



The attitudes of coaches and managers toward talent identification in Wushu athletes

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ABSTRACT

The main purpose of this study was to investigate the attitudes of managers and coaches toward talent identification in Wushu athletes. A total of 110 Wushu Federation's managers and coaches participated in study to identify the Wushu elite athletes. The participants required to respond to a questionnaire that measure technical information, anthropometric, physical fitness and their subscales in two disciplines of Wushue, Taolu and Sanda. First, to make sure that the homogeneity exists between of the studied groups, the results of Levin Test indicated that there is homogeneity and convergence between the variance of the variables of the two groups. Then, Multivariate Analysis of Variance, MANOVA, was used to compare the attitudes of managers and coaches toward the factors that they think are serious in elite identification in Wushu sport. The results indicated both managers and coaches conformed that technical information and its subscales are very important elements in elite identification in Wushu sport. It means that no significant differences were reported between their attitudes. However, when the managers and coaches asked about the importance of two factors such as anthropometric and physical fitness in elite identification in taolu and sanda, two major components in Wushu sport, the findings showed that their attitudes were different. The difference was significant at $p<0.05$. Thus, based on the findings of the present study, it is recommended that the authority of Wushu Federation takes into account the dimensions which managers and coaches consider important in terms of talent identification of wushu athletes in their future planning.

Keywords: Wushu, Taolu, Sanda, Talent identification

INTRODUCTION

The term Wushu is Chinese for material art. Wu means military or martial. Shu means art. In contemporary times, Wushu becomes an international sport through the International Wushu Federation which holds World Wushu Championship every two years. Competitive Wushu is composed of two disciplines, Taolu and Sanda which are hold together in official competition. Taulo refers to performing actions including kicks and punches, martial art patterns, complex acrobatic maneuvers and different instruments, which is done individually. Taolu covers three competitions of Changquan, Nanquan and Taijiquan. Sanda is a modern fighting method and sport influenced by traditional Chinese boxing. Sanda appears much like kickboxing but includes many more grappling techniques. Sanda fighting championships are often held alongside Taolu or form competitions [4]. Wushu encompasses all type of Chinese material art. It begins an out of self defense to protect against wild animals and other humans. It was later used in combat, including war, and then gradually maturing into a fully developed international sport [5]. Taolu covers three competitions of Changquan, Nanquan and Taijiquan. However, Sanda is a complete fighting including kicks other than elbow and knees and boxing techniques. Wushu trainers usually are engaged in teaching two disciplines, however, the players just progress in one discipline professionally. The managers of different parts of federation and Wushu coaches are well informed of the situation of both Taulo and Sanda. Wushu in Iran has dramatic growth in the world, which indicates the awareness and efforts of the trainers and coaches of this field.

Nowadays, talent identifications have drawn the attention of different countries and many scholars try to identify the predictive indices of potential people in different countries [1]. The incline towards identification of sport talent has significantly increased in recent years [2]. Furthermore, the efforts of many countries have led to development of different programs for sport talent identification, which are due to understanding the significant of talent finding in different communities. A successful talent-finding program is applicable when it could truly identify the effective determining factors and indices required for that sport field.

Determining these factors and selecting the potential individuals based on them, one can predict the success of potential athlete [8]. Sport managers and coaches are those who played a significant role in promotion of sport talent- finding and improvement [9]. Based on the findings, it doesn't suffice only to identify the talented individuals in early ages however; they should be continuously guided, controlled and evaluated. This process will help talent finding process and selection of sport elites in expense of financial, technical and temporal capitals and increase the probability of athletes' success in global and Olympic fields. The talent finding process is the result of identification, direction and protection of talented individuals where the managers and coaches play significant role [6]. Therefore, the purpose of this study was to investigate and compare the attitudes of managers and coaches toward elite identification in Wushu sport both in Taolu and Sanda.

