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Examination of Talent Selection Methods in Different Sports Branches

Ömer Kaynar[1], Fatih Bilici[1]

[1]Muş Alparslan University, School of Physical Education and Sports,, Department of Physical Education and Sports Education, Turkey

Correspondence: Ömer Kaynar, School of Physical Education and Sports, Department of Physical Education and Sports Education Muş, Turkey. Email: o.kaynar@alparslan.edu.tr

Abstract

The purpose of this study was to determine the talent selection methods applied to athletes involved in different sports branches in Turkey. The research population consisted of 724 volunteer athletes who were active in sports clubs in thirty seven different cities of Turkey. Semi-structured interview form was used as data collection tool. It was determined that no talent test was applied to 512 (70.72%) of 724 athletes who participated in the study and 212 (29.28%) were put to talent test methods by their coaches. Of 212 athletes who were put to talent test, 41 (5.66%) were observed for their physical characteristics, 59 (8.14%) for their competitions, 75 (10.35%) for their basic motor skills (speed, strength, endurance, coordination, balance, flexibility and agility) and 37 (5.11%) for their technical capacities in competitions. As a result; it is estimated that the application of physical, mental, physiological, body composition and genetic tests all together while determining the talent selection in sports will be the most effective method to detect talented athletes.

Keywords: sports, talent selection, different sports branches, talent test methods

1. Introduction

Talent selection plays a significant role in identifying talented athletes. The talent of an individual in sports brings success. For this reason, many developed countries such as England, China, Russia, Germany and particularly the USA used talent selection methods in order to direct the candidates of promising athletes to the sports branches they are capable of (Mirwald, Baxter-Jones, Bailey & Beunen (2002).; Baıley, 2010).

In addition, the athlete is likely to be successful if his physical, physiological and anatomical structure is inclined to the given sports branch (Ayan & Mülazımoğlu, 2010). Therefore, talent selection methods play a key role in determining talented athletes.

The concept of talent is defined as "a person's ability to understand or do something, capability and aptitude" in Turkish Language Institution. The concept of talent in sports, however, can be defined as all of the genetic factors, innate physical and physiological capacities, mental skills and high-performance characteristics that are believed to be effective to be successful in sports. (Kaynar & Bilici, 2017).

Talent selection in sports science mainly consists of two methods. These are natural selection and scientific selection (Bompa, 2003). Natural selection can be defined as the random sports branch selection of a person who is directed to sports by trainer, family or teacher without being put to any talent test or scientific test. Scientific selection, on the other hand, can be defined as directing athlete candidate to a certain sports branch according to the results of the test conducted in the light of scientific data and applied by the experts to identify the talented athlete candidates. In the literature, there are a good number of studies conducted on talent selection methods which are applied to determine talented athlete candidates. Some of these studies emphasize that physical, physiological and motoric features are effective in directing individuals to sports (Hekim, Tokgöz, Reyhan & Yıldırım, 2012; Milanese, Bortolamı, Bertucco & Verlato, 2010). Others report that genetic factors and muscular, anthropometric and psychological characteristics are effective in identifying talented athletes (Ayan, 2010; Eynon, Ruiz, Oliveira, Duarte & Birk, 2011).

There is no research which investigates talent test methods used to detect talented athletes in different sports branches in Turkey. However, the methods used in talent tests in all sports branches are very important in identifying the athletes who may be successful and directing them to the related sports branch. Therefore, this study aims to determine the talent selection methods applied to athletes engaged in different sports branches in Turkey.

2. Methods

2.1 Participants

The research population consisted of 724 volunteer athletes from different branches; wrestling (150), football (92), volleyball (80), handball (71), taekwondo (68), basketball (55) table tennis (53), athletics (32), badminton (36), tennis (22) , judo (14), karate (18), skiing (11), fencing (7) and gymnastics (6), boxing (6), field hockey (3) in 37 different cities of Turkey. The convenience sampling method was used to detect the participants with the purpose of easy access to the participantation, improving reliability and saving time and money.

2.2 Data Analysis

Semi-structured interview technique was used in this study which is conducted based on the qualitative data collection technique. Semi-structured interview form developed by the researchers was used as data collection tool in the study.
In order to obtain comparative results, the semi-structured interview form, which was preferred in written, was developed to determine the talent test of the athletes. In the interview form, there are questions such as "education background, starting age of sports, active sports years, best sports grade, whether or not talent tests are applied, what methods are used, if any". Before starting the interviews with the athletes, the preliminary application was carried out and the interview form was finalized after necessary modifications were made according to the recommendations of the experts. In the preparation of the interview questions developed by the experts; attention was paid to ensure that the questions are clear, understandable and easy to answer and they are not complicated or guiding (Yılmaz & Altınkurt, 2011). The athletes were informed about the content of the interview form and the written interview form was applied. The written interview form applied to the athletes was transformed into the computer and the data were recorded. The frequency ranges and percentages of the data recorded on the computer were calculated and the data were interpreted. While interpreting the data, generally frequency and percentages are used. Tables are formed by determining the appropriate themes, the most and the least common answers are interpreted and the research findings are interpreted and evaluated (Büyüköztürk, Çakmak, Akgün & Karadeniz, 2011).

3. Results

Education background, best sports grade, starting age of sports and active sports years of the athletes are presented in Table 1.

