RESEARCH AND BUILD PHYSICAL DEVELOPMENT EXERCISES FOR MALE ATHLETES OF THE KARATEDO TEAM AT VIETNAM PEOPLE'S SECURITY UNIVERSITY

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Abstract:
By using regular scientific research methods, the physical health as well as the effectiveness of applying physical development exercises for male Karatedo athletes have been fully assessed after 6 months exercising.

Keywords: Physical education, sport training, physical strength, Karatedo, Vietnam People's Security University.

INTRODUCTION

Vietnam People's Security University, which belongs to People's Police Universities system, has a fundamental duty to protect the national security and society's stability. The university administrative board always base on quality of education to set the goal of training Officials who has both political and professional ethics and physical health that meet the actual requirements. To achieve the goal, Party Committee and administrative board suggested some solutions with the aim of stimulating the teachers to fulfil the need of upgrading students' physical strength. The university's department of Millitary, Martial arts and Physical Education play an essential role in the process of training fully qualified People's Public Security officers. Therefore, improving the quality of physical education and physical fitness training contributes to the education of revolution Police, which is an important target of education and training at Vietnam People's Security University. Starting from the reasons mentioned above and the desire to improve the physical strength and achievement of the Karatedo team of the People's Security University, we conducted a research on the subject: "Research and build physical development exercises for male athletes of the Karatedo team at Vietnam People's Security University"

Purpose of the study: Based on the assessment of male athletes from VPSU's Karatedo team's physical strength, establish a system of physical development exercises with the aim of enhancing the effectiveness and sports achievement of the university's specialized team.

In order to achieve the purposes mentioned above, there are some objectives must be set: Actual situation of the physical fitness and evaluation of the effectiveness of some physical development exercises for male Karatedo athletes of VPSU after 6 months of training.

RESEARCH METHODS

During the research process, we used the following research methods: Document analysis and synthesis method; Interview method; Pedagogical examination method; pedagogical experiment method and Statistical mathemathics method.

The research subjects of the project is 12 male athletes of Karatedo team at VPSU, who are compared before and after the experiment.

RESULTS AND DISCUSSION

1. Actual situation of the physical fitness of male Karatedo athletes at VPSU

On the basis of the tests selected through interviews and reliability assessments, the topic conducted a physical assessment test of male Karatedo athletes. Test results are presented in Table 1 as follows:

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Table 1. Actual situation of the physical fitness of male Karatedo athletes at Vietnam People's Security University

No	Test	$\bar{x}$	ε	C_V%
General physical fitness				
1	100m running (s)	13.6	0.02	3.00
2	Standing long jump (cm)	226.6	0.01	1.90
3	Push-up (times)	36.42	0.048	7.60
4	1500m running (s)	390.33	0.03	6.00
Professional physical fitness				
5	Gyakuzuki punch (Backhand punch) 10s (times)	18.08	0.048	7.60
6	Maegeri kick (Front kick) 10s (times)	8.67	0.047	7.50
7	Mawashigeri chudan backleg kick (Round kick) 10s (times)	8.58	0.049	7.80
8	Round kick and backhand punch 20s (times)	11.33	0.049	7.80
9	Hit fan-shaped 3 targets 20s (times)	10.67	0.046	7.20

Regarding the general physical strength evaluation: In 100m running, Standing long jump, push-up and 1500m running, the coefficient variables (Cv = < 10%) have indicated the relatively equal results of the athletes in the team.

Comparing the physical strength level of the athletes with training standards in People's Security Police Force, according to Circular 24/TT/BCA, dated 11/3/2013 of the Ministry of Public Security as follows (Table 2)

From the results presented in Table 1 and Table 2, the index of general physical fitness of the athletes in comparison with physical training criteria in Vietnam People's Public Security force are qualified and the average achievements of the age from 18 - 27 are better than the pass level, particularly:

Table 2. Comparinig the average results of male Karatedo athletes at VSPU with physical training standards in Vietnam People's Public force

Age	Content	Average result of athletes	Physical training standards in Vietnam People's Public Security force
18 - 27	100m running (s)	13.6	≤ 16.0
	On the spot long jump (cm)	226.6	≥ 220
	Push-up (times)	36.42	≥ 30
	1500m running (s)	390.33	≤ 450

Regarding the professional physical fitness: Table 1 shows that in the tests of Gyakuzuki punch (Backhand punch) 10s (times), Maegeri kick (Front kick) 10s (times), Mawashigeri chudan backleg kick (Round kick) 10s (times), Round kick and backhand punch 20s (times), Beat fan-shaped 3 targets 20s (times), the coefficient variables are less than 10%, which means that the achievements of the athletes is comparatively even.

