

Talent Identification and Development Model in Iranian Athletics

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Abstract: The main purpose of this study was to design a model for talent identification and development in Iranian athletes. This project aimed at addressing the problem of coaches to find the best children and youth for track and field by a multi-factorial modeling. This model can be utilized to explain the present status of the talent identification process and provide suitable suggestions to improve the results of athletic fields in international competitions. In terms of methodology, a descriptive-analytical and field study was used to randomly select expert coaches ($n = 38$) in Iran. A research-made questionnaire was used to collect the data and the experts confirmed its content validity as well as reliability (" ~ %) in a pilot study. The data were collected via six factors: motor ability, physiological, anthropometrical, psychological, sociological and cultural. The results of this research lead to a special model of Iranian track and field. This model has three phases (initial selection, general tests and special tests) with specific aims such as determining unsuitable children for athletic fields, determining the abilities of the youth for track and field and improving the special abilities required of athletes. Also, each phase has a special "input entrance" such as the main input, classical input, games input, free input and championship input. This model determined the age and time span of each phase and also emphasized those in charge of each phase.

Key words: Talent Identification % Model % Athletics

INTRODUCTION

According to the new findings of the physical education and the athletic sport sciences, the proper selection and instruction of the human resources and according to these findings, the human resources are the most important factor for the qualitative and quantitative improvement of the mentioned skills.

Therefore, it seems necessary to have a better and more precise understanding of the talents to improve the qualitative level of the athletes and consequently, the athletic sports.

In 1985, Bloom *et al.* conducted a study to understand how world-class talent was developed. They interviewed 120 individuals who had achieved world-class success in the fields of art, sport, music and academics. Successful individuals had very similar learning and development stages [1].

But the question is that, what is Talent identification? TiD refers to the process of recognizing current participants with the potential to become elite players. It is a process that makes a judgment about a performer's qualities and offers that individual an opportunity to do something for which he/she is suited [2, 3].

The only talent identification criterion in the Iranian track and field is the results of the schools championship games as well as the sport festivals which do not follow a definite criterion to select the talented individuals with the physical, psychological and social characteristics suitable for track and field. In spite of the fact that different methods have been presented to evaluate the performance level of the athletes' skills and abilities, nowadays the athletes resort to one of track and field events incidentally or through the trial and error process and when they continue their activity, their talents are not considered in that specific event. Thus, after several years, it may become clear that he/she does not enjoy the required potential to achieve the high championship levels in that event.

So early identification of future elite performers allows the best youngsters to access to the best coaching and training at an early age, thus increases the likelihood of success [2, 4].

On the other side, not timely use of the talent identification methods may force the youth talented in track and field to turn to the other sport disciplines, or they may not achieve the peak of their abilities due to their age.

Although early identification of talent is no guarantee of success in sports during childhood, let alone during adulthood, talent identification and selection for sport is not inherently wrong. Concerns commonly focus on how the selection program is used, how the sport system treats the young athlete once he/she is identified as talented as well as unrealistic expectation, decision making, progression with age and related issues [5].

But Today it Seems That Three General Categories of Talent Identification System Exist:

- C Systematic, governmental system: former soviet bloc countries, China
- C Systematic, non-governmental systems: tennis, swimming, well-structured age-group programs
- C Non-systematic approaches: somewhat random: identification system / no particular approach

When reviewing the talent identification process in Iran, it seems that the track and field stands in the third category of this classification.

Generally, according to the researchers accomplished in the field of the talent identification methods and models, the researchers have identified the factors affecting the performance of the skills in track and field as follows: psychological, anthropometrical, genetic, biological, psychological and sociological [3].

Thus, due to the fact that there has been no suitable model and method in Iran based on the Iranian elite coaches' consensus and according to the modern scientific methods of identifying the individuals talented in track and field, a model is presented in this research. This model has been developed on the basis of the scientific criteria as well as the cultural and native information of the Iranian athletes and youngsters; it can provide the criteria for the identification system to select the young talents in the semi-long-distance running sprint.

