

Influence of modern choreography means on the level of technical preparedness of athletes from acrobatic rock'n'roll at the stage of preliminary basic training

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Purpose: to study the influence of modern choreography on the level of technical preparedness of athletes from acrobatic rock'n'roll at the stage of preliminary basic training.

Material & Methods: theoretical analysis and generalization of data of special scientific and methodological literature, pedagogical observation, pedagogical testing, pedagogical experiment, method of expert evaluations, methods of mathematical statistics. The study involved 40 athletes (20 sports pairs of the Juvenile category).

Results: the level of technical mastery of the performance of the competitive program is determined before and after the pedagogical experiment. Dynamics of indicators of the level of technical preparedness of young athletes from acrobatic rock'n'roll.

Conclusions: study testifies to the positive influence of the means of modern choreography on the level of technical preparedness of athletes from acrobatic rock'n'roll at the stage of preliminary basic training.

Keywords: technical preparedness athletes, acrobatic rock'n'roll, modern choreography.

Introduction

The rapid growth of achievements in world sports constantly requires a relentless search for new, increasingly effective means, methods and organizational forms of training young athletes [3; 4; 9]. The current stage of development of acrobatic rock'n'roll is characterized by a high level of performing skills. As in any complex co-ordinated sport, acrobatic rock'n'roll should have a harmony between complexity, composition, performance [2; 6; 10; 12]. The growing competition in acrobatic rock'n'roll competitions on the international stage provides that the championship should be kept for those sports couples who will be able to combine the difference in complexity in unordinary motor connections with virtuosic performance and expressiveness, emotionality, and artistry. Therefore, today requires a more qualitative approach to the technical preparedness of young athletes, based on the principles of individualization and advancing development in an ever-changing environment in which acrobatic rock'n'roll [1; 5; 11].

The growth of the world popularity of acrobatic rock'n'roll as a spectacular dance sport determines the urgent need to search for new forms and means of choreographic training for athletes who would be allowed to be included in competitive programs adapted to the "rock and roll" style of performing elements of modern dance disciplines, in turn, will improve the technical preparedness of the Juvenile category in acrobatic rock'n'roll [1; 8; 11; 14].

The analysis of the scientific and methodical literature showed the lack of consideration of the issue in this direction and highlighted the problems of the technical preparedness of the Juvenile category in acrobatic rock'n'roll, which was the subject of our study.

Relationship of research with scientific programs, plans, themes. The work is carried out in accordance with the Consolidated Plan of research work in the field of physical culture and sports for 2016–2020. On the topic: "Psycho-sensory regulation of the motor activity of athletes of situational sports" (No. 0116U008943).

Purpose of the study: was to study the influence of the means of modern choreography on the level of technical preparedness of athletes from acrobatic rock'n'roll at the stage of preliminary basic training.

Objectives of the study:

1. To study the special scientific and methodical literature on the research problem.
2. To determine the content of the technical training of the Juvenile category athletes in acrobatic rock'n'roll I in the training process.
3. Analyze the dynamics of the technical readiness indicators of the Juvenile category in acrobatic rock'n'roll after the pedagogical experiment.

Material and Methods of the research

Research methods: theoretical analysis and generalization of data of special scientific and methodological literature, pedagogical observation, pedagogical testing, pedagogical experiment, method of expert evaluations, methods of mathematical statistics. The study involved 40 athletes (20 sports pairs of the Juvenile category).

Results of the research and their discussion

The first stage of our study was the study of the level of tech-

nical skill of young athletes engaged in acrobatic rock'n'roll at the stage of preliminary basic training. The level of technical skill of the "juvenile" category in acrobatic rock'n'roll was estimated in points for the performance of the criteria of competitive programs: the main course (male partner+female partner) of dance figures; composition.

Results of the study of the level of technical skill of athletes engaged in acrobatic rock'n'roll at the stage of preliminary basic training, after the primary control tests (performance of competitive programs) is presented in Table 1, 2.

