

## **Evaluation of talent indicators in Iranian karate from the perspective of Iranian elite athletes and coaches**

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### **ABSTRACT**

*In this study, the "Evaluation of talent indicators in Iranian karate from the perspective of Iranian elite athletes" was discussed. The research is descriptive. Statistical societies were 40 coaches and 800 athletes which were comprised all Iranian coaches and athletes in karate. Committee part was chosen through random sampling and just single karate was chosen among team and single kind. Also, 25 of coaches and 120 athletes were chosen as sample volume. Used tools were Questionnaire and interview and include 42 questions in physical, psychology, anthropometric and triple skill indicators. Validity Coefficient in mentioned indicators was more than 70%. Finally, single T group model was used to answer questions and finding showed that physical, psychology, anthropometric and triple skill indicators are important in karate talent.*

**Key words:** Talent, Karate, Athlete, Elite

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### **INTRODUCTION**

One of the most important explanations in sport is recognizing talent. Every one could learn to sing, paint or attend in special sport, but fewer people could achieve to upper level of skill. In past and even today in some countries, young people tend to sports which are custom and individual favour but in advanced countries and Eastern Europe this method is abrogated [7]. Recognizing talent is an interesting issue for some one who compete [4]. This issue is available in most of companies at the moment. Youth often have been chosen according to coach view and their sport function comparing to other coeval [6]. Because this method is not considered Adolescence effect, so have some limitation. How is decided for a young athlete through time, financial, social and moral resources? Recognizing talent should be organized. Most factors in this regard include enjoying young and brilliant athlete, exercise program, health and motivation [13]. Today, desirable operation of athlete is due to combination of different factors. Most of experts believe that use of physical, skill (technique and tactic), genetic, physiologic and biomechanic readiness are most important factors in skill sport optimized implementation and gain high level of heroism [11]. Many researchers wrote about benefit and defeat of advanced recognizing talent. Bomepa, peltolla and giyeta believe that recognizing talent help to increase brilliant progress. Also, help to elite people to choose suitable sport. Other countries could use of financial sport resources through recognizing talent. There is no doubt about existence organized talent as critical factor in athlete's growth [1]. There are different obscurities in Iran karate from the perspective of Iranian athlete and coaches and determining talent indicator is not easy. Human are different in physical, mental and dynamic skill. Subjective difference discussion try to determine difference

between people and Heredity effect [3]. Talent is one of factors in making differenced. Talent means natural readiness to do some of mental or physical activities. Talent speed up learning and finally is an important and effective factor [12]. Effective factors on sport should be considered before implementing talent program. Factors which should be examined are including: physiology, antropometry and mentally. Bompa and Thamsom believe that social and Heredity factors should be considered. Note that these factors are not listed as important level. Importance of these factors are different among sports and be considered in an effective talent program. Anthropometric indicators maybe is critical in recognizing talent in some sports like length in basketball [14]. Determining success factor aggrade way to achieve high level. This process need to be recognized and selecting brilliant people with physical, skill and moral qualification is critical. So recognizing talent is a process that be determine according to physical, dynamic and physocological qualification and then be sieved. Development of heroism sport is not exception. Coaches scientific finding and knowledge, way of recognizing talent, identify success factors in athleths, designing related system to recognizing talent are critical factors [5].

Recognizing talent is a multidimensional issue and there is different view what talent program should be implemented and how to be organized [2]. Recognizing talent is important issue in sport world. Identifying success factor eases the way. Recognizing normal athlethes among elite atheleths is difficult. Most of parents want their child to experience a sport field. Other parents maybe like to observe their children in national or international level of sport. Progress in primary level to elite in sport is a complicated process. This process need to have brilliant people with physical, skillful and mental qualification. Exploration process of athleth is most important issue in the sport today. So, in the sport as an art selecting brilliant people in low age, then conduct and control and evaluating them to gain high level. Otherwise, time and energy of coach is wasted and make a middle level athleth. So, main purpose is to recognizing talet to success in a special sport. In other word, one of most important issue in sport is recognizing talent. Every one could learn to sing, paint or attend in a special sport, but fewer one could gain higher level. Recognizing talent area is an interesting issue which was entered to sport world [13]. Different reasearches was disscussed in this issue like Mohammadi et al. around recognizing talent about young and teenages in football. Sheikh (2010) was discussed about study of talent about karate in Iran according to physical and mental readiness. Leg length, shoulder width, arm length, flexibility, anaerobic power, thereaction speed of hand, abdominalMuscle power, coordination and jumpresidual have significant meaning. Orlick & Partington (2002) expressed mental importance in sport talent. They founded that phycological variabelbe could predict Olympic Canada athleth. Mahouni and et al (2003) tried to identify some of mental skills related to sport talent. They reported that focus, management, stress managing, self confidence, mental readiness and motivation is important in recognizing elite and normal athelthes. Talent indicators are not curtained yet due to different research about sport talent. Because people in Iran tend to karate according to individual favourit, so in this sudy talent indicators were discussed form the perspective of athleth and coaches. So the main question of study is, what talent indicators in Iranina karate from the perspective of athleht and coaches are.

