

UDC 796.325+796.418.6:796.015.154

USING MINI-TRAMPOLINE JUMPING FOR IMPROVING TECHNICAL SKILLS IN VOLLEYBALL

N. MATSIUS, WU GUANGYAO

Belarusian State University of Physical Culture
Minsk, Belarus

Introduction. Volleyball is a kind of sport games which is deeply loved by people all over the world. This sport has the characteristics of fast rhythm and flexibility, which puts a great test on the athlete's reaction and agility. In training athletes' agility, volleyball players can be performed by diving to save the ball and rolling to catch the ball. These two training methods can help athletes improve their physical coordination and agility. If the coordination ability is good, it can be reasonably applied to the various volleyball skill reserves mastered [1]. So jumping and coordination are necessary abilities and skills for most athletes, and different various of acrobatics exercises, especially mini-trampoline training has been shown to improve them. Little is known about the effect of using mini-trampoline jumping on technical skills and development of coordination abilities in volleyball.

The main part. The purpose of this study is to investigate the effect of using mini-trampoline jumping in the training process of student volleyball players'.

Twenty students of sports games department BSUPC participated in two testing sessions and were allocated to a control group (CG, N = 10) and experimental group (EG, N = 10). The control exercise and three indicators, that were evaluated by 3 experts, were used for testing sessions.

The control exercise is jumping up on the mini-trampoline – landing with turn of 90° and making the jump set with throwing the ball into the special basket.

The indicators, which are the pose of volleyball player in the air; the interaction with the ball and the effectiveness of winning attack, were evaluated by 3 experts with the help of 5-point scale. After comparing the results of first testing using Mann-Whitney U-test it was proved that the results of control and experimental groups have no differences (tabl. 1).

Tabl. 1. Comparing the results of experts' scoring of first testing, points

Poses in the air		Interaction with the ball		Effectiveness of winning attack	
CG	EG	CG	EG	CG	EG
3,14	3,13	3,24	3,22	2,78	2,90
U-criteria		U-criteria		U-criteria	
45 > 23		49,5 > 23		49,5 > 23	
p > 0,05		p > 0,05		p > 0,05	

So the second part of the pedagogical experiment included the development and practical application of the complex of special exercises with mini-trampoline for students of EG. The CG had trained like usually, by using traditional methods of training. The complex for EG was used in the first part of general training after

warming up, lasted for 30 minutes and was practiced 3 times a week during the 3 months of the experiment. The fragments of the exercises are showed at the pic. 1.



Pic. 1. Fragments of training using exercises with mini-trampoline

After the implementation of the complex the second testing of CG and EG were held (tabl. 2).

Tabl. 2. Comparing the results of experts' scoring of second testing, points and %

Poses in the air		Interaction with the ball		Effectiveness of winning attack	
CG	EG	CG	EG	CG	EG
3,25	3,55	3,34	3,57	2,90	3,38
Growth		Growth		Growth	
2,2 %	8,4 %	2 %	7 %	2,4 %	9 %
p < 0,05		p < 0,05		p < 0,05	

The use of the Wilcoxon signed rank test allowed to approve that the results of EG before and after experiment have significant differences, and the results of CG have no significant differences.

Also students of EG have significant differences and positive growth in the control exercise (tabl. 3) that confirmed the effect of using mini-trampoline exercises in the training process of volleyball players.

Tabl. 3. Comparing the growths of EG in control exercises

EXPERIMENTAL GROUP			
LEFT SIDE		RIGHT SIDE	
BEFORE	AFTER	BEFORE	AFTER
1,2 times	3 times	1,9 times	3,2 times
22%	58 %	34,2 %	58,3 %

Conclusion. Therefore the results of pedagogical experiment proved that using mini-trampoline exercises in the training process of volleyball players have the positive effect on performing their technical skills and development of coordination abilities of athletes.

LIST OF LITERATURE

1. **Simonek, J.** Coordination abilities in volleyball / J. Simonek. – Walter de Gruyter GmbH & Co KG. – 2014. – 80 p.