

SELECTING PROFESSIONAL 100M RUNNING PHYSICAL FITNESS ASSESSMENT TESTS FOR THIRD-YEAR MALE STUDENTS MAJOR IN ATHLETICS, SPORTS TRAINING DEPARTMENT AT BAC NINH SPORTS UNIVERSITY

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Abstract:

Through regular scientific research methods, we have selected and determined the informativeness and reliability of the professional physical fitness tests for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University.

Keywords: Professional 100m running physical fitness assessment tests, students major in Athletics, sports training department, Bac Ninh Sports University.

INTRODUCTION

To get high achievements in the 100m running requires that the athlete must have appropriate physical fitness level, skillful techniques and appropriate body shape. This is a competition content that requires strong competition on the function of the mobility system between the athletes. To win, the top factor as well as the decisive factor and the basis for the athletes to achieve the highest performance is to have professional physical fitness preparation. Therefore, to evaluate the effectiveness of the professional 100m running physical fitness development exercises for male students major in athletics, sports training department, the study “Selecting professional 100m running physical fitness assessment tests for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University” is a scientific work with practical significance in teaching and training.

RESEARCH METHODS

In the research process, we use the research methods: Method of analyzing and synthesizing documents, method of seminar interviews, pedagogical examination method and statistical mathematics method.

RESULTS AND DISCUSSION

In order to select tests in examining, evaluating the professional 100m running

physical fitness for 3rd year male students major in Athletics, Sports training department at Bac Ninh Sports University, through referencing to relevant documents shows that, the process of selecting assessment tests must follow three rules:

- Rule 1: The selected tests must evaluate comprehensively in terms of professional physical fitness levels.

- Rule 2: The selection of tests must ensure the reliability and informativeness of the research subject. In other words, the implementation of this rule is the selection of tests aimed at identifying the contents about the professional physical fitness... In order to assess the level of professional physical fitness for research subjects, the selection of tests on this side is the determination of the physical fitness levels and other professional characteristics, normally the tests selected must be aimed to assess the following abilities:

- + About the maximum speed
- + About the speed strength
- + About professional speed
- + Professional durability.

- Rule 3: The selected test must have a simple organization format suitable to the practical conditions of the teaching and professional training of 100m running for third-year male students major in Athletics, Sports training

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Based on the theoretical and practical basis to select precisely scientific ensured tests, we conducted according to the following steps:

Step 1. Determine the requirements when selecting tests;

Step 2. Determine the tests by referencing documents;

Step 3. Interview to select the tests;

Step 4. Determine informativeness and reliability.

Through the method of reading and analyzing documents, initially, we have synthesized 8 professional 100m running physical fitness tests for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University. We conducted interviews with teachers, coaches and athletics experts to select the professional 100m running physical fitness tests. These are reliable and informative tests. Interview results are presented in Table 1.

Table 1. Results of selecting professional 100m running physical fitness tests for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University (n = 30)

No.	Interview content	Result	
		m_i	Ratio (%)
1	30m high speed running (s)	30	100
2	60m crouch start running (s)	28	93.33
3	120m standing start running (s)	26	86.67
4	150m standing start running (s)	23	76.67
5	200m crouch start running (s)	18	60.0
6	On the spot long jump (cm)	30	100
7	3 steps long jump (m)	21	70.0
8	100m crouch start running (s)	29	96.67

From the results obtained in Table 1 it shows that: In order to evaluate the physical fitness during the process of teaching and training 100m running, we selected 5 tests with the approval rate of over 85% to ensure sufficient reliability so that we can apply in the research process. The tests selected are: 30m high speed running (s); 60m crouch start running (s); 120m standing start running (s); On the spot long jump (cm); 100m crouch start running (s)

Determine the informativeness of the selected tests

In order to ensure the scientific nature when putting the tests into application, we conducted determining the spearman correlation coefficient between the test results of 5 tests (selected through interviews) with 100m running test results. Through processing data by statistical mathematics methods, the results are presented in table 2.

The results obtained in Table 2 show that: In all 5 tests selected through the interviews, the test results that determine the correlation of the tests with the performance of 100m running are

Table 2. The correlation between professional 100m running physical fitness evaluation tests

No.	Test	$\bar{x} \pm \delta$	r	P
1	On the spot long jump (cm)	251.56 ± 7.01	0.618	< 0.05
2	30m high speed running (s)	3.38 ± 0.24	0.685	< 0.05
3	60m crouch start running (s)	7.88 ± 0.67	0.695	< 0.05
4	120m standing start running (s)	14.15 ± 0.45	0.79	< 0.05
5	100m crouch start running (s)	12.13 ± 0.53	0.792	< 0.05

highly informative shown in $r_{\text{calculated}} > r_{\text{table}}$ and $r_{\text{calculated}} > 0.60$ at the threshold $P < 0.05$. Thus, all 5 tests above are highly informative to apply in evaluating the professional 100m running physical fitness for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University.

Determine the reliability of the selected tests

To ensure reliability, we continue to determine their reliability by repeated testing method for research subjects. The methods and

conditions for making the tests are the same for both tests. The time for repeating the tests is carried out within 7 days and ensure that the second test conditions are the same as the first test. The reliability is determined by the method of calculating the correlation coefficient between 2 times of setting up 5 tests on the research subjects. Through processing data by statistical mathematics methods, the results are presented in Table 3.

The results obtained in table 3 show that: All

Table 3. The correlation coefficient between two times of setting up professional 100m running physical fitness evaluation tests

No.	Test	1st time $\bar{x} \pm \delta$	2nd time $\bar{x} \pm \delta$	r	P
1	On the spot long jump (cm)	251.56 ± 7.01	252.46 ± 7.01	0.872	< 0.05
2	30m high speed running (s)	3.38 ± 0.24	3.35 ± 0.23	0.895	< 0.05
3	60m crouch start running (s)	7.88 ± 0.67	7.79 ± 0.57	0.905	< 0.05
4	120m standing start running (s)	14.15 ± 0.45	14.10 ± 0.43	0.892	< 0.05
5	100m crouch start running (s)	12.13 ± 0.53	12.11 ± 0.52	0.974	< 0.05

5 tests have a very strong correlation with $r_{\text{calculated}} = 0.872$ to $0.974 > t_{\text{table}} = 0.8$ with $P < 0.05$. Therefore, all 5 tests ensure reliability and are allowed to be used to assess professional 100m running physical fitness for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University. Thus, through the above-mentioned research steps, we have selected 5 tests that ensure high informativeness and reliability, so that we can apply it to the evaluation of the professional 100m running physical fitness for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University.

CONCLUSION

From our research results, it is possible to have the following conclusions:

The research process has selected professional 100m running physical fitness assessment tests for third-year male students major in Athletics, Sports training department at Bac Ninh Sports University, including: On the spot long jump (cm) - assess speed strength; 30m high speed running (s) - assess maximum speed; 60m crouch start running (s) - assess professional speed; 120m standing start running

(s) – assess professional speed durability; 100m crouch start running (s) – assess speed durability - exercise effectiveness. The above tests have been verified for their reliability and informativeness during the test preparation process.

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