## MATERIALS AND MEHODS

Stuey method is survey. Statistical societies were 40 coaches and 800 athlethes which were comprised all Iranian coaches and athlethes in karate. Committee part was chosen through random sampling and just single karate was chosen among team and single kind. Committee part was chosen through random sampling and just single karate was chosen among team and single kind. Also, 25 people of coaches and 120 people were chosen as sample volum. In this study was used interview and questionaree tool. Questionaree include 30 indicators(15 physical and 15 psycology). In addition to mentioned indicators, 2 other indicators named anthropometric and karate skill was created, so anthropometric refer to 9 indicators and karate skill refer to 3 indicators. Finally it is explained that present questionaree include 42 question in physical, psychological, anthropometric and skill area. 15 indicators in physical, 15 in sycology, 9 in anthropometric and 3 in karate skill were placed. Measurement criterion designed as "veryhigh" to "very low" (5 =verymuch, 4 =high, 3 =medium, 2 =low, 1 =verylow). Questionaree showed desirable validity coefficient in physical, sycological, anthropometric and karate skill according to Cronbach's alpha.

Table1. Questionnaire validity

Variable	Cronbach's alpha(coefficient of internalheterogeneity)	Halfthetest(coefficient of stability)
Physicaltalent	0.78	0.78
Psychologicaltalent	0.79	0.79
Anthropometrictalent	0.79	0.78
Skilledtalent	0.78	0.77
Total	0.79	0.78

T single group was used to study of athleth and coaches prospective in talent indicators.

## RESULTS

**Table2: T single group to examine “physical” indicators about talent from the prospective of coaches**

	Indicator	Sig	Df	T	Empirical average	Theoretical average
1	Reactionspeed	0.001	24	4.70	3.96	3
2	Jumpsitu	0.011	23	2.76	3.50	3
3	Individualspeed	0.001	24	8.43	4.16	3
4	Muscle power	0.001	24	18.76	4.72	3
5	Response speed of legs	0.001	24	3.72	3.64	3
6	Nervous-muscle coordination	0.001	24	6.45	4.16	3
7	Anaerobic power	0.047	24	2.08	3.40	3
8	Cardio - vascular Stamina	0.001	24	4.10	3.76	3
9	Muscle stamina	0.002	24	3.46	3.80	3
10	Response speed of hands	0.001	24	3.77	3.68	3
11	Flexibility	0.002	24	3.48	3.76	3
12	Balance	0.001	24	3.59	3.68	3
13	Agility	0.001	24	6.72	4.12	3
14	Powerful explosive	0.001	24	5	4	3
15	Abdominal muscles	0.001	24	3.64	3.56	3
16	Physical	0.001	23	15.87	3.88	3

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators of physical talent indicators. Because empirical average is higher than theoretical average, so evaluation of physical indicator is higher than middle level in sport talent recognizing from the prospective of coaches.

