

APPLY EXERCISES TO DEVELOPE SPECIALIZED PHYSICAL CAPACITY FOR BADMINTON TEAM'S MALE STUDENTS OF BAC NINH SPORT UNIVERSITY

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Abstract:

By using the common scientific research methods in sports, the study has selected 32 exercises to develop the specialized physical capacity of male students in Badminton team at Bac Ninh Sport University. Initial application of the exercises in practice of training shows that the exercises are highly effective in developing specialized physical capacity for the students.

Key words: Exercise, specialized physical capacity, athletes, Badminton, team, students, etc.

INTRODUCTION

Examining the training plan of the Badminton team of students at Bac Ninh Sport University shows, the time spent on developing the specialized physical capacity of athlete is inappropriate, the number of specialized physical capacity exercises is small, the application of exercises is not identical, systematic and scientific, etc. Therefore, the selection of exercises to develop the professional physical capacity to bring high performance for male students of Badminton team at Bac Ninh Sport University is an important and urgent issue.

RESEARCH METHODS

The study has used the research methods of document analysis and synthesis, interview, pedagogical observation, pedagogical tests, pedagogical experiment, and mathematical statistics.

RESULTS AND DISCUSSION

1. Selection of exercises to develop specialized physical capacity for Badminton team's male students at Bac Ninh Sport University

By interviewing the Badminton teachers, we have selected 32 exercises divided in to 4 groups

to develop the specialized physical capacity for male students of Badminton team at Bac Ninh Sport University, including:

- Group of speed development exercises (07 exercises): From exercise 1 to 7
- Group of strength development exercises (08 exercises): From exercise 8 to 15
- Group of endurance development exercises (10 exercises): From exercise 16 to 25
- Group of motor coordination development exercises (07 exercises): From exercise 26 to 32

2. Application and evaluation of exercises to develop specialized physical capacity for Badminton team's male students at Bac Ninh Sport University

2.1. Selection of tests to evaluate specialized physical capacity for Badminton team's male students at Bac Ninh Sport University

Through material reference, interviews with coaches, and determination of the confident and informative degree of the tests, the study has selected 08 tests to evaluate the specialized physical capacity for the subjects. They are Test 1: Move horizontally 20 times (s); Test 2: Throw shuttle away (m); Test 3: 03-step move and jump smash 20 times (s); Test 4: Clear (m); Test 5: Move forwards and backwards 14 times (s);

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Table 1. Experimental procedure

No.	Exercise	Month Week		1				2				3				4			
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Move by signal in 30 seconds			x	x	x				x			x						
2	Single jump rope in 30 seconds				x		x				x			x			x		
3	Swing Ante 1.5 kg in 30 seconds			x			x		x			x				x			
4	Move horizontally 20 times			x				x				x			x		x		
5	Move forwards and backwards 10 times			x				x			x			x				x	
6	Move and jump smash in 30 seconds				x				x			x				x		x	
7	Jump smash in 30 seconds			x			x					x			x				x
8	Double jump rope in 40 seconds			x					x					x		x		x	
9	03- step move and jump smash by tennis racket 40			x			x					x					x		x
10	Move and jump to hit the shuttle at 02 corners above the net 30			x					x			x			x			x	
11	Jump smash along the sidelines with servers 30 times					x		x					x			x			x
12	Clear with servers 30 times			x			x				x					x			
13	Move to 02 back corners of the court and jump smash 15 times			x					x				x		x				
14	Move and net shot, move backwards and jump smash 10 times			x				x			x						x		
15	Move horizontally and drive 40 times					x			x			x			x			x	
16	Swing Ante 1.5 kg simulating underarm hit for a minute			x						x			x				x		
17	Continuously jump smash for a minute					x			x					x			x		
18	Move horizontally in single court 40 times			x			x					x			x				x
19	Move forwards and backwards 14 times			x					x				x			x			
20	Move and net shot, move backwards and jump smash with servers 10 times			x						x				x				x	
21	Jump smash along the sidelines with servers for a			x			x					x			x			x	
22	Move to 04 corners to drop shot and smash 6 times			x								x				x			x
23	Move to 02 back corners of the court and clear for a minute			x					x	x		x						x	
24	Single games in double court			x				x				x			x		x		x
25	Double games			x					x		x			x		x		x	
26	Move and exchange shuttles on 6 positions of the court 2 times			x					x				x				x		x
27	Move and exchange shuttles on 4 positions of the court 4 times			x				x					x				x		
28	Move and hit shuttle for a minute on the positions of the court with			x					x			x					x		
29	Move to 02 back corners of the court and clear 20 times in a straight line			x					x		x			x					x
30	Move to 02 corners above the net and drop shot 20 times in a straight line			x					x			x				x		x	
31	Move and drop shot, move backwards and smash along the sidelines			x				x		x					x				
32	Move and drop shot to the 2 corners of the net, move backwards and clear 20 times					x					x		x			x			x



