

REVEALING THE CORRELATION STRUCTURE OF THE SELECTION INDICATORS IN AGE 15-16 YEARS IN THE CROSS-COUNTRY VARIATION

Preliminary communication

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Abstract

Control tests and measurements at the level of initial sports training are excellent instrument for revealing the potential for a certain sport. The purpose of this study is to find correlational structures of anthropometric development and motive potential of talented adolescents /age 15-16/ for cross-country cycling and to perform comparative analysis of the existing interdependencies in each of the studied groups. The proposed test battery includes: at -1000 m from the place; X-size.; X 2-Weight.; H3-100 m flying start.; X 4-200 m flying start.; X 5 Running 30 m start with low signal.; X 6 Running 30 m flying start with signal.; H7 Jump length of place.; H8 vertical bounce.; The Informant Flexibility.; X 10 strength of the right hand.; X 11 force of left hand. The tests included in the study, appear to be significant both for the physical development and preparation of the young bikers. The study is conditioned by the backwardness of the discipline in Bulgarian at the moment and by the lack of a system for the selection of the talented cyclists for the cross-country discipline.

Keywords: *anthropometrics, training process, sport achievements, development of adolescents, motor abilities, motor tests, Pearson correlation, anthropometric characteristics, sport-technical possibilities*

INTRODUCTION

Cross-country skiing is the most popular and fascinating discipline of mountain biking. It is characterized by a variety of terrains with Wheeler overcomes inclines in both directions (up and down). Since 1996. is the program of the summer Olympic Games in Atlanta (Hristov (Хистов),1996).

The development of the adolescent organism is of interest to scientists and researchers not only from sports and pedagogical, but also from the biological point of view.

Knowledge of peculiarities in the development of the adolescent body are a prerequisite for organizing and conducting an effective training process, facilitating as achieving high sport achievements and stimulating the proper development of adolescents.

Tests and measurements at the stage of initial sports training are an excellent tool for discovering the makings for one or the other sports discipline.

The selection is at the top of every science-based and organised sporting activity.

Anthropometric characteristics are one of the first major features and prerequisites for making a selection in most of the sports, including cycling. This is what prompted us to conduct this study (Hristov (Хистов),1996).

The purpose of this research is to reveal correlation structures of anthropometric growth and motor abilities of gifted children at age 15-16 years for the cross-country discipline and make a comparative analysis of existing interdependencies in each of the studied populations.

METHODS

The object of the study are anthropometric and motor characteristics of Bulgarian boys aged 15-16 years (N=14).

The subject of the research are the indicators reflecting the degree of antropometrično growth and mobility opportunities.

The developed standards for selection provide specialist ability to find the most talented young riders for the cross-country discipline in age 15-16 years.

The proposed test battery includes: at -1000 m from the place; X-size.; X 2-Weight.; H3-100 m flying start.; X 4-200 m flying start.; X 5 Running 30 m start with low signal.; X 6 Running 30 m flying start with signal.; H7 Jump length of place.; H8 vertical bounce.; The Informant Flexibility.; X 10 strength of the right hand.; X 11 force of left hand.

RESULTS AND DISSCUSION

Correlation analysis starts with keeping track of dependencies between the signs in the first study in age 15-16 years table 1. Defining the basis for comparison is the 1000 m from the location indicator (Y').

Sport-technical capabilities of cyclists from this age (y') enter in a relationship with the other 12 test as follows:

- large – with X3, X4, X7, X8, X10;
- significant – c X5, X6, X11;
- moderate – c X1, X9;
- insubstantial – with X2.

Insubstantial is the only link with the weight of the competitors (X2 - $r = 0,28$).

Interkorelaciite between all the groups studied tests are essential. Exception solely weight (X2), which correlates significantly with only r"stta (X1) the cyclist.

In the table. 2 the results of correlation analysis of data for the second test in age 15-16 years.

Table 1. Correlation analysis of data from the first testing/age 15-16 years

Tests	Y ^v	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11
Y ^v	---											
X1	-0,50	---										
X2	-0,21	0,60	---									
X3	0,76	-0,43	-0,12	---								
X4	0,77	-0,46	-0,17	0,90	---							
X5	0,70	-0,46	-0,24	0,92	0,90	---						
X6	0,70	-0,51	-0,15	0,79	0,90	0,89	---					
X7	-0,72	0,45	-0,08	-0,92	-0,91	-0,81	-0,88	---				
X8	-0,85	0,61	0,20	-0,85	-0,83	-0,82	-0,77	0,81	---			
X9	-0,44	0,15	0,02	-0,46	-0,53	-0,50	-0,51	0,47	0,46	---		
X10	-0,80	0,41	0,24	-0,85	-0,89	-0,84	-0,81	0,84	0,87	0,41	---	
X11	-0,77	0,41	0,10	-0,82	-0,89	-0,91	-0,91	0,81	0,70	0,50	0,81	---