Table 1. Education background, best sports grade, starting age of sports and active sports years of the athletes

Education Background					
Primary School	Elementary School	High School	Associate	Undergraduate	Graduate
38	241	271	30	137	7
Best Sports Grade					
Turkey Champion	European Champion	World Champion	Olympics Champion	Special Tournament	None
68	27	11	-	266	352

Starting Age of Sports								
6 years old	6 years old	6 years old	6 years old	6 years old	6 years old	6 years old	6 years old	6 years old
21	50	91	137	149	108	78	66	25
Active Sports Years								
1-2 years	2-4 years	4-6 years	6-8 years	8-10 years	10-12 years	12-14 years	14-16 years	16 years and above
161	189	145	108	63	38	8	6	6

As table 1 shows the participants of the study are 724 athletes engaged in different sports branches with the mean age of 16.59 height (cm) of 171.05 and mean weight (kg) of 68.27.

Table 2. Talent test applications

Talent Test (n/%)			
Yes (n/%)		No (n/%)	
212/ 29.28		512/70,72	
Talent Test Methods (n/%)			
Physical features	Observing the competition	Basic motoric features	Technical capacity in the competition
41(5.66)	59(8.14)	75(10.35)	37 (5.11)

It was found that 512 (70.72%) of the 724 athletes who participated in the study were not put to any talent tests and 212 (29.28%) of them were put to talent test methods by their coaches. Of the 212 athletes who were put to talent test methods, 41 (5.66%) were observed for their physical characteristics, 59 (8.14%) for their competitions, 75 (10.35%) for their basic motor skills (speed, strength, endurance, coordination, balance, flexibility and agility) and 37 (5.11%) for their technical capacity in the competitions Table 2.

4. Conclusions and Recommendations

Physical and motoric features, genetic structure, somatotype characteristics, body composition, mental ability, technique, tactics, and experience have an important role in the success of talented athletes (Gökdemir & Koç, 2000; Demiral, Erdemir & Kızılyaprak 2001; Eniseler, 2010). In addition, many literature studies report that talent test methods used in the identification of talented athletes are an important criterion in determining talented athletes (Ayan, 2010; Küçük, 2009).

It was determined that 512 (70.72%) of the 724 athletes who participated in the study were not put to any talent test and 212 (29.28%) were put to talent test methods by their coaches. It was also determined that of the 212 athletes who were put to talent test methods, 41 (5.66%) were observed for their physical characteristics, 59 (8.14%) for their competitions, 75 (10.35%) for their basic motor skills (speed, strength, endurance, coordination, balance, flexibility and agility) and 37 (5.11%) for their technical capacity in the competitions.

In the study conducted to detect elite female judoists, body composition, long jump with pause, static and dynamic balance, coordination, quickness and speed tests were used (Mülazımoğlu, 2009). For the identification of the talent of 91 new basketball players, methods of throwing the ball to the hoop, throwing the ball to the hoop by skimming, dribbling, dribbling, bringing the pins down, throwing the ball to the target on the wall and fast pass on the wall were applied. In another study, wrestling competitions, 800 m running test, 30 m running test, flexibility and mental skill tests were performed on the wrestlers to be accepted in wrestling training centre (Özal, 2003).

In many sports branches, somatotype characteristics, body composition, muscle mass, and body fat ratio may affect sportive performance positively or adversely (Kerr, Ackland & Schreiner 1995; Kürkçü, Hazar & Özdağ 2009; Eler 2018).

In talent selection, the trainer's observation and the decisions of the experts are decisive (Kozel, 1996). In the study conducted on basketball players, it was emphasized that technical characteristics play an important role in success (Kılınç, Erol & Kumartaşlı, 2011).

Literature findings and results of the present study also indicate that similar physical, physiological and anthropometric test methods are applied to the athletes engaged in different sports branches.

It is known that genetic characteristics have an effect on the physical, physiological and anthropometric features of the individual. Therefore, genetic studies in sports conducted in recent years aim to determine talented athletes and maximize the sportive performance (Epstein, 2013; Sercan et.al. 2014; Alonso et.al., 2014).

It has been reported that the genetic feature clearly determines to which aerobic and anaerobic performance a person is inclined and how long he will respond to training (Bouchard, Taylor, Simaneau & Dulac, 1991). In the study conducted with 14 pairs of identical twins, it was found that approximately 48% of the lactic anaerobic capacity was determined by the factors passing by the genetics in the high-intensity training (Simoneau et al., 1986).

It is known that the effect of exercise on the heart is controlled by genes and exercise has different levels of effect on heart and heart functions of athletes with different genes (Ulucan, Göle, Altindas & Güney2013). It has been reported that genetic factors affect the physiological characteristics such as VO2max capacity, strength, endurance, types of muscle fibers, heart size, and lactate (Mustafina et al. 2014).

Many performance parameters such as physical, mental, physiological, anthropometric and somatotype body

composition have been used to determine talented athlete for talent selection. Although genetic studies are known to be an important criterion in talent selection, they are not much applied in infrastructure studies.

It is probable that more dramatic results will be obtained on condition that genetic studies are included in the performance parameters used in the identification of talented athletes in sports. Because genetic studies ensure directing individuals to certain sports branch or within a sports branch based on their physical, physiological and anatomical tendencies; and help prepare individual training and nutrition programs particularly in individual sports and assess the disability risk.

As a result; while determining the talent selection in sports, it is predicted that the application of the physical, mental, physiological, body composition and genetic tests all together will be the most effective method to detect the talented athlete.

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