MATERIALS AND METHODS

This research has applied a descriptive approach. A researcher-made questionnaire was used as the information measurement instrument to evaluate the information about the talent identification methods and criteria. Subjects consisted of the male coaches of the track and field federation's national teams, the coaches of the provincial teams and the teachers of physical education in the track and field clubs of the Ministry of Education. This questionnaire was validated and justified by Delphi approach and after gathering the primary

information through a questionnaire (it consisted of open-ended questions). The questionnaire was presented to a sample group. This sample was determined by stratified random sampling.

RESULTS

The results obtained from the questionnaire were gathered in two sections: the demographic information (Table 1) and technique information. After determining the characteristics of the population, their comments were compared with the other research results, were integrated and finally an applied model of identifying and training the individuals talented in track and field for Iran was presented.

The talent identification authorities' as well as the elite coaches' comments were gathered and the results were shown in Table 2.

According to the results of Table 2, most of the Iranian elite coaches (77%) (It approves the need for a systematic talent identification method) recommended the physical education teachers and coaches to identify and develop the talented individuals; it is in conformity with the other research results such as Richards (1999) [6], Gilz (2007) and McDonald (2007) [7].

Furthermore, 43% of the Iranian coaches apply the coach-made methods which are based on their personal experiences as well as the standard criteria. The random and unsystematic method based on the athletes' personal interests in track and field is the second common method (27%) to identify the talented Iranian individuals; it seems to be logical if we consider the importance of the youth's personal motivations and interests factor in a specific sport discipline [8].

In an opinion poll about the suitable age of identifying the talented individuals and the most important criteria of talent identification in track and field, the Iranian elite coaches presented their comments as follows (Table 3).

As it can be seen in Table 3, the Iranian elite coaches believe in a multi-factorial approach and identified the motor ability (148 points), the physiological (141 points) and the anthropometrical (124 points) factors as the most important factors of identifying the talents respectively. These comments are in conformity with the results obtained from many other researches such as Richards (1999), Kersey (2002), Balyi and Morley (2002, 2006).

Most of the Iranian elite coaches (70%) believe that the age of 12-16 is the best and most suitable age for talent identification and these comments are in agreement with many researches such as Williams (2000) and Balyi (2002, 2004).

Table 1: The demographic characteristics of the Iranian elite coaches (n=38)

Variance	Level of coaching				Degree			
	Int.	1st	2nd	3rd lowest level	M.A. (PE)	B.A. (PE)	Junior College Diploma	Diploma
Position/ Rank								
Percentage (%)	16.6	13.3	20	50	3	60	13.7	23

Table 2: TiD methods and the individuals in charge from Iranian elite coaches' point of view (n=38)

Variance	TiD Methods				Individuals in charge		
	Applying universal criteria	Coach-made (scientific-experimental)	Observation (experimental)	Other methods (incidental and random)	PE teacher	Elite coaches	A combined group of teachers and coaches
(%)	10	43	20	27	23	-	77

Table 3: The priority of the most important criterion from the Iranian elite coaches' viewpoints (n=38)

Variance	Motor Ability	Physiological	Anthropometrical	Psychological	Sociological	Cultural
Points	148	141	124	106	78	61
Priority	1	2	3	4	5	6

DISCUSSION

According to the information obtained from track and field coaches' opinions, it becomes clear that nowadays in Iran, the only identification criterion (i.e. the schools championship games as well as the sport festivals results) does not follow a definite procedure to select the talented individuals enjoying the characteristics suitable for track and field. Furthermore, according to this information as well as what can be found in the talent identification researches all over the world, there is a consensus among the coaches that a suitable and integrated talent identification system (identification and training) for track and field is required. Additionally, they believe in using the criteria based on the modern and scientific principles to select the talented individuals at a suitable age, although Balyi (2002, 2004) believes that countries with sparse population seem to be dependent on very systematic approaches to TiD.