Conclusion: all 9/9 tests assessing the physical fitness of male athletes of the Karatedo team of the university have Cv <10%, the relative index error of each test is less than 0.05, indicated that the physical fitness between athletes is even. The general physical fitness test (100m running, 1500m running, Standing long jump, push-up) of the athletes compared to the standards of physical training in Vietnam People's Public Security force all passed and

had better results in the same age group.

2. Differences between the test results of male athletes of Karatedo team at VPSU before and after the experiment

With the exercises that have been objectively selected through interviews with experts, coaches and put into practical experiment, we conducted an assessment of the differences between the test performances of male athletes of Karatedo team at VPSU after 6 months of training. Through the results of the two testing times, the indicators $\overline{x}$, δ, d are calculated using the statistical mathematics method and the obtained results are presented in Table 3 as follows:

Table 3 shows that: After the experiment, the average result of the group in all indicators in general and professional physical fitness is higher than the results before experiment, and this difference has meaning at the probability threshold P <0.05. Therefore, it shows that the exercises selected to develop the physical fitness for the male athletes of Karatedo team at VPSU has brought practical results for the development of the team's physical strength.

Table 3. The difference in the test performance of male athletes of VPSU's Karatedo team before and after the experiment

No	Test	Before		After		D	t	P
		$\overline{x}$	δ	$\overline{x}$	δ			
General physical fitness								
1	100m running (s)	13.6	0.45	13.26	0.31	*|-0.34|*	*|-2.42|*	< 0.05
2	Standing long jump (cm)	226.6	4.44	229.25	2.58	4.24	2.89	< 0.05
3	Push-up (times)	36.42	2.78	44.92	3.55	8.5	3.39	< 0.05
4	1500m running (s)	390.33	23.43	378.92	23.21	*|-11.66|*	*|-3.37|*	< 0.05
Professional physical fitness								
5	Gyakuzuki punch (Backhand punch) 10s (times)	18.08	1.37	21.25	1.81	3.17	3.31	< 0.05
6	Maegeri kick (Front kick) 10s (times)	8.67	0.65	10.08	1.08	1.42	3.16	< 0.05
7	Mawashigeri chudan backleg kick (Round kick) 10s (times)	8.58	0.67	10.25	1.21	1.67	3.08	< 0.05
8	Round kick and backhand punch 20s (times)	11.33	0.88	12	0.6	0.66	2.52	< 0.05
9	Hit fan-shaped 3 targets 20s (times)	10.67	0.78	12.08	1.32	1.41	2.89	< 0.05

(t_{table} = 2.201)

3. Evaluate the effectiveness of some physical development exercises for male athletes of Karatedo team at VPSU through growth rate

To evaluate the effectiveness of the identified exercises, we started to assess the growth rate of the tests results of the team after 6 months of training. Through the results of the two testing times (before and after experiments) we conducted the calculation of the indicators $\overline{x}$, δ, W% by the method of statistical mathematics and obtained the results shown in Table 4.

Table 4 shows that: After the experiment, the indicators of general and professional physical fitness have grown, both 9/9 indicators have statistical meaning at probability threshold p <0.05, due to $t_{caculated} > t_{table}$. In which, the indicator with the highest growth rate is push-up (W% = 20.09%), the indicator with the lowest growth rate is Standing long jump (W% = 1.13 %).

