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Research on construction of professional strength development exercises for women athletes Rowing National youth team at Da Nang National Sports training center

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Abstract

The use of traditional research methods has evaluated the Professional strength of woman female rowing boat racing young nation team at National Sports Training Center Da Nang as a basis for selection, Appropriate exercise to develop endurance for a female athlete rowing boat racing young nation team at National Sports Training Center Da Nang, along with a science-based program that is tailored to the actual conditions of the boat racing training program at the National Sports Training Center Da Nang.

Keywords: Professional strength, National Sports Training Center Da Nang, current status

Introduction

Rowing is one of the races of the Boat Race in Vietnam, the sport industry is determined to be a key Olympic sport belonging to the group that is preferred investment with a target medal in the Sea Games, Asiad, and Olympic.

This is confirmed through the advancement of rowing yachts through precious medals in recent Seagames. However, in many ways, the Vietnam rowing boat racing was also appreciated in the young, the achievement is much weaker in Asia and the world. Because nowadays world boat racing has grown at a very high speed and the level of Vietnamese athletes is low. In fact, due to the many causes of impact that have influenced the achievement of the home water Boat Race, and one of the predominant causes is the specialized endurance of Vietnamese rowing athletes who are limited, therefore, the research builds exercises to develop the professional endurance for women athletes Rowing National youth team at Da Nang National Sport Training Center is urgent problem.

Research Methods

The research process uses the following methods: Analyse and synthetic document; observe pedagogy; check pedagogy; experiment pedagogy; mathematical statistics.

Results and Discussion

1. Select professional endurance development exercises for female rowers in the national youth team at the Danang National Sports Center.

Based on the exercises selected through reference materials, pedagogical observations and direct interviews. Begin from the facts analyzed through the synthesis of professional documents, and consulted with many experts and coaches with experience in teaching and coaching domestic and foreign boat racing, firstly, the project has selected 26 exercises and divided into 2 groups to improve professional strength for female rowing boat races in the national youth team. In order to have an accurate and effective choice while ensuring the objectivity and science of the topic, conducting interviews with domestic and foreign experts, coaches, the content of the interview is to determine the priority of using the articles. practice in 3 levels:

- Priority 1: The important exercises

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- Priority 2: The normal exercises
- Priority 3: Exercise does not matter.

Corresponds to the score (priority 1 is 3 points, priority 2 is 2 points, priority 3 is 1 point).

Selection method: We conducted the selection of exercises with the overall score is quite good (70% of the maximum

total points: 63/90 points). Results are presented in the following table.

Like that, in the 26 exercises that the subject gave the interview, the topic has selected 8 exercises with the approval and high priority to be used in the development of professional endurance of female athletes. boat rowing national youth team at Danang National Sports Center.

Table 1: Interview results on selection of professional endurance exercises for Female National Athletes. (n = 30).

No.	Exercises / interview results	Exercise priority						Total	
		Priority 1		Priority 2		Priority 3			
		Votes	Total	Votes	Total	Votes	Total		
Group of Endurance training exercises End-1. (Circuit below 150times/minute)									
1	Rowing 2×2km,r=30''	5	15	6	12	19	19	46	
2	Rowing tug	26	85	3	6	1	1	85	
3	Rowing 1×8km	5	15	20	40	5	5	60	
4	Rowing continuously 20km.	25	75	1	2	4	4	81	
5	Rowing 30×300m,r=30	8	24	15	30	7	7	61	
6	Rowing 50×1km,r=3 minute	7	21	8	16	15	15	52	
7	Rowing 3×2km,r=3 minute	24	72	6	12	0	0	84	
8	Rowing 8×1,5km,r=2 minute	10	30	80	16	12	12	58	
9	Rowing 8km	3	9	6	12	21	21	42	
10	Rowing 10×500m,r=1 minute	11	33	4	8	15	15	56	
11	Run 2000m	9	27	11	22	10	10	59	
12	Rowing 1×6km.	12	36	5	10	13	13	59	
13	Rowing 1×12km	17	51	10	20	15	15	74	
Aerobic Capacity training exercises End-2. (Circuit 150-180times/minute).									
14	Rowing 6×800m	5	15	10	20	15	15	50	
15	Rowing 2×1.5km,r=1 minute	7	21	8	16	15	15	52	
16	Rowing 3×1km,r=30''	3	9	6	12	21	21	42	
17	Rowing 4×800m,r=30''	10	30	5	10	15	15	55	
18	Rowing 8×400m,r=20''	6	18	10	20	14	14	52	
19	Rowing 15×200m,r=20'	6	18	13	26	11	11	55	
20	Rowing test 2000m.	24	72	1	2	5	5	79	
21	Rowing 1×2500m	10	30	15	30	5	5	65	
22	Rowing 10×250m,r=20'	7	21	10	20	13	13	54	
23	Rowing 10×500m,r=25'	15	45	9	18	6	6	69	
24	Rowing 12×200m,r=20	4	12	8	16	18	18	48	
25	Rowing 6×1000m,r=60	4	12	6	12	20	20	44	
26	Rowing 20×250m.r=30	23	69	2	4	5	5	78	

2. Evaluate the effectiveness of selected professional endurance exercises

To assess the effectiveness of the application of professional endurance training exercises for female Rowing boat race athletes at the Danang National Sports Training Center, the subject examined the endurance level of the research subjects.

Experimental pre-test according to 3 tests on 10 female athletes. The goal is to look at the differences in professional endurance levels of the two groups. Data has been processed in statistical mathematics. Test results are presented in Table 2.

Table 2: Comparison of the results of tests to assess the professional endurance level of the experimental and control women groups. (nA = nB = 05).

