

# Selection of Exercises to Improve the Effectiveness of Physical Education under the Project of Elective Sports Cockpitching for Female Students K2023 Hanoi Metropolitan University

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## Abstract

The interview results have selected 36 exercises belonging to 5 exercise groups to improve the effectiveness of physical education according to the project for female Hanoi Metropolitan University students studying the optional sport of shuttlecock, including Group 1: Exercises to develop strength quickly has 7 exercises; Group 2: Strength development exercises have 6 exercises; Group 3: Exercises to develop endurance has 5 exercises; Group 4: Exercises to develop flexibility and coordination has 5 exercises; Group 5: Exercises with the bridge has 13 exercises with an agreement level of > 70% or more and an average score of > 3.41 - 4.20 points.

**Keywords**— Physical education; Shuttlecock; Students; Exercises; Vietnam.

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## I. INTRODUCTION

Physical education in schools has the goal of physical development for pupils and students to contribute to the training of comprehensive human development, improving physical strength, educating moral character, and a healthy lifestyle. strong, enriching the cultural and spiritual life of students. The generation of students is the future owners of the country, so the future historical strength of the country depends on this generation.

Physical education and physical training activities in universities and colleges are an important educational aspect in the career of education and training, to contribute to the goals of Raising people's knowledge, fostering

human resources, and training talented people for the country to meet the needs of innovating the country's socio-economic development.

## II. RESEARCH METHODS

The research process uses the following research methods: Document analysis and synthesis method; Pedagogical observation method; Interview method; and Statistical mathematical methods.

## III. RESEARCH RESULTS AND DISCUSSION

Through analysis of relevant domestic and foreign references, research topics on improving the effectiveness of physical education for students, other sports, and especially shuttlecock; Through research on the current status of physical education according to the sports project of choosing a favorite sport for female students of Hanoi Metropolitan University and through direct interviews with coaches, lecturers, and shuttlecock experts in Hanoi and other localities throughout the country. The project selected 36 exercises to improve the effectiveness

of physical education according to the project of the optional sport of shuttlecock for female students of Hanoi Metropolitan University Class of 2023, divided into 5 groups, including:

Group 1: Exercises to develop strength quickly: 7 exercises.

Group 2: Strength development exercises: 6 exercises.

Group 3: Exercises to develop endurance: 5 exercises.

Group 4: Exercises to develop flexibility and coordination: 5 exercises.

Group 5: Exercises with bridge: 13 exercises.

Specifically presented in table 1:

Table 1. Summary of exercises to improve the effectiveness of physical education according to the project of the optional sport of shuttlecock for female students of the Class of 2023 Hanoi Metropolitan University

No	Groups	Exercise name	Amount of exercise	Function
1.	<b>Group 1: Exercises to develop strength quickly</b>	Leg curl exercise	Perform 90 seconds for about 30-35 times * 3 times resting for 30 seconds in between.	Helps the legs react quickly when lifting the bridge and maintaining body balance.
2.		Tiptoe exercise	Perform 90 seconds/time * 3 times, rest 30 seconds in between.	Helps keep the ankle flexible when performing contact movements with the bridge.
3.		Ankle stretching exercise	Do it for 90 seconds at a time for about 15-20 reps * 3 times, rest 30 seconds in between.	Helps keep ankles flexible and increases resilience when performing fast and strong jumps.
4.		Leg curl exercise	Perform 90 seconds for about 30-35 times * 3 times resting for 30 seconds in between.	
5.		Jumping exercise to change legs	Perform 120 seconds/time * 3 times, rest 30 seconds in between.	
6.		Hopscotch exercise	Perform 15-20m/time * 4 times (switch legs)	
7.		Running exercise to raise thighs in place	Perform 30 seconds/time * 3 times	
8.	<b>Group 2: Exercises to develop strength</b>	Frog jumping exercise	Perform 15 -20 m/time * 3 times	Helps increase the strength of thigh, leg, and ankle muscles to be able to kick high.
9.		Exercise lying face down - leaning forward	Do it for 45 seconds at a time	Helps develop back and abdominal muscles to have good jumping power to increase the flying power of the bridge.
10.		Exercises lying on your back - crunches.	Do it for 45 seconds/time	
11.		Step up and down exercise on a 50cm fitness platform	Do 1 time/30 seconds * 3 times	Increase leg strength and ankle flexibility to increase the flying power of the bridge.
12.		Leg straddling exercise	Perform 60 seconds/time * 3 times	Helps expand the range of motion and ankles for good rebounding power.
13.		Exercise to kneel and bounce high in place	Do it for 60 seconds at a time for about 25-30 reps * 3 times	Helps increase ankle strength.
14.	<b>Group 3:</b>	Squat exercise -	Perform 120 seconds/time * 3 times	Helps increase thigh muscle strength and

