

CURRENT STATE OF SPEED-STRENGTH TRAINING FOR MALE WUSHU SANSHOU ATHLETES AGED 14-15 AT HANOI TRAINING AND COMPETITION CENTER

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Summary

This study employed standard scientific research methods to assess the current state of speed-strength training for male Wushu Sanshou athletes aged 14-15 at the Hanoi Sports Training and Competition Center. The assessment was conducted through surveys on key areas: coaches' awareness of speed-strength training, the duration of speed-strength training, exercises for speed-strength development for the research subjects, and the current state of speed-strength in the athletes. The research discoveries provide practical scientific evidence to enhance training effectiveness for athletes, ensuring high-performance outcomes.

Keywords: Current state, training, male athletes, speed-strength, Wushu Sanshou.

INTRODUCTION

The training process for Wushu Sanshou athletes requires the seamless integration of technique, strategy, psychological states, training environments, and equipment with the development of physical fitness attributes. To achieve optimal performance, alongside general fitness, Wushu Sanshou athletes need to cultivate specific physical qualities such as speed-strength, movement speed, endurance, agility, and coordination. Thus, special attention must be given to the development of these attributes in training [1]. Research has demonstrated that speed-strength plays a crucial role in performance: Speed-strength is a special form of strength, combining power and velocity. It is the ability to exert maximum strength in the shortest time possible [2, 3]. Empirical studies and competition analyses in Wushu Sanshou confirm that speed-strength is a unique characteristic of this sport. It is a critical foundation for athletes to execute quick, powerful, and effective offensive techniques.

In practice, the speed-strength training of male Wushu Sanshou athletes at the Hanoi Sports Training and Competition Center reveals several limitations that negatively affect their speed-strength levels and competition results.

Therefore, evaluating these athletes' current state of speed-strength training is essential. This evaluation is not only fundamental to improving speed-strength development but also enhances athletes' physical fitness, skills, combat effectiveness, and competition results. Additionally, it contributes to improving the overall training quality for Wushu Sanshou at the Hanoi Sports Training and Competition Center and meets the high-performance training requirements of the center in the current period.

RESEARCH METHODS

The study employs the following research methods: document analysis and synthesis, interviews, pedagogical observation, and statistical methods.

RESULTS AND DISCUSSION

1. Current status of speed-strength training duration for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center

The study evaluates the research subjects' current duration of speed-strength training by investigating the annual physical training program for Wushu Sanshou. The results of the current status of speed-strength training duration for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition

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Center are as follows:

- Speed training: 20.455%
- Strength training: 22.73%
- Endurance training: 20.455%
- Flexibility training: 15.15%
- Coordination training: 21.21%

The survey of the physical training program indicates an even distribution of time across various physical attributes. However, speed-strength, a critical attribute specific to Wushu Sanshou, has not been allocated sufficient training time (6.06%). This inadequate attention

to speed-strength training contributes to the less-than-optimal technical and tactical performance of the 14- to 15-year-old Wushu Sanshou athletes at the Hanoi Sports Training and Competition Center.

2. Current status of speed-strength exercises for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center

2.1. Number of speed-strength exercises

The study surveyed the use of speed-strength exercises, and the results are presented in Table 1

Table 1. Current usage state of speed-strength development exercises for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center

No.	Exercise type	Exercise name	Quantity	Percentage %
1	General speed-strength exercises	1. Alternating leg jumps on box	10	52.63
		2. Two-leg box jumps		
		3. Frog jumps		
		4. High knee jumps		
		5. Continuous high-knee running		
		6. 60m sprint (standing start)		
		7. Partner piggyback run around the mat		
		8. Push-ups (face down)		
		9. Jump rope		
		10. Two-person leg press		
2	Specific speed-strength exercises	1. Continuous straight punches while running	7	36.84
		2. Continuous hook punches while running		
		3. Alternating front kicks to target		
		4. Alternating roundhouse kicks to a heavy bag		
		5. Alternating straight punches to target		
		6. Alternating hook punches to target		
		7. Throwing dummy over the hip		
3	Combat training exercises	1. Sparring using only punching and kicking techniques	2	10.53
		2. Sparring where one attacks and the other defends and counterattacks		
		Total	19	100

The results in Table 1 indicate that speed-strength training exercises for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center have been concerned and integrated into the training program. However, the number of exercises remains limited relative to the annual training cycle, lacking variety and diversity, which may lead to monotony in the athletes' training. This is

the reason leading to the suboptimization of speed-strength training exercises for male Wushu Sanshou athletes.

2.2. Number of training plans incorporating speed-strength exercises

The study was surveyed to assess the integration of speed-strength exercises in training plans. The findings are presented in Table 2.

Table 2. Current usage state of speed-strength development exercises in training plans for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center

No.	Content of training plans	Number of training plans	Percentage %
1	Comprehensive use of speed-strength exercises	8	26.67
2	Use of general speed-strength exercises	10	33.33
3	Use of specific speed-strength exercises	10	33.33
4	Use of combat training exercises	2	6.67
Total		30	100

Table 2 illustrates that among the 30 training plans utilizing speed-strength exercises, only 8 plans (26.67%) focus on speed-strength development through the comprehensive use of such exercises. Meanwhile, 10 training plans (33.33%) include general speed-strength exercises, another 10 (33.33%) focus on specific speed-strength exercises, and only 2 plans (6.67%) involve combat-related exercises. These results indicate that there is a limited focus on dedicated speed-strength training, with inconsistent use and distribution of speed-strength exercises across the training plans.