Shown in Table 1 judges scores are averages of six partial criterion evaluations: "A" – main move (male partner+female partner), scores (0-20) "B" – dance figures, points (0-25) "C" – composition, points (0-20).

We also used penalties for technical errors in view of the scale of reductions in accordance with the Regulations of the World Confederation of Rock and Roll.

Analysis of the assessment of the level of technical skill of athletes in the performance of the competitive program by a sports couple at the initial stage of the experiment in the experimental group (EG) showed that the partner and partner of the sports pair No. 7, the "Basic" criterion, received the highest average score of 8.7 points and 8.5 points course ". The total score of the sports couples number 7 is 17.2. The best results of this criterion were shown by the partner and partner of sports pairs No. 4 and No. 5 (the number of points of average scores from 8,5 to 8,4). Sports couples received a total score: 16,9; 16,8. The average results of this criterion were shown by the male partner and female partner of sports pairs No. 1, No. 3, No. 6, No. 8, No. 9 and No. 10 (the score of average scores from 8,4 to 8,2). Sports couples No. 1 and No. 9 received a total score of 16,7; couples No. 6 and No. 10 received a total score of 16,6; sports pair No. 3 and No. 8 received a total score of 16,5. The worst results of this criterion are the partner and partner of sports pair number 2 (the number of points of average scores from 8,2 to 8,1). The total score of the sports pair No. 2 – 16,3.

Highest average score in the "Dance Figures" criterion of the competition programs was given by the partner and partner of the sports couples No. 7 – by 8,95 points. The total sum of the points of the sports couples No. 7 – 17,9. The best results

of this criterion were shown by male partner and female partner of sports couples number 3 and number 4 (the number of points average grades of 8.9). The total amount of points – 17,8 each sporting couples. The average results of this criterion were shown by male partner and female partner of sports couples No. 5, No. 6, No. 9, No. 10 and No. 8 (the number of points of average grades from 8,8 to 8,6). Sports couples received a total of points: 17,6; 17,4; 17,3; 17,2. The worst results of this criterion are the male partner and female partner of sports couples number 1 and number 2 (the number of points of average grades is 8,5). The total sum of points was 17,0 each sporting couples.

The highest average score in the criterion "Composition" of competitive programs was given to a male partner and female partner of sports couples No. 6 (the number of points of average ratings at 8,7). The total score of the sports couples number 6 is 17,4. The best results of this criterion were shown by the male partner and female partner of sports pairs No. 10, No. 9 and No. 8 (the number of scores of average scores from 8,65 to 8,5). Sports couples received a total score of 17,3; 17,1; 17,0. The average results of this criterion were shown by the male partner and female partner of sports couples No. 7, No. 1, No. 4 (number of scores of average scores from 8,2 to 8,1). Sports couples received a total score of 16,4; 16,2. The worst results of this criterion are the male partner and female partner of sports pairs No. 2, No. 3, No. 5 (number of points of average ratings is 8,0). The total score of 16,0 was awarded to each sports couples.

Coefficient of variation (V, %) showed that the group is homogeneous.

Analysis of the assessment of the level of technical skill of athletes in the performance of the competitive program by a sports couple at the initial stage of the experiment in the control group (CG) showed that the highest average score of 9,1 points and 9,0 points was obtained by the male partner and female partner of sports pair No. 2 – "main move". The total score of the sports pair number 2 is 18,1. The best results of this criterion were shown by the male partner and female partner of sports pairs No. 1 and No. 3 (the number of points of the average ratings is from 9,0 to 8,8). Sports couples received a total score of 17,9 and 17,7. The average results of this criterion were shown by the male partner and female partner of sports couples No. 4, No. 5, No. 6, No. 7, No. 9 and

Table 1
Results of the performance of the competitive program by a sports couple (male partner, female partner) from acrobatic rock'n'roll before pedagogical research (EG, n=20)