	<b>Exercises to develop endurance</b>	stand up		knee joint flexibility to increase the flying power of the bridge.
15.		Exercises for moving across the field	Perform 60 seconds/time * 3 times	Develop endurance and flexibility on the field.
16.		Exercises to move forward and backward	Perform 60s/time * 3 times	
17.		Jump rope exercise	Perform 60 seconds/time * 3 times	Increase endurance and ankle speed.
18.		Zigzag running exercise	Perform 25-30m/time * 3 times	Helps increase endurance and move flexibly to the correct position of the ball.
19.	<b>Group 4: Flexibility and coordination exercises</b>	Leg and thigh contraction exercises	Perform 45 seconds/time * 3 times	Helps develop muscles and ligaments of the ankles and thighs to increase strength and speed.
20.		Exercise to spread your legs to the sides	Perform 60 seconds/time * 3 times	Helps increase thigh and ankle muscle strength for good jumping ability.
21.		Ankle stretching exercise	Do it for 90 seconds at a time for about 15-20 reps * 3 times	Helps ankle flexibility and increases rebounding power.
22.		Exercises for coordinated movement and jumping	Perform 25-30m/time *3 times	Helps increase flexibility, increase coordination, and develop speed when moving on the field.
23.		Knee curl exercise on the fitness ladder	Do it for 60 seconds at a time for about 20 -25 reps * 3 times	Helps develop thigh, back, and abdominal muscles to maintain good balance.
24.	<b>Group 5: Exercises with bridges</b>	Exercise to move diagonally across the stone field to a fixed suspension bridge	Perform 60 seconds/time * 3 times	Develop speed and speed endurance.
25.		Exercise on moving rocks to a fixed suspension bridge	Perform 60 seconds/time * 3 times	Develop speed and flexibility on the field.
26.		Exercises on moving rocks to a fixed suspension bridge	Perform 60 seconds/time * 3 times	
27.		Thigh lift exercise	Perform 60 seconds/time * 3 times	
28.		Exercise to raise the bridge with the inside of the foot	Do it every 5 minutes * 3 times	Flex your ankles and control the ball as desired.
29.		General bridge lifting exercises	Do it every 5 minutes * 3 times	
30.		Exercise to toss the shuttlecock and kick with the instep over	Perform 60 seconds/time * 3 times	Increase ankle strength and control the ball as desired.

		the net		
31.		Exercise to toss the shuttlecock and kick with the inside of the foot over the net	Perform 60 seconds/time * 3 times	
32.		Continuous shuttlecocking exercise	Do it every 5 minutes * 3 times	Flex your ankles and control the ball as desired.
33.		Exercise continuously	Do it every 5 minutes * 3 times	
34.		2-person shuttlecock passing exercise	Do it every 5 minutes * 3 times	Increase the ability to coordinate and control the ball at will.
35.		Exercises to continuously pass the shuttlecock in groups	Do it every 5 minutes * 3 times	
36.		Exercise to push the bridge with the instep into the box	Perform 60 seconds/time * 3 times	Increase ankle strength and control the ball as desired.

**Interview for assignment selection**

To select objective and appropriate exercises to improve the effectiveness of physical education according to the project of the optional sport of shuttlecock for female students of the Class of 2023 at Hanoi Metropolitan University, the project conducted interviews with experts, COACHES, lecturers, and referees of shuttlecock by questionnaire. The number of ballots issued was 30, and 27 ballots received. The interviewed experts included 27 people: 17 people (62.96%), and 6 people (22.22%) experts in theory and methods of physical training and

sports with Associate Professor, PhD, and lecturer degrees. Teaching 4-player soccer (14.81%). Including: 2 associate professors, 6 doctors, 10 masters, and 9 bachelors. Expert opinions are evaluated on a 5-step Likert scale from  $\mu = 1$  to  $\mu = 5$ :  $\mu = 1$  to  $\mu = 2$  – disagree;  $2 < \mu < 3$  - partly agree;  $3 < \mu < 4$  – agree;  $4 < \mu = 5$  – strongly agree. After analyzing and processing the information obtained from experts (n=27), the criteria were selected with an average value  $\mu > 3$  with a selection rate of 70% or more. The results are presented in Table 2.