Specialized physical capacity is very important in teaching and coaching Badminton

Test 6: Swing Ante 0.5 kg in 20 seconds (times);
 Test 7: Move and exchange shuttles on 6 positions of the court 4 times (s) and Test 8: Move and jump smash at 2 corners of the back of the court 10 times (s)

2.2. Experiment

Experimental subjects include 20 male students of Badminton team at Bac Ninh Sport University divided into 2 groups:

- Control group: 10 students, practice the specialized physical capacity exercises in the training program prepared by the coaches.
- Experimental group: 10 students, practice the specialized physical capacity exercises and training program selected by the study. In

which, exercises to develop speed, strength, motor coordination practice at the beginning of the session, after the general and specialized start-up; Exercises to develop endurance practice at the end of the session, after completing the main part of the session (before the relax).

Experimental time: The experiment is conducted in 04 months (for 1 semester), 2 sessions per week, 120 minutes for each session (20-25 minutes for physical capacity exercises).

- Experimental procedure presented in detail in Table 1.

2.3. Experimental results

a, Results before experiment (Table 2)

Table 2. Comparison of specialized physical capacity by Badminton team's male students at Bac Ninh Sport University before experiment

No.	Test	Experimental Group (n=10)		Control Group (n=10)		t	p
		$\bar{x}$	$\pm\delta$	$\bar{x}$	$\pm\delta$		
1	Move horizontally 20 times (s)	29.34	1.85	29.42	1.89	1.26	>0.05
2	Throw shuttle away (m)	7.26	0.12	7.28	0.14	1.37	>0.05
3	03- step move and jump smash 20 times (s)	43.12	1.82	43.67	1.92	1.23	>0.05
4	Clear (m)	13.48	0.56	13.42	0.58	1.43	>0.05
5	Move forwards and backwards 14 times (s)	59.36	1.32	59.12	1.34	1.78	>0.05
6	Swing Ante 0,5kg in 20 seconds (times)	42.18	2.34	42.84	2.32	1.67	>0.05
7	Move 4 times on 6 positions of the court (s)	62.64	1.46	62.48	1.48	1.82	>0.05
8	Move and jump smash at 2 coners of the backcourt 10 times (s)	43.12	1.72	43.18	1.76	1.42	>0.05

Table 3. Comparison of specialized physical capacity of Badminton team's male students at Bac Ninh Sport University after 04 experimental months

No.	Test	Experimental Group (n=10)		Control Group (n=10)		t	p
		$\bar{x}$	$\pm\delta$	$\bar{x}$	$\pm\delta$		
1	Move horizontally 20 times (s)	26.48	1.92	28.12	1.94	3.24	<0.05
2	Throw shuttle away (m)	8.14	0.26	7.64	0.16	2.94	<0.05
3	03- step move and jump smash 20 times (s)	40.24	1.96	42.38	1.86	3.12	<0.05
4	Clear (m)	15.12	0.68	14.54	0.64	3.46	<0.05
5	Move forwards and backwards 14 times (s)	56.14	1.46	58.04	1.48	3.74	<0.05
6	Swing Ante 0,5kg in 20 seconds (times)	46.62	2.46	44.12	2.42	3.67	<0.05
7	Move 4 times on 6 positions of the court (s)	58.42	1.74	60.18	1.68	3.86	<0.05
8	Move and jump smash at 2 coners of the back of the court 10 times (s)	40.06	1.84	42.02	1.82	3.42	<0.05

On the Table 2, before experiment, $t_{\text{calculation}} < t_{\text{table}}$ in 08 tests, there is no difference with the probability threshold $P > 0.05$. This proves that, before experiment, the specialized physical capacity of the two groups is equivalent

b, Results after 4-month experiment (Table 2)

We have evaluated the specialized physical capacity of the two groups. The results presented in Table 3.

The Table 3 show, the specialized physical capacity in all tests of the experimental group get better results than the control group, $t_{\text{calculation}} < t_{\text{table}}$, the difference is significant at the probability threshold $p < 0.05$.

To understand more the difference in the specialized physical capacity between the experimental group and the control group after 04 months of experiment, the study has compared the growth rate of specialized physical capacity of the two groups. The results show, after 4 months of experiment, the specialized physical capacity of the two groups has growth. However, the growth rate in all tests of the experimental group is better than the control group. This proves that the application of the exercises selected by the study has been effective in improving the specialized physical capacity for male students of Badminton team at Bac Ninh Sport University.

CONCLUSION

1. Results of the study have selected 32 exercises for specialized physical capacity development for male students of Badminton team at Bac Ninh Sport University.

2. Results of the pedagogical experiment prove that the exercises selected by the study has been effective in improving the specialized physical capacity for the students, the difference is significant at the probability threshold $p < 0.05$.

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