

Assessing weightlifting talent indices from Iranian top coaches' points of view

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ABSTRACT

The main objective of the present study was to evaluate the talent indices of weightlifting from Iranian top coaches' points of view. The statistical sample of the present study which was selected purposefully included 40 Iranian coaches in grades one and two having the history of being in the Premier League and national team. To this end, a questionnaire was designed in two parts consisting of personal questions and questions related to talent. Its validity and reliability were obtained using Cronbach alpha as 0.81. To analyze the obtained data, the descriptive statistical method including tables, charts and scattering- and central tendency indices was used. The study results revealed that coaches in the study believed that having strong and big fingers in the area of anthropometric criteria is in the first priority and physical strength in the area of physical-movement criteria is in the first priority of weightlifting talent identification. The anaerobic power of physiological criteria is in the first priority in the weightlifting talent identification and obeying the coach for mental-social criteria is in the first priority too.

Keywords: Talent Indices, Weightlifting, Iranian Top Coaches

INTRODUCTION

To achieve success, take favourable advantage and prevent the loss of material, intellectual and human capital in all aspects of political, social, cultural, economic, military life, etc. talent identification is done with objectives such as discovering elite and rearing elite by screening and guiding non-selected individuals to identify their hidden talent in other areas. According to sport science scientists, sport talent identification is a rational, short and affordable way for the successful presence of athletes in international arenas. The main objective of talent identification is to identify and select athletes having the most capability in a certain sport (8).

According to sport science scientists, sport talent identification is a rational, short and affordable way for successful presence of athletes in international arenas. The process requires the identification and selection of talented individuals who have physical, skill and behavioural qualifications for success in a particular sport. As far as it is relevant to elite athletes, coaches' time and work should be spent for those who have potential abilities. Otherwise, talent, time and energy of the coach are wasted or in its best form, low quality athletes will be created (6). Ringer believes that talent identification means the prediction of implementation via measuring physical, psychological and social properties and also technical skills. Paltula (1998) considers talent identification as the process in which, young children are directed to sports where there is the most likelihood of being successful based on criteria obtained from comprehensive test batteries (4). Bompa (2000) believed that talent identification in sport means discovering and activating potential abilities of the individual and guide them in the right direction (7). Portman (1994) considers a talented person as one having an unusual talent for a special activity such as exercise, industrial or art activities (15).

Accordingly, talent identification is a process in which talented individuals are identified by a scientific view to sport and in this process, variables and various properties such as structural, physiological, physical-movement and psychological ones affecting each field must be defined and their indices be determined and then, screened. These methods are different in various countries (5). In most Eastern European countries in late 1960, scientists adjusted special methods to identify talented athletes. Most individuals receiving medal in 1972 Olympic Games particularly from East Germany had scientifically been selected. Like this, it was happened in Bulgaria in 1976 Winter Olympics too. Approximately 80% of athletes receiving medal had been identified as talented ones (Huygens, 2012). Today, it is necessary to achieve championship through research and scientific findings that many countries such as China, Australia, Canada, Malaysia and even Qatar believe in it (13).

Aygbvk et al (2011) concluded that weightlifters and wrestlers have more strong muscular body in comparison with the boxers and non-athletes (1). Andrew Frye et al (2006), in their study, selected 115 young weightlifters of national elite and Olympic championship with the aim of identifying characteristics of anthropometric and performance variables in adult and American male elite weightlifter compared to non-athletes and in their results, they found that five characteristics of vertical jump (22.78%), relative fatness (18.9%), grip strength (14.43%), twist angle during lift-off squash (0.92%) and the highest percentage to body mass index with 23.13% of all variables play a major role in selecting and screening elite weightlifting champions (6).

Talent causes to expand the context and scope of talented individuals who have the required opportunity to develop athletic skills (11). The most important task of coaches and consultants is to identify talents, determine their amount and identify individual differences in various capacities. Before the onset of training, coaches should be aware of the rate of individual's potentials so that they can lead them to fields having further success via applying various tests (14). This professional practice will avoid wasting time, manpower and facilities and spending unnecessary costs. Achieving the apex of sport performance requires athletes with anthropometric, physiological, physical-movement and strong psychological characteristics and scientific training programs benefiting from specialists of sport sciences and facilities. Providing the scientific discovery of athletic talents, they can be put in the body of the national team in 2 to 3 years and if it is done by traditional methods, the time can be intensified much than that (3). The present research aims to determine what criteria are measures of talent identification in the sport field of weightlifting in the viewpoints of coaches?

MATERIALS AND METHODS

The study population is first class coaches and two Iranian weightlifters who have participated as coaches in the world- and Asian championships and the domestic and international tournaments. In total, the number of individuals responding the questionnaires as a coach is 40 ones. The instrument used to measure the variables was the questionnaire that in two parts, evaluates personal information such as coaching degree and certificate, coaching experience and coach championship title and in the next part, anthropometric, physical-movement, physiological and psychosocial properties which prioritizes them based on their importance according to the coaches' responses. The present questionnaire was validated through library studies, internet sites and consultation with coaches of national weightlifting teams of various age categories and by surveying opinions of ten scientific and practical weightlifting experienced professors who taught at universities, and for its reliability, experimental distribution of Cronbach alpha was used which has been achieved as 0.81. To analyze the data obtained from descriptive statistical method encompassing tables and graphs and dispersion and central tendency indices, SPSS software version 19 was used.

RESULTS

The most work experience of coaches is 6 to 10 years with 42.1%. The highest grade of coaches participating in the present study is the international grade with 31.6%. According to the obtained data, 63.2% and 36.8% of Iranian coaches are coaching part- and full-time, respectively. Most Iranian coaches believe that talent identification should be done at the age of 8 to 12 years old.