Table 2. Interview results for choosing exercises to improve the effectiveness of physical education according to the project of the optional sport of shuttlecock for female students of the Class of 2023 Hanoi Metropolitan University (n=27)

No	Groups	Code conventions	Result			
			Total	(%)	Mean ( $\mu$ )	Evaluate
1	<b>Group 1: Exercises to develop strength quickly</b>	Leg curl exercise	102	75.56	3.78	Agree
2		Tiptoe exercise	110	81.48	4.07	Agree
3		Ankle stretching exercise	101	74.81	3.74	Agree
4		Leg curl exercise	109	80.74	4.04	Agree
5		Jumping exercise to change legs	103	76.30	3.81	Agree
6		Hopscotch exercise	113	83.70	4.19	Agree
7		Running exercise to raise thighs in place	99	73.33	3.67	Agree
8	<b>Group 2:</b>	Frog jumping exercise	103	76.30	3.81	Agree

9	<b>Exercises to develop strength.</b>	Exercise lying face down - leaning forward	101	74.81	3.74	Agree
10		Exercises lying on your back - crunches	99	73.33	3.67	Agree
11		Step up and down exercise on a 50cm fitness platform	98	72.59	3.63	Agree
12		Leg straddling exercise	96	71.11	3.56	Agree
13		Exercise to kneel and bounce high in place	100	74.07	3.70	Agree
14	<b>Group 3: Exercises to develop endurance.</b>	Squat exercise - stand up.	105	77.78	3.89	Agree
15		Exercises for moving across the field.	102	75.56	3.78	Agree
16		Exercises to move forward and backward	97	71.85	3.59	Agree
17		Jump rope exercise	101	74.81	3.74	Agree
18		Zigzag running exercise	100	74.07	3.70	Agree
19	<b>Flexibility and coordination exercises.</b>	Leg and thigh contraction exercises	98	72.59	3.63	Agree
20		Exercise to spread your legs to the sides.	100	74.07	3.70	Agree
21		Ankle stretching exercise	103	76.30	3.81	Agree
22		Exercises for coordinated movement and jumping	101	74.81	3.78	Agree
23		Knee curl exercise on the fitness ladder	97	71.85	3.59	Agree
24	<b>Group 5: Exercises with bridges.</b>	Exercise to move diagonally across the stone field to a fixed suspension bridge	101	74.81	3.74	Agree
25		Exercise on moving rocks to a fixed suspension bridge	95	70.37	3.52	Agree
26		Exercises on moving rocks to a fixed suspension bridge	98	72.59	3.63	Agree
27		Thigh lift exercise	97	71.85	3.59	Agree
28		Exercise to raise the bridge with the inside of the foot	98	72.59	3.63	Agree
29		General bridge lifting exercises.	100	74.07	3.70	Agree
30		Exercise to toss the shuttlecock and kick with the instep over the net	95	70.37	3.52	Agree
31		Exercise to toss the shuttlecock and kick with the inside of the foot over the net	98	72.59	3.63	Agree
32		Exercise continuously	100	74.07	3.70	Agree
33		Exercise continuously	97	71.85	3.59	Agree
34		2-person shuttlecock passing exercise	102	75.56	3.78	Agree
35		Exercises to continuously pass the shuttlecock in groups	97	71.85	3.59	Agree
36		Exercise to push the bridge with the instep into the box	100	74.07	3.70	Agree

Qua bảng 2 cho thấy, tất cả 36 bài tập theo đề xuất của đề tài đều có sự tán thành ở Table 2 shows that all 36 exercises proposed by the topic have an agreement level of > 70% or more with an average score > 3.41 - 4.20 points. Thus, the project will use 36 exercises to develop a research plan and put it into practical experimental application to improve the effectiveness of physical education according to the project of the optional sport of shuttlecock for female students. member of Hanoi Metropolitan University Class of 2023.

#### **IV. CONCLUSION**

Through the interview results, 36 exercises belonging to 5 groups of exercises to improve the effectiveness of physical education were selected according to the project of the optional sport of shuttlecock for female students of the Class of 2023 Hanoi Metropolitan University with unanimous approval score > 70% or higher and have an average score > 3.41 - 4.20 points.

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