Criteria for evaluating the competitive program, scores	Sports couple									
	1	2	3	4	5	6	7	8	9	10
A Main move (male partner)	8,3	8,1	8,3	8,4	8,4	8,3	8,5	8,3	8,3	8,3
A Main move (female partner)	8,4	8,2	8,2	8,5	8,4	8,3	8,7	8,2	8,4	8,3
B Dance figures (male partner)	8,5	8,5	8,9	8,9	8,8	8,7	8,95	8,6	8,65	8,65
B Dance figures (female partner)	8,5	8,5	8,9	8,9	8,8	8,7	8,95	8,6	8,65	8,65
C Composition (male partner)	8,1	8,0	8,0	8,1	8,0	8,7	8,2	8,5	8,55	8,65
C Composition (female partner)	8,1	8,0	8,0	8,1	8,0	8,7	8,2	8,5	8,55	8,65
Overall rating ("A" + "B" + "C")	49,9	49,3	50,3	50,9	50,4	51,4	51,5	50,7	51,1	51,2
Ранг	9	10	8	5	7	2	1	6	4	3
Average arithmetic, \bar{X}	8,32	8,22	8,38	8,48	8,38	8,57	8,57	8,45	8,52	8,53
Mean square deviation, σ	0,18	0,23	0,42	0,36	0,36	0,21	0,34	0,16	0,14	0,18
Coefficient of variation, %	2,2	2,8	5,0	4,2	4,3	2,4	3,9	1,9	1,6	2,1

Table 2

Results of the performance of the competitive program by a sports couple (male partner, female partner) from acrobatic rock'n'roll before pedagogical research (CG, n=20)

Criteria for evaluating the competitive program, scores		Sports couple									
		1	2	3	4	5	6	7	8	9	10
A	Main move (male partner)	8,9	9,0	8,8	8,7	8,6	8,7	8,5	8,4	8,5	8,6
	Main move (female partner)	9,0	9,1	8,9	8,6	8,5	8,6	8,6	8,3	8,4	8,3
B	Dance figures (male partner)	8,6	8,6	8,9	8,7	8,7	8,9	8,95	8,7	8,7	8,7
	Dance figures (female partner)	8,6	8,6	8,9	8,7	8,7	8,9	8,95	8,7	8,7	8,7
C	Composition (male partner)	8,9	8,7	8,8	8,9	8,7	8,6	8,4	8,3	8,6	8,7
	Composition (female partner)	8,9	8,7	8,8	8,9	8,7	8,6	8,4	8,3	8,6	8,7
Overall rating ("A" + "B" + "C")		52,9	52,7	53,1	52,5	51,9	52,3	51,8	50,7	51,5	
Ранг		3	4	2	5	7	6	8	10	9	
Average arithmetic, \bar{X}		8,78	8,85	8,75	8,65	8,72	8,63	8,45	8,58	8,62	
Mean square deviation, σ		0,21	0,05	0,12	0,08	0,15	0,26	0,20	0,12	0,16	
Coefficient of variation, %		2,4	0,6	1,4	0,9	1,7	3,0	2,9	1,4	1,8	

No. 10 (the number of scores of average ratings from 8,7 to 8,3). Sports couples No. 4 and No. 6 received a total score of 17,3; sports couples No. 5 and No 7 received a total score of 17,1; sports couples No. 9 and No. 10 received a total score of 16,9 points. Worst results of this criterion are the partner and partner of the sports pair No. 8 (the number of points of the average ratings is 8,4 and 8,3). Total score of the sports couples No. 8 – 16,7.

Highest average rating in the criterion "Dance figures" of competitive programs was given to a male partner and female partner of the sports pair No. 7 – 8,95 points. The total score of the sports couples number 7 is 17,9. The best results of this criterion were shown by male partner and female partner of sports couples No. 3 and, No. 6 (the number of points of the average ratings by 8,9). Sports couples No. 3 and No. 6 received a total of 17,8 points. The average results of this criterion were shown by the male partner and female partner of sports couples No. 4, No. 5, No. 8, No. 9 and No. 10 (the score of the average ratings is 8,7). Sports couples No. 4, No. 5, No. 8, No. 9 and No. 10 received a total score of 17,4. Worst results of this criterion are the partner and partner of sports couples No. 1 and No. 2 (the number of points of the average ratings is 8,6). Sports couples No. 1 and No. 2 received a total score of 17,2.