MATERIALS AND METHODS

This is an applied study in terms of objective and is descriptive. The participants in this study include 110 managers and coaches having the international coaching certificates in Wushu, and working for Wushu Federation in Iran. The measuring tool of this study includes a 90 items questionnaire which asked the participants to show their attitudes toward the importance of 1. Technical information, 2. Anthropometric, 3. Physical fitness factors and their subscales both in Taolu and Sanda in elite identification and improvement of wushu athletes. The subscales of technical information include internal factors- age and external factors- test, match and group. The subscales of anthropometric are anthropometric in Taolu, anthropometric in Sanda, mesomorph, ectomorph, and ectomorph body types. Subscales of physical fitness in Taolu include flexibility and power, performing Taolu form, basic movements, advanced forms of Taolu; and those for physical fitness on Sanda include advanced movement in Sanda, exercises out of Sanda, basic performance of Sanda movement, power in Sanda.

The results of internal reliability of the questionnaire using Alpha Cronbach coefficient showed 0.81 for technical information, 0.82 for anthropometric, and 0.88 for physical fitness. For descriptive analysis of data mean and standard deviation were used. In order to test the intended hypotheses, first the Levin Test was used to make sure that the homogeneity of variances between the variables is hold. Then, MANOVA was used to compare the means of intended groups.

RESULTS

1. Technical information and its factors

To analyze the data, MANOVA was used to compare the attitudes of managers and coaches toward the talent identification in terms of technical information and the subscales of internal factors, age and external factors, test, match and group. The results indicated there was not a significant difference between the attitudes of managers and coaches toward the technical information and its subscales in identification of potential individuals in Wushu, $P=0.1$, $F:4.50 = 1.60$. It means that the null hypotheses was not rejected at $P<0.05$.

Anthropometric in Taolu, Sanda

In this section, the attitudes of managers and coaches toward talent identification in terms of anthropometric in Sanda and Taolu and the subscales of mesomorph, ectomorph, and ectomorph body types were compared. MANOVA showed that managers and coaches' viewpoints concerning the anthropometric dimension in Taolu and Sanda and its factors in identification of potential individuals are different $P= 0.001$, $F: 3, 63 = 5.80$.

Table 1 presents the results of one-way analysis of variance for investigation of differences between managers and coaches' viewpoints concerning talent finding indices in terms of Taolu and Sanda and its factors in identifying the potential individuals.

The results included in table 1 show that managers and coaches' viewpoints are different toward the anthropometric in Sanda, $P<0.001$, ectomorph, $P<0.001$, mesomorph, $P<0.05$ in identification in potential individuals in Wushu sport.

Table1- The results of managers and coaches attitudes toward anthropometric factors

Source	Dependent variable	SS	DF	MS	F	P
Managers and coaches	Anthropometric in Taolu	2.20	1	2.20	0.70	0.40
	Anthropometric in Sanda	530.70	1	530.70	11.10	0.001**
	Ectomorph	345.20	1	345.20	16.90	0.000**
	Mesomorph	38.30	1	38.30	4.50	0.03*
	Endomorph	3.01	1	3.01	0.90	0.30

*significant at $P < 0.05$ **significant at $P < 0.001$ **Physical fitness in Taolu and its factors**

In this section, managers' and coaches' viewpoints concerning talent finding indices in terms of physical fitness in Taolu and the subscales of flexibility and power, performing of Taolu forms, basic movements, Taolu advanced forms were compared. MANOVA showed that the managers' and coaches' viewpoints in terms of physical fitness in Taolu in identification of potential individuals are different $P = 0.001$, $F: 4, 64 = 5.01$, Wilks' Lambda= 0.76.

Table 2 shows the results of one-way analysis of variance for investigation of differences between managers and coaches' viewpoints concerning talent finding indices in terms of Taolu physical fitness in identifying the potential individuals.

Table2. The results of managers and coaches toward physical fitness in Taolu

Source	Dependent variable	SS	DF	MS	F	P
Managers and coaches	Physical fitness in Taolu	938.90	1	938.90	11.60	0.001*
	Flexibility and power	219.60	1	219.60	7.40	0.008**
	Performing Taolu forms	51.30	1	51.30	14.50	0.000**
	Basic movement	42.80	1	42.80	11.90	0.001**
	Taolu advanced forms	4.40	1	4.40	1.10	0.30

* Meaningful in $P < 0.05$ ** Meaningful in $P < 0.01$

The results presented in table 2 show that managers and coaches' viewpoints are different in terms of the mean value of physical fitness in Taolu, $P < 0.01$, flexibility and power, $P < 0.01$, performing Taolu forms, $P < 0.01$, and basic movements , $P < 0.01$.