Table 4. The physical fitness growth rate of male athletes of Karatedo team VPSU

No	Test	Before experiment		After experiment		W%	t	P
		$\bar{x}$	δ	$\bar{x}$	δ			
General physical fitness								
1	100m running (s)	13.6	0.45	13.26	0.31	*|-2.6|*	*|-2.42|*	< 0.05
2	Standing long jump (cm)	226.6	4.44	229.25	2.58	1.13	2.89	< 0.05
3	Push-up (times)	36.42	2.78	44.92	3.55	20.09	3.39	< 0.05
4	1500m running (s)	390.33	23.43	378.92	23.21	*|-3.03|*	*|-3.37|*	< 0.05
Professional physical fitness								
5	Gyakuzuki punch (Backhand punch) 10s (times)	18.08	1.37	21.25	1.81	16.1	3.31	< 0.05
6	Maegeri kick (Front kick) 10s (times)	8.67	0.65	10.08	1.08	15.11	3.16	< 0.05
7	Mawashigeri chudan backleg kick (Round kick) 10s (times)	8.58	0.67	10.25	1.21	17.7	3.08	< 0.05
8	Round kick and backhand punch 20s (times)	11.33	0.88	12	0.6	5.71	2.52	< 0.05
9	Hit fan-shaped 3 targets 20s (times)	10.67	0.78	12.08	1.32	12.45	2.89	< 0.05

4. Discuss the effectiveness of some professional physical development exercises for male athletes of VPSU's Karatedo team after 6 months of experimenting

Regarding the experiment on some physical development exercises for male Karatedo athletes of VPSU: Through a number of selected exercises, we conducted a training program for male Karatedo athletes in Vietnam People's Security University in 6 months (24 weeks).

After the experiment, the average results of the group in all indicators are higher than the before experiment's ones and this difference has the meaning at probability threshold P <0.05. Therefore, the exercises selected to develop the physical fitness for the male athletes of VPSU's Karatedo team has been proved to bring practical results for the development of the team's physical fitness.

The indicators of general and professional physical fitness have growth, both 9/9 indicators have statistical meaning at probability threshold p <0.05, due to $t_{caculated} > t_{table}$. In which, the indicator with the highest growth rate is push-up (W% = 20.09%), the indicator with the lowest growth rate is on the spot long jump (W% = 1.13 %). The selected exercises have been proved to have positive results in the development of general and professional physical fitness of male Karatedo athletes at Vietnam People's Security University.

Regarding general fitness: The highest growth rate is push-up, the development rate is 20.09%, 3 indicators which are 100m running, standing long jump, 1500m running have slower growth. This is suitable with the rule of developing sport achievements, because tests with short experimental periods will hardly have high growth rate compared to experimental tests in a longer period of time.

Regarding professional fitness: The indicators which have high growth rate are statistically significant at the probability P <0.05, therefore indicating that the program has been effective in developing professional physical qualities for male Karatedo athletes at Vietnam People's Security University.

Taekwondo lesson at Bac Ninh Sport University (illustration, photo by: upes1)

CONCLUSION

Through testing and evaluating, 9/9 physical fitness tests of the athletes in the team have equal achievements. The general physical fitness tests compared to the criteria of physical training in Vietnam People's Public Security are all at pass level and have average results better than the pass level at the same age.

Evaluating the effectiveness of some physical development exercises for male athletes of VPSU's Karatedo team after 6 months of training: The experiment indicated that all indicators had considerable growth, 9/9 tests' growth had statistical meaning at probability $P < 0.05$, due to $t_{caculated} > t_{table}$. Simultaneously, the average results of the group in all tests were higher than the before experiment, and this difference has meaning at probability threshold $P < 0.05$. Therefore, the exercises selected to develop the physical strength for the male athletes of VPSU's Karatedo team has been proved to have positive effectiveness for the development of the team's physical strength

REFERENCES

1. Aulic.I.V (1982), *Evaluate sports training levels*, Sports Publishing House, Hanoi.

2. Ministry of Public's Security (2009), *People's Public Security Martial Arts curriculum*, People's Public Security Publishing House.

3. Le Buu, Nguyen The Truyen (1986), *Testing physical fitness and sports capacities*, Sports Publishing House, TP.HCM.

4. S.H. Choi (1990), *Taekwondo - Karatedo free duel fight exercises*, Sports Publishing House, Hanoi.

5. Le Van Dung (1996), *Karate free duel fight*, Thuan Hoa Pubishing House, Hue.

6. Luu Quang Hiep, Pham Thi Uyen (2003), *Sports Physiology*, Sports Publishing House, Hanoi.

7. Harre.D (1996), *Training theory*, Sports Publishing House, Hanoi.

8. Lac Ha, Pham Xuan Thao (1988), *Basic Karate*, Long An Publishing House.

9. Tran Tuan Hieu (2006), *Karatedo training exercises system*, Sports Publishing House, Hanoi.

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