The highest average score in the criterion "Composition" of the competitive programs was given to the male partner and female partner of sports pairs No. 1 and No. 4 (the number of points of the average ratings at 8,9). The total score of sports pairs No. 1 and No. 4 is 17,9. The best results of this criterion were shown by the male partner and female partner of sports couples No. 3, No. 2 No. 5 and No. 10 (the number of points of average ratings from 8,8 to 8,7). Sports couple No. 3 received a total of 17,6 points. Sports couples No. 2, No. 5 and No. 10 received a total score of 17,4. Average results of this criterion were shown by the male partner and female partner of sports pairs No. 6, No. 7 and No. 9 (the score of average scores is from 8,6 to 8,4). Sports couples No. 6 and No. 9 received a total of 17,2 points. Sports pair number 7 received a total score of 16,8. The worst results of this criterion are the partner and partner of the sports pair No. 8 (the number of points of the average ratings is 8,3). The total score of the sports pair number 8 is 16,6.

Coefficient of variation (V%) showed that the group is homogeneous.

During the pedagogical research in the experimental group, the means of choreography were used in the training process in the form of performing modern dance movements (modern jazz, hip-hop, disco). The control group took part in pedagogical research on the traditional method of the training process of a sports couple with acrobatic rock'n'roll.

The results of the performance indicators of the components of the competitive program of a sports couple from acrobatic rock'n'roll after pedagogical research are presented in Table 3 and 4.

Analysis of the assessment of the level of technical skill of athletes in the performance of a competitive program by a sports couple after a pedagogical experiment in an experimental group (EG) showed that the highest average score of 9,7 points and 9,8 points was obtained by the male partner and female partner of sports pair No. 4 – criterion "Main move". The total score of the sports couples number 4 is 19,5. Best results of this criterion were shown by the partner and partner of sports pair No. 5 (number of points of average ratings from 9,6 and 9,7). The total score of sports couples No. 5 is 19,3. Average results of this criterion were shown by the male partner and female partner of sports pairs No. 1, No. 2, No. 3, No. 6 (the number of points in the average ratings is from 9,6 to 9,4). Total score of the sports couples number 6 is 19,2; sports couples No. 1 and No. 3 received a total score of 19,1; Total score of the sports pair number 2 is 18,9. The worst results of this criterion are the partner and partner of sports couples No. 7, No. 8, No. 9 and No. 10 (the number of points of average scores from 8,9 to 8,5). Sports couples received a total score: 17,7; 17,1; 17,3; 17,2.

Highest average score in the criterion "Dance figures" of competitive programs was given to a male partner and female partner of sports couples No. 5 and No. 6 – by 10,15 points. Sports couples No. 5 and No. 6 received a total score of 20,3 points. The best results of this criterion were shown by the male partner and female partner of sports pairs No. 1, No. 2, No. 3 and No. 4 (number of points of average ratings is from 10,1 to 10,05). Sports couple No. 3 received a total of 20,2 points; sports couples No. 1, No. 2 and No. 4 received a total score of 20,1. Average result of this criterion was shown by the male partner and female partner of sports pair No. 7 – 9,95 points. Total score of the sports couples number 7 is 19,9. The worst results of this criterion are the partner and

Table 3

Results of the performance of the competitive program by a sports couple (male partner, female partner) from acrobatic rock'n'roll after pedagogical research (EG, n=20)