According to Table 1, strong and big finger has the most importance in anthropometric indices in the viewpoints of coaches participating in the study.

According to Table 2, physical strength has the most importance in physical-movement indices in the viewpoints of coaches participating in the study.

According to Table 3, cardiovascular fitness has the most importance in physiological indices in the viewpoints of coaches participating in the study.

According to Table 4, obeying the coach has the most importance in psychosocial indices in the viewpoints of coaches taking part in the study.

Table 1: Descriptive statistics for subscales of anthropometric indices in choosing elite talents of weightlifting in terms of Iranian coaches' opinions (in terms of importance rate of 5 scores)

Anthropometric indices	Coaches' opinions
Ratio of weight to height	4.47 ± 0.51
Length of hands	3.16 ± 1.01
Strong and big finger	4.52 ± 0.61
Being muscular body	4.42 ± 0.60
Width of shoulders	4.52 ± 0.62
Percentage of body fat	3.42 ± 0.60
Size of head	1.47 ± 0.69
Standing tall	2.57 ± 0.69
Wide of hips	2.73 ± 0.65

Table 2: Descriptive statistics for subscales of physical-movement indices in choosing the elite talents of weightlifter in terms of Iranian coaches' opinions (in terms of importance rate of 5 scores)

physical-movement indices	Coaches' opinions
Explosive strength (power)	4.52 ± 0.69
strength	4.52 ± 0.61
Speed	4.31 ± 0.75
Perseverance	3.57 ± 1.17
Flexibility	3.95 ± 0.91
Balance	3.89 ± 0.87
Agility	4.50 ± 0.78
Reaction time	4.10 ± 0.81

Table 3: Descriptive statistics for subscales of physiological indices in choosing elite talents of weightlifting in terms of Iranian coaches' opinions (in terms of importance rate of 5 scores)

physiological indices	Coaches' opinions
Cardiovascular fitness	4.01 ± 0.87
Anaerobic power	4.05 ± 0.91
Maximum consumption of oxygen	3.53 ± 0.90
Lactate tolerance	4.05 ± 0.85

Table 4: Descriptive statistics for subscales of psychomotor indices in choosing elite talents of weightlifting in terms of Iranian coaches' opinions (in terms of importance rate of 5 scores)

psychomotor indices	Coaches' opinions
Achievement motivation	4.73 ± 0.56
Confidence	4.73 ± 0.65
Obeying the coach	4.84 ± 0.37
Audacity and competition sense	4.63 ± 0.59
Creativity and technical intelligence	4.47 ± 0.77
Centralization	4.63 ± 0.68
Imagery	4.00 ± 1.20
Overcoming stress	4.42 ± 0.77

DISCUSSION AND CONCLUSION

As the results of the present study revealed, in the anthropometric domain, the most important factor in the viewpoints of Iranian coaches is strong and big finger that that results of the present study is consistent with the results obtained from the study by Astarvn *et al* (2011).

As the results of the present study showed, in the area of physical-movement, the most important factor is power in viewpoints of Iranian coaches that the study results are consistent with results of the study by Avrvanv's(12). According to his research, having power, speed, muscular endurance, tall height, cardiovascular endurance and technical and tactical intelligence have been known as necessary to expand and develop weightlifting and as it was mentioned in the research, the above factors are among the important indices for talent identification in

weightlifting. Given the research principles, flexibility, strength, power and the speed of body movement are considered as other important factors in weightlifting that all of them are measurable by field or laboratory tests.

As the results of the present study indicated, in the physiological area, the most important factor has been anaerobic power and lactate tolerance in the viewpoints of Iranian coaches that the study result is consistent with the results by Ghanbari (2008). In his research entitled determining affective indices on weightlifting in the viewpoints of talent identification coaches and providing proposed pattern, he showed that the appropriate age for talent identification is between 10 to 12 year old and also, cardiovascular fitness, intelligence, technical and tactical intelligence and creativity, length of hands and ratio of height to weight factors have high priorities in various anthropometric, physical-movement, physiological and psychological-social domains and the research results are inconsistent with some findings by Ghanbari (2008) such as muscle fibres and aerobic power which is probably due to inconsistent effect of changing in weightlifting provisions in determining the dominant factors, different statistical models of two researches (coaches' academic level, Coaching experience and championship experience) and different measurement tool (questionnaires). Also, the results of the current research are an inconsistent with Hrvsvyl's study (1992) In his research, he considered the physiological characteristics as naturally effective on talent identification of high anaerobic power role, muscular perseverance and flexible factors (14).

As the results of the present study showed, in psycho-social area, the most important factor is obeying the coach in the viewpoints of Iranian coaches. The study results are consistent with those of Gvykan (2006) and Esther aglet and Astarvstar (2005). Environment movement abilities such as strength, speed, power, endurance, flexibility, agility, balance, reaction time, neuromuscular coordination, self-confidence and obeying the coach enjoy high importance in weightlifting(2).

The present research results are inconsistent with some findings by Avrvanv (2011) such as implementation speed and competitive anxiety control that is probably due to the difference statistical samples of both researches (coaches' academic level, coaching experience, championship experience) and being different measuring instrument (questionnaire) (10). Considering the research results, factors of strong and big finger, reaction time, cardiovascular fitness and technical intelligence and creativity have been known as the first priorities in structural, physical - movement, physiological and psycho - social areas. It is recommended that coaches consider these factors in choosing talent in weightlifting. According to the research results, the appropriate age of weightlifting talent identification is 8 to 12 years and it is recommended that the relevant organizations consider this age.

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