**Table3. T single group to examine “sychology” indicators about talent from the prospective of coaches**

No.	Indicator	Sig	Df	T	Empirical average	Theoretical average
16	Self efficacy	0.001	24	5.31	4.12	3
17	Centralization	0.001	24	10.66	4.36	3
18	Ability to processvisual-spatial	0.001	24	5.41	4.08	3
19	MemoryStorage	0.001	24	2.19	3.40	3
20	Motivated	0.001	24	5.64	4.16	3
21	Task-oriented	0.692	23	0.40	3.08	3
22	Mental imagery	0.001	24	7.46	4.24	3
23	Controlpositive emotions	0.005	24	3.11	3.48	3
24	Controlnegative emotions	0.001	24	6.06	3.88	3
25	Attention	0.001	23	9.47	4.37	3
26	Confidence	0.001	24	6.57	4.20	3
27	Ambition	0.001	24	15.08	4.68	3
28	Achievement Motivation	0.632	24	0.48	3.12	3
29	Extrinsic motivation	0.057	24	2	3.40	3
30	Stress	0.161	24	1.44	3.32	3
Total	Psychological	0.001	22	11.67	3.87	3

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators except 21, 28 and 30. Because empirical average is higher than theoretical average, so evaluation of physical indicator is higher than middle level in sport talent recognizing from the prospective of coaches. Because empirical average is more than theoretical average in Self efficacy, Centralization, Ability to process visual – spatial, Memory Storage, Motivated, Mental imagery, Control positive emotions, Control negative emotions, Attention, Confidence, ambition, Achievement Motivation, Extrinsic motivation indicators, so evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches. It should be mentioned that there is no significant meaning between theoretical and empirical average in Task-oriented, Extrinsic motivation and stress indicators. Evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches.

**Table4. T Single Group to Examine “Anthropometric” Indicators about Talent from the Perspective of Coaches**

No.	Indicators	Sig	Df	T	Empirical average	Theoretical average
31	Longer lower body than upper body	0.001	24	3.64	4.12	<b>3</b>
32	Length	0.870	24	-0.16	2.96	<b>3</b>
33	Low fat	0.200	24	1.31	3.28	<b>3</b>
34	Small waist	0.001	24	5.95	4.32	<b>3</b>
35	Big foot	0.001	24	3.93	4.12	<b>3</b>
36	Long hand	0.185	23	-1.36	2.75	<b>3</b>
37	Big hand	0.001	24	6.12	4.24	<b>3</b>
38	Big leg	0.006	24	3	3.60	<b>3</b>
39	Long leg	0.001	24	5.13	3.96	<b>3</b>
<b>Total</b>	<b>Anthropometric character</b>	<b>0.001</b>	<b>23</b>	<b>8.88</b>	<b>3.71</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators except 32, 33 and 36. Because empirical average is more than theoretical average in longer lower body than upper body, smaller waist, big foot, big hands, long leg indicators, so evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches. It should be mentioned that there is no significant meaning between theoretical and empirical average in length, low fat and long hand indicators. Evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches.

**Table 5. T Single Group to Examine “karate skill” Indicators about Talent from the Perspective of Coaches**

	Indicator	Sig	Df	T	Empirical average	Theoretical average
40	Hand technique	0.015	24	2.62	3.64	<b>3</b>
41	Leg technique	0.001	24	7.07	4	<b>3</b>
42	Throw technique	0.346	24	0.96	3.20	<b>3</b>
<b>Total</b>	<b>Karate skill</b>	<b>0.001</b>	<b>24</b>	<b>4.56</b>	<b>3.60</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between hand and leg techniques. Because empirical average is more than theoretical average in mentioned indicators, so evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches. It should be mentioned that there is no significant meaning in throw technique, so Evaluation of mentioned indicator is more effective than middle level in sport talent recognizing from the prospective of coaches.