Criteria for evaluating the competitive program, scores		Sports couple									
		1	2	3	4	5	6	7	8	9	10
A	Main move (male partner)	9,5	9,4	9,6	9,7	9,6	9,6	8,8	8,6	8,6	8,6
	Main move (female partner)	9,6	9,5	9,5	9,8	9,7	9,6	8,9	8,5	8,7	8,6
B	Dance figures (male partner)	10,05	10,05	10,1	10,05	10,15	10,15	9,95	9,6	9,65	9,65
	Dance figures (female partner)	10,05	10,05	10,1	10,05	10,15	10,15	9,95	9,6	9,65	9,65
C	Composition (male partner)	9,7	9,55	9,6	9,7	9,55	9,3	9,05	9,1	9,05	9,15
	Composition (female partner)	9,7	9,55	9,6	9,7	9,55	9,3	9,05	9,1	9,05	9,15
Overall rating ("A" + "B" + "C")		58,6	58,1	58,5	59,0	58,7	58,8	55,7	54,5	54,7	54,8
Ранг		4	6	5	1	3	2	7	10	9	8
Average arithmetic, \bar{X}		9,77	9,68	9,75	9,83	9,78	9,63	9,28	9,08	9,12	9,13
Mean square deviation, σ		0,23	0,29	0,27	0,17	0,29	0,45	0,53	0,47	0,45	0,47
Coefficient of variation, %		2,4	2,9	2,8	1,7	2,9	4,7	5,7	5,2	4,9	5,1

partner of sports couples No. 8, No. 9 and No. 10 (the number of points of average ratings from 9,65 to 9,6). Sports couples No. 9 and No. 10 received a total score of 19,3; sports pair number 8 received a total score 19,2.

Highest average score in the criterion "Composition" of competitive programs was given to the male partner and female partner of sports pairs No. 1 and No. 4 (the number of points of average ratings is 9,7). Sports couples No. 1 and No. 4 received a total score of 19,4. The best results of this criterion were shown by the male partner and female partner of sports couples No. 2 No. 3 and No. 5 (the number of points of average ratings from 9,6 to 9,55). Sports pair No. 3 received a total of 19,2 points; sports couples No. 2 and No. 5 received a total score of 19,1. The average result of this criterion was shown by the male partner and female partner of sports pair No. 6 (the number of points of average ratings is 9,3). The total score of the sports couples number 6 is 18,6. The worst results of this criterion are the male partner and female partner of sports couples No. 7, No. 8, No. 9 and No. 10 (the number of points of average ratings from 9,15 to 9,05). Sports pair number 10 received a total score of 18,3; sports pair number 8 received a total score of 18,2; sports couples No. 7 and No. 9 received a total of 18,1 points.

Coefficient of variation (V%) showed that the group is homogeneous.

Analysis of the assessment of the level of technical skill of athletes in the performance of a competitive program by a sports couple after a pedagogical experiment in a control group (CG) showed that the highest average score of 9,2 points and 9,3 points was obtained by the male partner and female partner of the sports pair No. 1 – criterion "Main move". Sports pair No. 1 received a total of 18,5 points. The best results of this criterion were shown by the male partner and female partner of sports pairs Nos. 2 and 3 (the number of scores of average scores from 9,2 to 9,1). Sports couples No. 2 and No. 3 received a total score of 18,3. Average results of this criterion were shown by the male partner and female partner of sports pairs No. 4, No. 5, No. 6, No. 7, No. 9 and No. 10 (score of average scores is from 8,9 to 8,5). Sports couples received a

total sum of points: No. 4 – 17,7; No. 5 – 17,5; No. 6 – 17,8; No. 7 – 17,6; No. 9 – 17,3 and No. 10 – 17,2. The worst results of this criterion are the male partner and female partner of the sports pair number 8 (number of points of the average ratings is 8,6 and 8,5). Sports pair number 8 received a total score 17,1.