Generally, track and field as a recent specialized sport requires a generalized approach to early training. For this sport, the emphasis should be on the development of general motor and technical - tactical skills during the first two phases of training [9].

The model presented in this research has been developed according to the analysis and compared with the talent identification models of the world and took the general principles of models into consideration:

It is a Systematic and Long-term Athlete Development Model: This model is of a long-term and systematic procedure which identifies and develops the individuals talented in track and field. The identification phase starts

from the elementary schools (6-11 years old) and develops them in the required time span. This model continues until the elites join the national adolescent and youth teams. The results of many researches since 1895 have noted the necessity for the long-term progressive procedure of identifying and developing the talented individuals as well.

Chen Hong Woo (1992) [10], the Chinese talent identification system designer and Peltolla (1992) indicated the necessity for a systematic plan of the talent identification.

As McIver (2006) [11] mentioned, a TiD program is pointless without a united talent development plan. TiD and TD (talent development) systems should be integrated.

Kulka quotes Pfutzner (2001) that the most systematic model was probably the one in the former Deutsch Democratic Republic (DDR). Australian Institute of Sport (AIS) adopted some elements of the DDR's talent identification approach by implementing a talent search program [1]. Balyi, a Hungarian sport scientist and coach, mentioned that the quality of talent identification system may influence the country's international elite sport in various ways [12]. Balyi also developed a model for talent identification during 2002-2006 [13].

This Is a Multi-Factorial Method: Like the previous models in which the researchers have used various factors such as the motor ability elements (legs and arms power, speed of movement and general endurance), the anthropometrics elements (standing and sitting heights, arm span and body weight) and the psychological elements (personality traits and behavioral dimensions)

with an eye to the age factor, these factors have been applied in this model to identify the talented individuals according to the coaches' as well as considering other researches' comments all over the world.

There are many samples of the multi-factorial models presented by the researchers since 1981 because the best system for TiD incorporates different elements such as physiological, psychological, sociological, technical abilities, psychomotor abilities, anthropometrics and [14-17].

Considering the importance of the number of participants in the first phase of the model (6-11 years old) as well as the economic situation in Iran, it should be noted that the researcher used the standard field tests in this model. This issue has been considered in many of the model samples in the world [18-21].

Issues in TiD Approach: There are many different issues in this model which will be discussed separately.

Considering the Age: in TiD systems, both chorological age and biological development are critical points [18]. Therefore, there are different ideas about the exact age of TiD. Many researchers suggested that TiD should take place in different phases on the basis of age [5, 9, 11, 14, 15, 18].

From expert coaches' viewpoints, the first phase of TiD should take place around 6 years old, the golden years of learning. They also suggested 3 phases for TiD.

Considering the Results of Competitions: In addition to the systematic long term athlete development model, TiD is based on the results of competitions and recommendation of talent scouts and expert coaches [2, 22- 24].

Considering the Information Localization: As many researchers asserted, with regard to the genetic, physical, cultural, economic and other differences, the information applied in the model (including the athletes' profiles as the youth's norm and comparison criteria to select the individuals above than the medium level) has been obtained from the Iranian youth and athletes [7].

Generalizability to Other Sports: Although this model has been designed for track and field, it can also be applied for other sports by changing the contents of the boxes (tests, exercises and criteria).

CONCLUSION

With regard to the fact that every different population with its own characteristics requires a special model based on its own information and field, the talent identification model of the Iranian track and field (Fig. 1) is presented.

The general characteristics of the model (the model phases and input (entrance)) are presented in Tables 4 and 5.