**Table6. T single group to examine “physical” indicators about talent from the prospective of athletes**

No.	Indicators	Sig	Df	T	Empirical average	Theoretical average
1	Reactionspeed	0.002	119	-3.24	2.63	<b>3</b>
2	Jumpsitu	0.001	119	-11.84	1.97	<b>3</b>
3	Individualspeed	0.001	119	5.05	3.47	<b>3</b>
4	Muscle power	0.001	119	7.04	3.70	<b>3</b>
5	Response speed of legs	0.011	118	-2.57	2.75	<b>3</b>
6	Nervous-muscle coordination	0.001	119	-9.82	1.89	<b>3</b>
7	Anaerobic power	0.001	119	-10.22	1.96	<b>3</b>
8	Cardio - vascular Stamina	0.001	119	-4.15	2.55	<b>3</b>
9	Muscle stamina	0.356	118	0.92	3.09	<b>3</b>
10	Response speed of hands	0.014	119	-2.49	2.74	<b>3</b>
11	Flexibility	0.001	119	-20.07	1.71	<b>3</b>
12	Balance	0.001	119	-9.72	1.98	<b>3</b>
13	Agility	0.596	119	-0.53	2.92	<b>3</b>
14	Powerful explosive	0.001	119	-25.35	1.32	<b>3</b>
15	Abdominal muscles	0.001	119	9.55	3.94	<b>3</b>
<b>Total</b>	<b>Physical</b>	<b>0.001</b>	<b>117</b>	<b>-9.85</b>	<b>2.57</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators of physical talent indicators except 9 and 13. Because empirical average is higher than theoretical average in individual speed, abdominal muscle and muscle power, so evaluation of physical indicator is higher than middle level in sport talent recognizing from the prospective of athlete. Empirical average is lower than theoretical average in reaction speed, Jump situ, Response speed of legs, Nervous - muscle coordination, Anaerobic power, cardio - vascular Stamina, Response speed of hands, Flexibility, Balance, Agility, Powerful explosive indicators, so evaluation of mentioned indicator is lower than middle level in sport talent recognizing from the prospective of athlete. It should mention that in muscle stamina and agility there is no significant meaning between

theoretical and empirical average. So evaluation of mentioned indicator is in middle level of talent recognizing from the prospective of athlete

**Table7. T single group to examine “psychological talent” indicators about talent from the prospective of athletes**

NO.	Indicators	Sig	Df	T	Empirical average	Theoretical average
16	Self efficacy	0.073	119	1.80	3.19	3
17	Centralization	0.001	119	-7.65	2.36	3
18	Ability to process visual-spatial	0.060	119	-1.89	2.85	3
19	Memory Storage	0.001	119	12.65	4.10	3
20	Motivated	0.001	119	-11.45	1.86	3
21	Task-oriented	0.001	119	-14.67	1.63	3
22	Mental imagery	0.800	119	-0.25	2.96	3
23	Control positive emotions	0.001	119	9.10	4.01	3
24	Control negative emotions	0.001	119	9.86	3.90	3
25	Attention	0.001	119	11.20	3.98	3
26	Confidence	0.001	119	7.40	3.75	3
27	Ambition	0.627	119	0.48	3.06	3
28	Achievement Motivation	0.001	119	11.88	3.95	3
29	Extrinsic motivation	0.001	119	30.49	4.66	3
30	Stress	0.001	119	16.94	4.19	3
31	Psychological	0.001	119	<b>10.40</b>	<b>3.36</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators except 16, 18, 22 and 30. Because empirical average is higher than theoretical average in memory storage, control of positive emotions, control of negative emotion, attention, self confidence, motivation. Extrinsic motivation and stress indicators so evaluation of indicator is lower than middle level from the prospective of athlete. Because empirical average is lower than theoretical average in Centralization, Motivated, Task-oriented indicators so evaluation of indicator is lower than middle level from the prospective of athlete. There is no significant meaning between Self efficacies, Ability to process visual-spatial, mental imagery and Ambition indicators, so evaluation of indicator is in middle level from the prospective of athlete.

**Table8. T single group to examine “anthropometric specification” indicators about talent from the prospective of athletes**

NO.	Indicators	Sig	Df	T	Empirical average	Theoretical average
31	Longer lower body than upper body	0.280	119	-1.08	2.90	3
32	Length	0.001	119	6.44	3.45	3
33	Low fat	0.049	119	1.98	3.15	3
34	Small waist	0.001	119	8.80	3.68	3
35	Big foot	0.001	119	15.45	4.72	3
36	Long hand	0.001	119	13.17	3.85	3
37	Big hand	0.001	119	10.68	3.75	3
38	Big leg	0.001	119	6.93	3.52	3
39	Long leg	0.001	118	13.89	3.89	3
<b>total</b>	<b>Anthropometric character</b>	<b>0.001</b>	<b>118</b>	<b>16.03</b>	<b>3.66</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators except 31. Because empirical average is higher than theoretical average in length, low fat, small waist, big foot, long hand, big hand, big leg and long leg control so evaluation of indicator is more than middle level from the prospective of athlete. There is no significant meaning in longer lower body than upper body, so evaluation of indicator is in middle level from the prospective of athlete.