The highest average score in the criterion "Dance figures" of competitive programs was given to a male partner and female partner of sports pair No. 7 – 9,2 points. Sports pair number 7 received a total score of 18,4. The best results of this criterion were shown by the partner and partner of sports pairs No. 3, No. 6 and No. 10 (the number of points of average ratings from 9,1 to 9,0). The total score of 18,2 was given to sports couples No. 3 and No. 6; sports pair No. 10 received a total score 18,0. Average results of this criterion were shown by the partner and partner of sports pairs No. 1, No. 4, No. 5, No. 8, No. 9 (score of average scores is from 8,8 to 8,9). Sports couples No. 4, No. 8, No. 9 received the total amount of balances 17,8: sports couples No. 1, No. 5 received a total score of 17,6. Worst results of this criterion are the male partner and female partner of sports pair number 2 (number of points of average ratings is 8,7). Total score of 17,4 was given to the sports pair No. 2.

The highest average score in the criterion "Composition" of the competitive programs was given to the male partner and female partner of sports pairs No. 1 and No. 4 (the number of points of average ratings is 9,1). The total score of 18,2 was given to sports couples No. 1 and No. 4.

The best results of this criterion were shown by the partner and partner of sports pairs No. 3, No. 2 No. 5 and No. 10 (number of points of average ratings from 9,0 to 8,9). Sports pair No. 3 received a total score of 18,0: sports couples No. 2, No. 5 and No. 10 received the total score 17,8. The average results of this criterion were shown by the male partner and female partner of sports couples No. 6, No. 7, No. 9 (the number of points of average ratings from 8,8 to 8,6). The total score of 17,6 was awarded to sports couples No. 6 and No. 9; sports pair No. 7 received a total score of 17,2.

Table 4

Results of the performance of the competitive program by a sports couple (male partner, female partner) from acrobatic rock'n'roll after pedagogical research (CG, n=20)

Criteria for evaluating the competitive program, scores	Sports couple									
	1	2	3	4	5	6	7	8	9	10
A Main move (male partner)	9,2	9,1	9,2	8,9	8,8	8,9	8,8	8,6	8,7	8,8
A Main move (female partner)	9,3	9,2	9,1	8,8	8,7	8,9	8,8	8,5	8,6	8,5
B Dance figures (male partner)	8,8	8,7	9,1	8,9	8,8	9,1	9,2	8,9	8,9	9
B Dance figures (female partner)	8,8	8,7	9,1	8,9	8,8	9,1	9,2	8,9	8,9	9
C Composition (male partner)	9,1	8,9	9	9,1	8,9	8,8	8,6	8,5	8,8	8,9
C Composition (female partner)	9,1	8,9	9	9,1	8,9	8,8	8,6	8,5	8,8	8,9
Overall rating ("A" + "B" + "C")		53,5	54,5	53,7	52,9	53,6	53,2	51,9	52,7	53,1
Ранг		5	1	3	8	4	6	10	9	7
Average arithmetic, \bar{X}		8,92	9,08	8,95	8,82	8,92	8,85	8,65	8,78	8,85
Mean square deviation, σ		0,20	0,08	0,12	0,08	0,15	0,28	0,20	0,12	0,19
Coefficient of variation, %		2,2	0,9	1,3	0,9	1,6	3,2	2,3	1,3	2,1

The worst results of this criterion are male partner and female partner of sports pair number 8 (the number of points of average ratings is 8,5). Sports pair number 8 received a total of 17,0 points.

The coefficient of variation (V%) showed that the group is homogeneous.

Absolute ratings and their ranking places provide an important material for the analysis of the prospects for further training of sports couples with acrobatic rock'n'roll.

The dynamics of changes in indicators of the criteria for evaluating the performance of a competitive sports pair program from acrobatic rock'n'roll before and after the pedagogical experiment in the experimental group showed the result for each criterion (Table 5).

The criteria for assessing the performance of the competitive program before and after the pedagogical experiment in the experimental group showed the following changes: the criterion "A" (Main move (male partner+female partner)) in the group increased by 10,5% in percentage terms; criterion "B" (Dance figures) in the group in percentage terms increased by 14,1%; criterion "C" (Composition) in the group in percentage terms increased by 13,2%.

All indicators of the criteria for evaluating the performance of the competition program before and after the pedagogical experiment in the experimental group have the reliability of the differences in the results ($p < 0,05$)

The dynamics of changes in the criteria for evaluating the performance of a competitive sports program from an acrobatic rock'n'roll before and after the pedagogical experiment in the control group showed the following results for each criterion (Table 6).