Table 2. Correlation analysis of data from the second testing/age 15-16 years

PAC.	Y ^v	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11
Y ^v	---											
X1	-0,55	---										
X2	-0,28	0,68	---									
X3	0,80	-0,42	-0,02	---								
X4	0,85	-0,49	-0,07	0,98	---							
X5	0,75	-0,45	-0,04	0,97	0,94	---						
X6	0,74	-0,50	-0,05	0,95	0,93	0,94	---					
X7	-0,79	0,43	-0,01	-0,94	-0,97	-0,89	-0,92	---				
X8	-0,91	0,60	0,25	-0,86	-0,89	-0,85	-0,80	0,80	---			
X9	-0,48	0,11	0,09	-0,58	-0,50	-0,55	-0,58	0,48	0,45	---		
X10	-0,87	0,46	0,14	-0,88	-0,92	-0,87	-0,85	0,90	0,91	0,45	---	
X11	-0,78	0,49	0,15	-0,93	-0,91	-0,95	-0,92	0,89	0,80	0,55	0,87	---

Defining the basis for comparison is the test of 1 000 m from the place (Y^v).

A very great degree of interconnection of the sports-technical capacity (Y^v) dating quiz X8 (vertical bounce from place – r = -0,91).

Follow in importance with a great degree of relationship quizzes X3 (100 m flying start – r = 0,80), X4 (100 m JumpStart – r = 0,85), X5 (30 m start with low signal – r = 0,75), X6 (30 m JumpStart (r = 0,74), X7 (jump from place – r = 0,-0,79), X10 (dinamometriã right hand - r = -0,87) и X11 (dinamometriã left hand - r = 0,-0,78). Significant is the connection with X1 (growth - r = -0,55).

All functional tests are proving to be significant for sporting achievement of young bikers. This gives us another proof for the selected tests for the exploration of the possibilities of young cyclists, and from there – and for their selection.

By interkorelaciite (see the. table. 2) the most informative report: special gear options (X3, X4) with all indicators (от X5 до X11), expressing a natural quality. Relationships are essential r - varies from 0,50 до 0,98, as the majority of them are larger than 0,80. Their rate increases depending on how their respective qualities are present in a relationship. From anthropometric tests only the growth (X1) correlates with the special abilities of the persons surveyed speed - r with moderate values. And here the interconnections in nature are similar to those found in sport-technical possibilities with the other tests, which is logical;

high-speed capabilities of the lower limbs (X5, X6) with all the tests, without the weight (X2) – r varies from -0,55 до -0,96. With the growth (X1) addiction is a less pronounced – r is accordingly -0,45 and -0,50;

the blast force of the lower limbs (X7, X8) with all the

tests (r varies from 0,48 to 0,97). From anthropometric growth signs (X1) appears to be interconnected with them (r is accordingly 0,43 and 0,60).

the flexibility (X9) with all the tests (r varies from 0,45 to 0,58), without the anthropometric;

dinamometriãta (X 10, H11) with other tests (r ranged from 0,45 to 0,93), without the weight (X 2).

Summing up, it should be noted that the weight as a factor lost its influence on the sport-technical possibilities of young bikers. This trend is enhanced with the increase of age, which confirms our presumption that with the increase of sports experience as treniranostta and the relative physical abilities are enhanced, ignoring the passive impact of weight as a positive factor.

In order of importance for the sports score the tests could be arranged in the following order: special speed-power capability (X 3, X 4), speed of the lower limbs (X 5, X 6), speed-power capabilities of the lower limbs (H7, H8), izdr"zlivostH12, H13, a special gear), the force of the upper extremities (X 10, X 1 2), 2 time anthropometric medical data (X 1, X 2).

CONCLUSIONS

The study is conditioned by the backwardness of the discipline in Bulgarian at the moment and by the lack of a system for the selection of the talented cyclists for the cross-country discipline.

The significance of the research is determined by the results of the study – targeted immediately to improve performance in the selection of young Bulgarian cyclists – the future of cycling sport in our country.

The relationship between sports and the technical possibilities and the other indicators (tests), as well as between themselves, provides us with the opportunity to

explore the significance of each one for the development of the cyclist and the improvement of the training process in this important stage of its overall construction.

The tests included in the study, appear to be significant both for the physical development and preparation of the young bikers.

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