Test	Result evaluation					
	Control group	Experimental group	Compare two groups			
			\bar{X}	\bar{X}	σ	tcount
Test 2500m (s)	628	627	7.054	0.792	2.776	0.05
Test 4000m (s)	1156	1165	14.08	0.817	2.776	0.05
Test VO2max(ml/kg/ minute)	54.7	54.73	0.618	0.419	2.776	0.05

The results in Table 2 show that: Achievements of all 3 contents of assessment and evaluation of professional endurance level have $t_{count} < t_{board}$ at probability threshold $P = 0.05$. This proves that the achievement between the experimental group and the control group is no difference, in other words, the professional strength level and the 2000m rowing rowing achievement of the two groups in the time

before the experiment were similar. This is also the basis for the topic to divide the two groups logically.

To evaluate the effectiveness of exercises, after conducting experiments, the topic used the tests used in the original group to check again. The data obtained after the experiment was processed statistically mathematically by self-collating method for each group. Results are presented in table 3.

Table 3: Comparison of self-control achievement of professional endurance tests of 2 groups of control and experimental women. (n = 05).

Test	Result evaluation					
	Before experiment		After experiment		Compare	
	\bar{X}	\bar{X}	σ_d	tcount	tboard	P
Women's Control group						
Test rowing 2500m (s)	628	603	12.289	4.369	4.303	<0.05
Test rowing 4000m(s)	1156	1123	65.239	4.392	4.303	<0.05
Test VO ₂ max	54.7	54.75	0.917	5.282	4.303	<0.05
Women's Experimental group						
Test rowing 2500m (s)	627	580	19.975	10.665	4.303	<0.05
Test rowing 4000m(s)	1165	1040	80.876	8.673	4.303	<0.05
Test VO ₂ max	54.73	58.45	2.182	11.222	4.303	<0.05

Through Table 3. shows: Achievements at 3 test tests of the control group as well as the experimental group at two points before and after the experiment through self-referencing method are significant at probability threshold P = < 0.05% with confidence needed. However, for the experimental group, the results of the two test have t_{count} higher than t_{board} compared to the control group.

Therefore, the choice of the application of the exercises we have compiled for the experimental group is much more effective than the exercise groups often used to train female

athletes of the national youth team boat racing at the Da Nang Sport Training Center. It proves that the achievement between the experimental group and the control group has a statistically significant difference, that is, the level of professional endurance in the experimental group is better than the control group.

To confirm the effectiveness of the selected exercises, the topic compares the post-experimental achievements of the two groups. The results are presented in Table 4.

Table 4: Comparison of the achievement test of professional endurance tests between two experimental and control female groups (Na = nB = 05).

Test	Result evaluation					
	Control group		Experimental group		Compare two groups	
	\bar{X}	\bar{X}	σ_c	tcount	tboard	P
Test rowing 2500m(s)	601	580	40.737	2.796	2.776	<=0.05
Test rowing 4000m(s)	1123	1040	146.445	2.818	2.776	<=0.05
Test VO ₂ max	4.75	58.45	4.979	2.782	2.776	<=0.05

Table 4 shows the pre-empirical results of the two control groups and the experiments in the three test tests as follows.

- At the 2500m rowing test, we have: t_{count} = 2,796 > t_{board} = 2,776. Therefore, the difference in achievement between the experimental and control groups was significant at the probability threshold P<= 5%.
- At the 4000m rowing test, we have: t_{count} = 2,818 > t_{board} = 2,776. Therefore, the difference in achievement between the experimental and control groups was significant at the probability threshold P<= 5%.
- At the test VO₂max we have: t_{count} = 2,782 > t_{board} = 2,776. Therefore, the difference in achievement between the experimental and control groups was significant at the

probability threshold P< = 5%. Therefore: After the experiment time, the achievement of all 3 contents of the evaluation and evaluation of the professional endurance level of the subjects have a t_{count} > t_{board} in probability threshold P< = 0.05. This proves that the results between the experimental group and the control group have statistically significant differences, that is, the level of professional endurance in the experimental group is better than the control group.

To confirm the superiority of the use of selection and application of exercises, the subject conducted using S.Browdy's index to evaluate the growth rate of achievement before and after the experiment of both control groups and experiment groups. Results are presented in Table 5.

Table 5: Growth rate of achievement of the professional endurance tests of female athletes in both control and experimental groups after 42 weeks of experiment. (n = 05).

Test	Growth rate W%					
	Control group			Experimental group		
	Before experiment	After experiment	W%	Before experiment	After experiment	W%
Test rowing 2500m(s)	628	601	1.32%	627	580	5.35%
Test rowing 4000m (s)	1156	1123	1.47%	1165	1040	8.96%
Test VO ₂ max	54.7	54.75	1.70%	54.73	58.45	8.94%

Table 5 shows that the growth rate of achievement in all 3 professional endurance tests, the achievement index of the experimental group (5.35%, 8.96%, 8.94%) is much higher than the control group (1.32%, 1.47%, 1.70%).

Through the table above shows that after the experimental process, the test results of the experimental and control groups had a difference compared to before the experiment. In the experimental group, however, the difference was more

pronounced than in the control group.

Conclude

The thesis has selected and built 8 exercises of professional endurance development divided into two large groups.

- End-1 aerobic endurance training exercises with 4 exercises.
- End-2 aerobic exercise training group with 4 exercises.

With the above 8 exercises are applied in professional strength development training for rowing athletes of the national youth team at the Danang National Sports Training Center for 42 weeks. The results show that the exercises that the project has selected and built are more effective in developing endurance and competitive performance than the exercises that the young rowing team coaches often do. used with necessary statistical confidence $P \leq 5\%$.

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