and also try to evaluate their performance. They should also use elite coaches in national teams to provide opportunities to achieve the highest levels of success in important international competitions.

The third important factor in the area of human managerial is talent identification. Ericsson (2003) believed that there is a general rule in this regard and it says that the suitable age for choosing a person to achieve the elite level in sports is 8 to 10. He also believes that to do so, some 10 thousand hours of practice is needed [7]. According to different talent identification patterns, in order to achieve the peak performance in any sports field it is essential to become specialized in it. In the case of talent identification, it is important to note that doing sports is a general activity in leisure time of children. A child with the age of 6 to 7 can not be convinced to compete since they can't realize the conception and consequence of this decision. For example, Lu Li was only

13 years old when he achieved the gold medal of the Barcelona Olympic in gymnastics in 1992. He had to quit because of the fatigue and intensive tiredness when he was 14 [16]. Therefore, national athletic organizations should practically support their young members. It should be noted that not all the athletes can be champions. Only a few have this chance. Only a few are supported in competitions. Therefore talent identification programs should be done in a way that decreases the children's mental problems as much as possible.

The second influential area in Iran's elite sports is supportive structural area. Among all factors in this area, competition and support have the largest effect. Many of athletic organizations believe the competitions as the corner stone of the international success [2]. When the competitions are important and a vast number of athletes participate in them, the possibility of the improvements will be higher. Studies by Baker *et al.* showed that competitions and sports events are the core element for international success. On the other hand, hosting the important competitions has been mentioned as a success element, too. Therefore athletic managers should have effective planning in order to hold premier leagues to facilitate the victory path for their athletes.

As for the support factor, it should be noted that athletes are not alone in this world, they are influenced by social and organizational factors. The environment by which they are supported, increases the possibility of being successful [5]. Supportive services play important roles in increasing the athletes' performance. For example, supporting the elite sports in all aspects is one of the basic rules in Germany. In this rule athletes are not only supported in their athletic field but also in their educational and career life [23]. In Iran, champions of very important out of home competitions such as Olympic or world or Asia championships, can benefit from educational, job, retirement etc. supports [22].

Another important factor is financial resources. Countries that have more investments in this field have more chances to put their team in ideal conditions for practicing. There are many examples in which governments could improve their sports condition after they had invested in this area. This often happens after a loss in an international event. Hougan and Norton (2000) found a linear relation between the invested money to develop the elite sport and the medals achieved. They calculated 37 million dollars for each medal [7]. Researches show that the role of a government in providing financial resources is vital. They facilitate the way to championship by doing so. For example, the government of Australia

dedicates special budget to elite sport every 4 years. From 1989 to 1992, 217 million dollars and from 1992 to 1996 293 million dollars was invested for sports. Moreover, in 1994, another 135 million dollars was added to the budget for Sydney Olympic [28]. It should be noted that the countries that put vast amount of investments in sports, are the ones that are successful in Olympic competitions. It should also be noted that more investment doesn't mean the guaranty for being successful. It only increases the chance to be successful.

Another factor in success is the athletic facilities with priority for elite sports. When talented athletes are promoted to higher levels and practice regularly, they need more professional and more accessible equipment. Sutriado stated that all national sports organizations pay attention to the point that high quality practical facilities can affect the success of the athletes and help them have a better performance in global competitions and the Olympic [28].

The third area that influences the success in Iran's elite sport is research-development area. In this area, the comprehensive factor has more effect on the success than scientific researches. It should be noted that countries will have the chance to be successful in athletic fields which have appropriate organizations in this regard. In fact, integrated and homogenous structures are prerequisites for suitable use of the resources [8]. Athletic disciplines in each country should be integrated and homogenous. Activities and aims which have to be followed should be logical and stable. The priorities for activities, planning, disciplines etc. should be clear when making strategies. Different countries are successful in different athletic fields. No country can claim that is successful in all fields. Therefore it is necessary that instead of investing in all fields, special fields are chosen in this regard. In most countries, physical educations are handled by a special organization with specified tasks. One of the biggest problems of our country in this regard is that there isn't a suitable organizing method, nor is there a unified decision making center. It should be noted that vast investing in elite sport will be successful only if the strategies and policies are made appropriately. As Clumpner (1994) stated, a suitable communicational system as well as task defining systems could facilitate reaching these goals [6].

Scientific researches can be mentioned as effective factors in Iran's athletic success. Even if the coaches are the main factors in forming elite athletes, supports by administrative staff as well as expert managers help the athletes improve their performance into the highest levels. Scientific researches play important roles in different

fields including designing and building sports facilities and equipment as well as techniques and tactics for practical approaches. Besides they are influential in nutrition, physiotherapy, massage, athletic medicine, psychology, biomechanics etc. Therefore in order to reach these benefits, powerful cooperation among universities and federations is necessary.

In general, as it can be seen in this research as well as other studies, investing on some factors doesn't mean the guaranty to be successful in athletic fields. It is impossible to be successful without having a systematic approach.

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