Table 4: The phases of the talent identification model

Phase	Aim (purpose)	Age	People in charge	Time span (except exceptions)
Initial selection	* omitting unsuitable and unhealthy children * teaching and developing the general motor abilities	6-11 years old (elementary school)	PE Teachers and school physicians	About 1-5 years
General tests	* the main phase of the talent identification process * determining the abilities and characteristics of the youth above the medium level * developing and improving the general abilities required for track and field	12-16 years old (junior high school)	PE Teachers and the school clubs coaches	About 1-3 years
Special tests	* developing and improving the special abilities required of athletes *preparing the tables for the youth's abilities norms and comparing with the athletes' profiles	Over 12 years old	The experienced coaches of the federation and the clubs	About 2-5 years

Table 5: The input of the talent identification model

Input entrance	Aim (purpose)	Criterion	The entrance tests of each phase
1 The main input	The entrance permits the talent identification model	Physical and psychological healthiness * the general motor abilities	* the medical tests
2 The classic input	The entrance permits to take part in the test's box model's norm tables of field tests	A score above the average of the * physical-motor abilities * psycho-motor abilities * anthropometrics	* psychological
3 The games input	The entrance permits the general training phase national or provincial games	Achieving the 1 st - 10 th rank in and field events	Various games of the track
4 Free input	The entrance permits the general training phase * the person's and his/ her family's interest	* introduced by the talent spotters tests (no.2)	The school games entrance
5 Championship input	The entrance permits the track and field championship special training	The profiles of the champions in Iran and the world in the desired abilities of the model	The school games entrance tests (no.2)

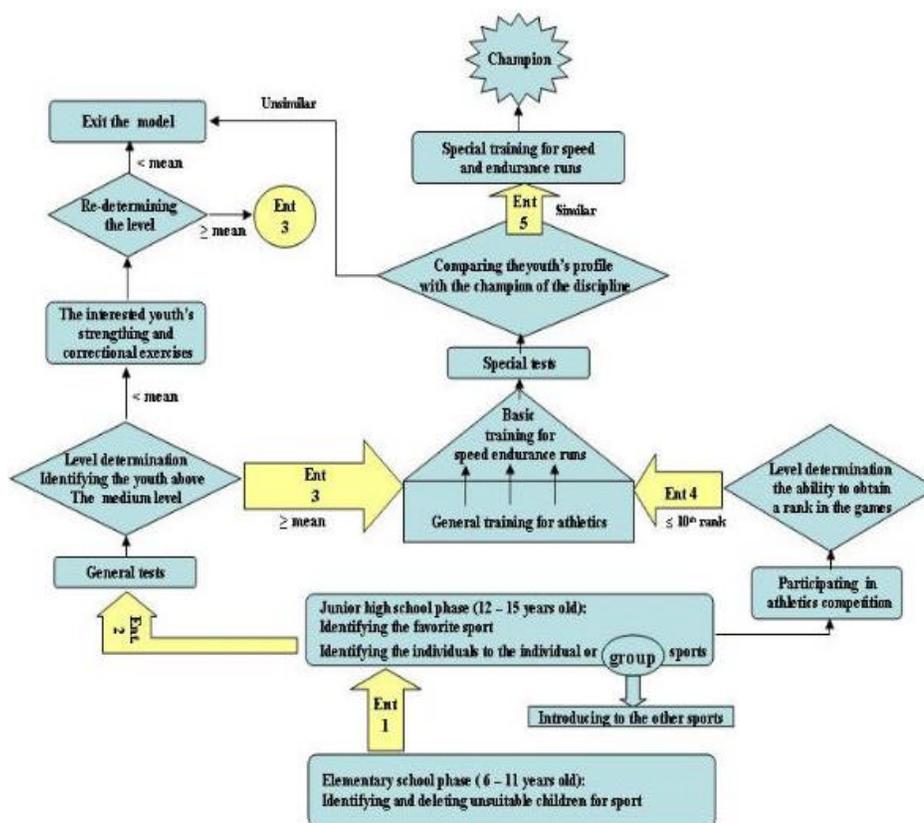


Fig. 1: TiD model for the speed and endurance running

Table 5 can identify the test which should be performed to move from one phase to another. Also, the performance criterion of each test can be identified.

Table 4 shows the various stages of the test, purposes, the ages of each stage, the estimated time span of each stage and the individuals in charge of each stage.

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