1. Physical fitness in Sanda and its factors

In this section, managers' and coaches' viewpoints concerning talent finding indices in terms of physical fitness in Sanda and the subscales of advanced movements of Sanda, sports out of Sanda, basic performance of Sanda and power were compared. MANOVA showed that the managers' and coaches' viewpoints in terms of physical fitness in Sanda and its factors in identification of potential individuals are different, $P = 0.01$, $F: 4, 60 = 3.20$, Wilks' Lambda= 0.82.

Table 3 presents the results of one-way analysis of variance for investigation of differences between managers and coaches' viewpoints concerning talent finding indices in terms of Sanda physical fitness and its factors in identifying the potential individuals.

Table3- Attitudes of managers and coaches toward physical fitness in Sanda and its factors

Source	Dependent variable	SS	DF	MS	F	P
Managers and coaches	Physical fitness in Sanda	319.70	1	319.70	6.80	0.01*
	Advanced movements in Sanda	71.50	1	71.50	6.70	0.01*
	Sports out of Sanda	14.30	1	14.30	1.30	0.20
	Basic movements of Sanda	1.70	1	1.70	0.30	0.60
	Power	18.60	1	18.60	3.10	0.08

* significant at $P < 0.05$ **significant at $P < 0.01$

The results presented in table 3 show that managers and coaches' viewpoints are meaningfully different in terms of physical fitness in Sanda, $P < 0.01$, and advanced movements of Sanda , $P < 0.01$.

DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the attitudes of managers and coaches toward talent identification in Wushu athletes. The results indicated that there was no significant difference between managers and coaches attitudes toward talent identification in terms of technical information; however, the difference was significant in terms of anthropometric in Taolu and Sanda. The results of managers and coaches viewpoints in terms of talent-finding indices in physical fitness in Taolu and its subscales showed significant differences between their

viewpoints. Also, the viewpoints of managers and coaches were different in terms of talent finding indices concerning physical fitness in Sanda. Kuan [4] concluded that there are some differences between the prioritization of effective factors on attracting and keeping the potential athletes in basic ranks of running according to managers and coaches which is in line with the present study in terms of the difference between managers' and coaches' viewpoints in terms of talent finding. Study of Limoochi [7] on forty international level table tennis coaches showed that 66 percent of the coaches chose observation method and 48.1 percent ranked the scientific method as their priorities in talent identification. Among somatotype factor, 59.4 percent of coaches chose mesomorph as the most suitable somatotype for athletes.

Mnenula [6] showed that there is difference between the attitudes of physical education teachers and managers of elementary schools in terms of prioritization of talent finding barriers. The investigation of wushu managers' and coaches' viewpoint in this study and in the studies done by others in terms of talent finding indices specially in Wushu sport showed that they consider talent identification as the main factor for success of athletes. In other words, managers and coaches evaluated the anthropometric dimension in Taolu and Sanda, physical fitness in Taolu and Sanda as significant. Thus, based on the findings of the present study, it is recommended that the authority of wushu Federation takes into account the dimensions which managers and coaches consider important in terms of talent identification of wushu athletes in their future planning. In other words, sport development in Wushu federation has to be seriously reviewed and improved. Furthermore, it is safe to recommend that there is a need to conceive the coach's attitudes to take elite identification as a business not as a leisure and talent identification program must be seriously improved. As a result, it substantially reduces the time required to reach high performance by selecting individuals who are gifted in Wushu sport. It may also increases competitiveness and the numbers of athletes aiming at reaching high performance level. As a result, there is a strong and more homogenous national team capable of better international performance. Finally, it indirectly facilitates applying scientific training because sport scientists who assist in talent identification can be motivated to continue to monitor Wushu athletes.

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