STUDY ON PHYSICAL EXERCISES TO IMPROVE SIT-STYLE LONG JUMP PERFORMANCE OF 8TH-GRADE FEMALE STUDENTS IN KIEN BINH SECONDARY SCHOOL, KIEN LUONG DISTRICT, KIENG IANG PROVINCE

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Abstract:
Using conventional research methods in sport, the research team has selected 18 physical exercises to improve sit-style long jump performance of 8th-grade female students in Kien Binh secondary school, Kien Luong district, Kien Giang province.
Keywords: Athletics, test, exercises.

INTRODUCTION

In long jumping, physical strength and exercises in physical training are important factors, determining the performance in training and competing, especially professional physical training exercises. Therefore, nowadays it is necessary for long jump teacher – trainers to choose a few exercises to improve the professional physical strength and long jump performance. To improve the long-distance jump performance of our students, we have conducted the research: "Study on physical exercises to improve sit-style long jump performance of 8th-grade female students in KienBinhsecondary school, KienLuong district, KienGiang province".

RESEARCH METHODS

During the research of this article, the following 5 methods were used: methods of reference analysis and document synthesis, interview method, pedagogical test method, pedagogical experimental method,and statistical math method.

RESULTS AND DISCUSSION

1. Choosing physical exercises to improve sit-style long jump performance of 8th-grade female students in Kien Binh secondary school, Kien Luong district, Kien Giang province

The study, on such basis of selecting exercises, researching professional documents and consulting with experts, had identified 5 groups with 25 exercises. Then, through interviews with 25 experts, trainers, teachers, the study selected 18 exercises with a high selection rate of over 75% and with a score of 67.5 points or more, which were:

Complementary physical exercises for the run-up

1/ Run 30m with a high starting stance. 2/ Run 30m in high speed. 3/ High knees running in place for 15 seconds. 4/ High skipping running.

Complementary physical exercises for leaping

1/ Long jump from the spot. 2/ High jump from the spot. 3/ Leapfrogging. 4/ Fast rope skipping. 5/ Jumping over a rope (crossbar) with two legs from the spot. 6/ Running and jumping to touch an object in midair.

Complementary physical exercises for midair movements

1/ Perform 1-3 run-up steps, then walk in midair. 2/ Run-up 7-11 steps, jump leg first, land on the sandpit (mattress) with your front leg, then run straight out of the sandpit (mattress). 3/ Run-up 5-7 steps, then jump, keeping the sitting posture in midair, land on the sandpit

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with both legs. 4/ Run-up 13-15 steps, jump leg first, land on the sandpit (mattress) with your front leg (requires proper footing on the jumping board when jump).

Complementary physical exercises for landing movements

1/ Long jump with short run-up and stretched legs to touch a prescribed mark (a piece of paper or a leaf) in the sandpit. 2/ Run-up 4-6 steps, jump leg first across the distance 180 – 220 cm, land with front foot.

Combined exercises

1/ Long jump in sit-style with 7, 11, 15 run-up steps. 2/ Perform sit-style long jump (a combination of run-up – jumping – mid-air – landing)

2. Application and efficiency evaluation of physical exercises to improve sit-style long jump performance of 8th-grade female students in Kien Binh secondary school, Kien Luong district, Kien Giang province

To accomplish this task, first of all based on the team's research and training plan, the study conducted an experimental plan over a semester period, using a parallel comparative experimental method. Experimental subjects included 70 8th-grade students from KienBinh secondary school, KienLuongdistrict, KienGiang province. The subjects were divided into 2 groups (35 students each)

Pre-experiment test

In order to accurately assess the effectiveness of the experimental process, before the experiment, the study conducted a test and compared the long jump performances of the two experimental and control groups.The test results are showed in Table 1.

The results obtained in table 1 show that the value is <0.05. Thus, the average sample value was sufficiently representative. Cv<10%, so the sample has a high homogeneity or the dispersion of the sample is relatively small.

Table 1. Comparison of average performance in sit-style long jump by experimental and control groups before the experiment (n=70)

Groups	Results					
	Records (cm) $\bar{x} \pm \delta$	C_V (%)	ε	d	t	p
Experimental (n=35)	252.54 ± 22.26	8.81	0.03	0.83	0.16	>0.05
Control (n=35)	253.37 ± 20.81	8.21	0.03			

Note: Relative error (ε)

Thus the average sample value of the total aggregation had high reliability. The comparison results showed that, d = 0.83, t= 0.16 < t_{05} = 1,994. It proved that the difference in the performance test of the 2 groups was not significant at probability threshold P> 0.05. In other words, the performances in sit-style long jump of the experimental and control groups are similar.

Test results after the experiment:

After one experimental semester, the study conducted a test to determine the sit-style long jump performances of the 2 groups and compare them with the pre-experimental test results, at the same time determine the growth rate in test results of the two groups. Calculated results are presented in Table 2.

The results from table 2 showed that: the long

Table 2. Comparison of average performance in sit-style long jump by experimental and control groups after the experiment (n=70)

Group	Results							
	Before the experiment $\bar{x} \pm \delta$	After the experiment $\bar{x} \pm \delta$	C_V (%)	ε	d	$\bar{W}$%	t	P
Experimental (n=35)	252.54 ± 22.26	282.34 ± 24.36	8.63	0.03	29.80	11.14	26.08	<0.05
Control (n=35)	253.37 ± 20.81	268.80 ± 21.08	7.84	0.03	15.43	5.91	21.54	<0.05

jump performances by both groups had improved considerably, the differences between the two groups' pre- and post-experiment performances were statistically significant at the probability threshold p <0.05. However, the performances and growth rate of the experimental group were higher than that of the control group (11.14% to 5.91%). In order to further explicate the differences in the growth rate in sit-style long jump performances of the experimental and control groups, the study demonstrates the 2 groups' growth rate on chart 1.

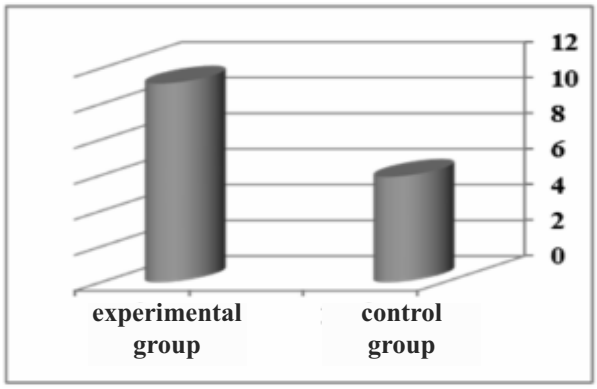

Chart 1. Growth rate of performances in sit-style long jump of the experimental and control group after the experimental process (n_A=n_B=35)

From the results obtained in Table 2 and Chart 1, we can confirm that the performances and performance progression in sit-style long jump of the experimental group increased more than the control group after the experimental process. This proves that the exercises that the study had selected and applied to the experimental process had worked and improved the sit-style long jump performance of 8th-grade female students in KienBinh secondary school, KienLuong district, KienGiang province.

CONCLUSION

With appropriate research methods, the study has selected 5 groups with 18 practical physical exercises in order to improve the sit-style long jump performance of 8th-grade female students in KienBinh secondary school, KienLuong district, KienGiang province. The experimental process has proved these exercises' effectiveness in improving the sit-style long jump performance of 8th-grade female students in KienBinh secondary school, KienLuong district, KienGiang province in the experimental group.

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