3. Assessment of speed-strength abilities of male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center

3.1. Test results of speed-strength ability testing of male Wushu Sanshou athletes aged 14 to 15

To determine the current speed-strength abilities of 14- to 15-year-old male Wushu Sanshou athletes at the Hanoi Sports Training and Competition Center, the study conducted tests on 20 athletes (10 athletes aged 14 and 10

athletes aged 15) using 7 selected tests. The results are presented in Table 3.

The results presented in Table 3 indicate a consistent development, which was demonstrated by the coefficient of variation (Cv) values ranging from 2.0% to 9.5%, < 10%. Additionally, the values (ϵ) in all tests ranged from 0.014 - 0.044 < 0.05, confirming that the speed-strength abilities of the Wushu Sanshou athletes in this age group at the Hanoi Sports Training and Competition Center are fairly uniform. The current training regimen has had a positive impact on speed-strength development for most athletes. However, further research is required to evaluate the extent of improvement in individual athlete performance.

3.2. Classification of speed-strength test results for male Wushu Sanshou athletes aged 14 to 15

The study classified the results of the speed-strength tests for male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center into five levels (Excellent, Good, Average, Below Average, Poor) based on a 2 σ rule. The results presented in Table 4 show

Table 3. Test results of speed-strength ability testing of male Wushu Sanshou athletes aged 14 to 15 (n=20)

No.	Test	Age Group (m _i =10)	$\bar{x} \pm \delta$	C _v (%)	ϵ
1	Standing long jump (cm)	14	245.2±6.321	2.6	0.018
		15	249.5±5.005	2	0.014
2	Push-ups (15s) (reps)	14	16.0±0.775	4.8	0.034
		15	17.3±1.1	6.4	0.044
3	Jump rope (15s) (reps)	14	37.8±0.98	2.6	0.018
		15	38.9±1.136	2.9	0.021
4	Straight punches to target (15s) (reps)	14	48.1±1.3	2.7	0.019
		15	49.0±1.183	2.4	0.017
5	Front kicks to target (15s) (reps)	14	14.8±0.748	5.1	0.036
		15	15.6±0.8	5.1	0.036
6	Roundhouse kicks to target (15s) (reps)	14	26.3±1.1	4.2	0.029
		15	27.2±1.077	4	0.028
7	Throwing 30kg - dummy over the hip (15s) (reps)	14	4.2±0.4	9.5	0.041
		15	5.2±0.4	7.7	0.043

Table 4. Classification of speed-strength abilities in male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center (n=20)

No.	Test	Age Group (m _i =10)	Classification									
			Poor		Below Average		Average		Good		Excellent	
1	Standing long jump (cm)	14	2	20	5	50	2	20	1	10	0	0
		15	1	10	6	60	2	20	1	10	0	0
2	Push-ups (15s) (reps)	14	0	0	3	30	4	40	3	30	0	0
		15	0	0	3	30	5	50	2	20	0	0
3	Jump rope (15s) (reps)	14	1	10	3	30	3	30	3	30	0	0
		15	1	10	3	30	5	50	1	10	0	0
4	Straight punches to target (15s) (reps)	14	1	10	3	30	4	40	2	20	0	0
		15	1	10	3	30	5	50	1	10	0	0
5	Front kicks to target (15s) (reps)	14	0	0	4	40	4	40	2	20	0	0
		15	1	10	5	50	3	30	1	10	0	0
6	Roundhouse kicks to target (15s) (reps)	14	0	0	6	60	2	20	2	20	0	0
		15	0	0	3	30	5	50	2	20	0	0
7	Throwing 30kg - dummy over the hip (15s) (reps)	14	0	0	6	60	2	20	2	20	0	0
		15	0	0	6	60	2	20	2	20	0	0



that the "Poor" level accounts for 10% to 20%, the majority of athletes fall within the "Below Average" (30%-60%) and "Average" (20%-50%) levels, while the "Good" level is less common (10%-30%), and no athlete reached the "Excellent" level. This indicates that the speed-strength levels of the athletes in this group are still relatively low, and the use of more appropriate exercises and training methods is necessary to enhance these abilities.

CONCLUSION

The study assessing the training of male Wushu Sanshou athletes aged 14 to 15 at the Hanoi Sports Training and Competition Center has demonstrated that speed-strength training is crucial for athletic development. However, the current emphasis on speed-strength training is insufficient, with inadequate training volume and ineffective distribution across plans. The ability level of the research subject remains limited. Additionally, the variety of speed-strength exercises remains limited, which could result in less effective athlete development. It is essential to increase the focus on speed-strength training, diversify the exercise selection, and implement more appropriate training methods to improve athletic performance among these young Wushu Sanshou athletes.

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