ACTUAL SITUATION OF PROFESSIONAL PHYSICAL FITNESS OF YOUNG VIETNAMESE JUDO ATHLETES

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Abstract:
Using regular scientific research methods, we have evaluated the professional physical fitness level of young Judo athletes in Vietnam through the following angles: Morphology, function and professional physical fitness. The results show that the level of professional physical fitness of young Judo athletes in Vietnam is still limited. That is the basis for the next research steps.
Keywords: Structure, professional physical fitness, athlete, young Judo, Vietnam.

INTRODUCTION

Developing physical qualities is the basis and foundation for acquiring, mastering techniques as well as applying techniques - tactics in a flexible and creative way in competition. However, the professional physical fitness level of young Vietnamese Judo athletes has not been paid enough attention. Starting from that practice, we conducted an assessment of the professional physical fitness level of young Judo athletes in Vietnam.

RESEARCH METHODS

During the research process, we use research methods: Method of analyzing and synthesizing documents; Method of interview and discussion; Pedagogical observation method; Pedagogical examination method and statistical mathematics method.

RESULTS AND DISCUSSION

Through document reference combining with direct interviews with experts and coaches in Judo nationwide, we have selected 18 criteria to assess professional physical fitness for young Judo athletes in Vietnam, including 5 morphological criteria, 8 functional criteria and 5 professional physical fitness criteria.

Results of professional physical fitness level assessment of young Vietnamese Judo athletes are presented in Table 1.

Through table 1 shows:

About body morphology:

The average height of young Vietnamese Judo athletes is 163.14, when compared to the standard height table for men and women aged 8-18 by the World Health Organization (WHO), it is lower than the standard, however, the average height of young Vietnamese female Judo athletes is near the standard (0.5cm lacking). However, when compared with the actual situation of the physical fitness of Vietnamese people of the same age published by author Duong Nghiep Chi, male and female Judo athletes aged 16-17 have a better height than the average of about 3 cm [2].

Regarding the weight index, also based on the WHO standard weight table, the male Judo athletes are still lighter than the standard while the female Judo athletes are heavier than the standard. And when compared to the actual situation of the physical fitness of Vietnamese people of the same age, both male and female are heavier.

Similarly, the Ketlet index and the shoulder width, arm length are also relatively high because the arm length has an advantage in attack and defense.

The weight, Ketlet and arm length criteria of male and female Judo athletes all have significant differences, shown in the $t_{calculated} > t_{table}$ at $P < 0.05$, the remaining criteria: height and shoulder width are not different.

Thus, although the morphology of male and

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Table 1. Actual situation of the professional physical fitness level assessment of young Vietnamese Judo athletes (n=14)

Group	Content	Male Judo athlete ($\bar{x}\pm\delta$)	Female Judo athlete ($\bar{x}\pm\delta$)	t	p
Morphology	Height (cm)	163.14±8.82	162.00±5.10	0.81	>0.05
	Weight (kg)	59.43±7.72	55.14±6.26	3.03	<0.05
	Ketlet index (g/cm)	364.89±47.99	340.43±37.52	7.00	<0.05
	Shoulder width (cm)	40.43±4.35	42.14±3.13	1.66	>0.05
	Arm length (cm)	69.29±3.35	64.29±3.68	4.99	<0.05
Function	Resting pulse (beats/min)	57.5±2.07	62.71±1.8	6.92	<0.05
	Vital capacity (litre)	4±0.58	3.29±0.49	1.83	>0.05
	Heart function (HW)	6.43±0.98	6.86±0.9	0.83	>0.05
	Anaerobic rate (W)	612.37±156.21	535.75±97.82	4.81	<0.05
	Anaerobic capacity (W)	526.71±174.11	449.67±94.76	4.70	<0.05
	VO2max (litre/min)	3.92±1.35	3.48±0.49	0.32	>0.05
	Single reflex (ms)	180.71±1.70	181.29±1.98	0.79	>0.05
	Complex reflex (ms)	341.57±2.37	340.29±5.22	1.23	>0.05
Professional physical fitness	Randori test 30 seconds (times)	17.14±1.46	16.14±1.07	1.66	>0.05
	Horizontal bar pull up 30 seconds (times)	18.43±1.62	17.29±0.76	1.96	>0.05
	Uchikomi test 10 seconds (times)	14.00±1.29	14.14±1.07	0.25	>0.05
	Uchikomi test 1 minute (times)	53.29±1.80	52.29±1.80	1.39	>0.05
	Continuous strikes 30 seconds (times)	9.43±0.98	9.14±1.07	0.53	>0.05

female Judo athletes of Vietnam has not yet met the standards of WHO, when compared with the standards of Vietnamese people, the indexes are higher.

About body function:

- Physiological function: The resting pulse frequency of male Judo athletes is on average 57.5 (beats / minute) and for female is 62.71 (beats / minute). This frequency is not much lower than the average value of Vietnamese people of the same age (average pulse frequency of Vietnamese people is 65-70 beats / minute).

The average vital capacity of male athletes is 4 (liters) and for females is 3.29 (liters). These indexes are higher than the average for Vietnamese people of the same age (the average value of Vietnamese people of the same age is male = 2.9 (liters); female = 2.3 (liters)).

The average heart function (HW) index of male athletes is 6.43 and for females is 6.86. According to Ruffier's heart function index, young Vietnamese Judo athletes have average heart function index (6 - 10: medium; 1 - 5: good; <1: very good).

- Regarding psychological function: The average single reflex time of male athletes is 180.71 (ms), the complex reflex time is 341.57 (ms). Thus, the mental types of male athletes also concentrated in the flexible - sub-flexible types with more than 70% and the stable - sub-stable types with nearly 30%. These are also the types of mental suitable for practicing and competing in Judo.

A comparison between the psycho-physiological function test results of male and female showed that: Only resting pulse index

illustration (photo by: upes1)

has a difference between male and female shown at $t_{calculated} > t_{table}$ at $P < 0.05$. The remaining criteria are not significantly different.

About professional physical fitness level:

Test results show that, in all 5 tests, male Judo athletes have higher performance than female athletes, however, when comparing between male and female, it was shown that only the horizontal bar pull-up test has a difference, the remaining tests has no significant difference.

CONCLUSION

Judging from the actual situation of the professional physical fitness level of young Vietnamese Judo athletes, the morphology, function, and professional physical fitness indexes are still limited, although the results are higher than the general level of Vietnamese people at the same age, they are still lower than WHO standards. This requires the coaching staff to pay attention to the selection of athletes as well as the training process.

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