**Table 9. T single group to examine “karate skill” indicators about talent from the prospective of athletes**

NO.	Indicators	Sig	Df	T	Empirical average	Theoretical average
40	Hand technique	0.014	119	-2.48	2.76	3
41	Leg technique	0.001	119	11.25	3.89	3
42	Throw technique	0.001	119	16.05	4.09	3
<b>Total</b>	<b>Karate technique</b>	<b>0.001</b>	<b>119</b>	<b>10.39</b>	<b>3.58</b>	<b>3</b>

In regard to above table stated that there is significant meaning in level  $\alpha = 0.01$  between theory and empirical average in all indicators. Because empirical average is higher than theoretical average in leg technique and throws technique factors, so evaluation of indicator is more than middle level from the prospective of athlete, while empirical average is lower than theoretical average in hand technique factors, so evaluation of indicator is less than middle level from the prospective of athlete.

## CONCLUSION

There is remarkable difference between components of sport psychology. We should pay attention to basic age, because are main base of adults and base is 18 year old that talent is increased [14]. Martin as baby psychology believed that base age is not mentioned to 13 till 18 years old and is lower than 13 years old. He believed 10 – 12 year old is sensitive AGE [6]. Teenagers could not learn football tactics before 13 years old (vein, 2001), so talent recognizing should not be limited to 18 years old and should be started from 10 years old and minor try to learn basic skill and anthropometric factors (height, weight, body mass and so on), psychology (intelligence, creativity, motivation, mental problems), sociology (family system, democratic culture, parent support is considered [7]). In regard to 4 factors the process of elite talent should be done. This information makes suitable way to recognizing talent. Sport psychology started from 1980 and believed to emotional, reducing motivation, mental pressure and stress and so on. In other hand, it is necessary to decrease stress, improving emotion, control mental pressure through managing emotion, positive thinking, self motivated, mental imaginary [6]. In this study, the evaluation of talent indicator in Iran karate from the perspective of athletes and coaches is considered and conclusions are achieved through T single group method. Finding showed significant meaning in  $\alpha = 0.01$  between empirical and theoretical average. So, effect of physical indicator is more than middle level from the perspective of coaches. Individual speed, power of muscle and abdominal power is more than expected rate from the perspective of athletes, while individual reaction, jump, leg reaction, Nervous-muscle coordination, Anaerobic power, cardio-vascular stamina, hand reaction, flexibility, balance, exploration power is more than middle level. So, muscle power and agility is mentioned in middle level. All indicators is more than expected level except task-oriented, promotion motivation and stress. The effect of psychology indicator is more than middle level from the perspective of coaches. Also, in the view of the Athletes stated "memory storage", "positive emotions control", "controlling negative emotions", "attention", "confidence", "achievement Motivation", "extrinsic motivation" and "stress" effect is more than expected. While "focus", "motivated", "task-oriented", "Self efficacy", "ability to process visual - spatial", "mental imagery" and "ambition" is more than middle level. Long height, long hand and low fat factors effect is in middle level through T single group method and from perspective of coaches. Long height, low fat, small waist, big foot, long hand, big hand, big leg and long leg factors effect are more than middle level except Longer lower body than upper body. Throw techniques have more than middle level effect from perspective of coaches. Hand technique is less than middle level, while leg technique and throw technique is more than expected. Finally, according to studies like Mosavi (2000), Magil (2000), Oljani (2001), Gharakhanlou and Afzalpour (2002), Ebrahim (2002), Ravasi (2002), Amirtash (2003), Gaeni (2003), Yousefi (2003), Rajabi (2005), Amirtash (2005), Bouta (2007), Zychowski and Taknata (2008) and Boucher (2008) stated that findings are cooperative. Because physical and psychological factors are effective in sport talent. In addition to anthropometric specification. Current study is done about karate and except Sheikh et al (2010) nobody did study about this issue. Also, Sheikh et al studied about anthropometric specification more. This study could be as a history for future study so that karate has more than 40 themes so it is necessary to study about talent to achieve more success in this sport.

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