Parameters of the criteria for assessing the performance of the competition program before and after the pedagogical experiment in the control group showed the following changes: the criterion "A" (Main move (male partner+female partner)) in the group increased by 2,4% in percentage terms; criterion "B" (Dance figures) in the group in percentage terms increased by 2,2%; criterion "C" (Composition) in the group in percentage terms increased by 2,4%.

Indicators of the "B" criterion for evaluating the performance of the competitive program before and after the pedagogical experiment in the control group have the reliability of the differences in the results ($p < 0,05$). Indicators of the criteria "A" and "C" have unreliable differences in the results ($p > 0,05$).

Using the methods of mathematical statistics, we observe a tendency for the performance of the competitive program of a sports couple (male partner, female partner) to change from acrobatic rock'n'roll before and after the pedagogical experiment (Tables 7 and 8).

Based on the statistical indicators of the performance of the competition program during the pedagogical experiment, both the reliability of differences in the results ($p < 0,05$) and the unreliability of the differences in the results ($p > 0,05$) are shown in the experimental and control groups.

Table 5

Dynamics of changes in indicators of the criteria for evaluating the performance of a competitive sports couple program (male partner, female partner) from acrobatic rock'n'roll after a pedagogical experiment (EG, n=20) ($p < 0,05$)

Criteria for evaluating the competitive program, scores	\bar{X}		σ		m		t_p	t_{rp}	p
	before	after	before	after	before	after			
A Main move (male partner+female partner)	16,68	18,44	0,25	0,98	0,08	0,31	5,50	2,71	<0,05
B Dance figures (male partner+female partner)	17,43	19,88	0,33	0,44	0,01	0,13	18,79	2,71	<0,05
C Composition (male partner+female partner)	16,56	18,75	0,57	0,54	0,18	0,17	8,85	2,71	<0,05

Table 6
Dynamics of changes in indicators of the criteria for evaluating the performance of a competitive sports couple program (male partner, female partner) from acrobatic rock'n'roll after a pedagogical experiment (CG, n=20) (p<0,05)

Criteria for evaluating the competitive program, scores	\bar{X}		σ		m		t_p	t_{rp}	p
	before	after	before	after	before	after			
A Main move (male partner+female partner)	17,3	17,72	0,46	0,51	0,14	0,16	1,97	2,71	>0,05
B Dance figures (male partner+female partner)	17,49	17,88	0,25	0,32	0,08	0,1	3,04	2,71	<0,05

Table 7
Statistical indicators of the performance of the competitive program of a sports couple (male partner, female partner) from acrobatic rock'n'roll before pedagogical experiment (p<0,05)

Sport couple number	Experimental group (n=20)	Control group (n=20)	t	t_{gr}	p
	$\bar{X} \pm m$	$\bar{X} \pm m$			
1	9,32±0,06	8,82±0,05	6,40	2,71	<0,05
2	9,22±0,08	8,78±0,07	4,14	2,71	<0,05
3	9,05±0,05	8,85±0,01	3,92	2,71	<0,05
4	9,48±0,12	8,75±0,04	5,77	2,71	<0,05
5	9,38±0,12	8,65±0,02	6,00	2,71	<0,05
6	9,23±0,15	8,72±0,05	3,23	2,71	<0,05
7	8,57±0,11	8,63±0,08	0,44	2,71	>0,05
8	8,45±0,05	8,45±0,07	0,00	2,71	>0,05
9	8,52±0,04	8,58±0,04	1,06	2,71	>0,05
10	8,53±0,06	8,62±0,05	1,15	2,71	>0,05

Remark. Criteria for evaluating the performance of the competition program "A" + "B" + "C", where A – Main move; B – Dance figures; C – Composition.

The use of modern choreography tools in the experimental group gave an improvement in the average percentages by 12,8% of the deviation from the initial level of technical preparedness of athletes in the performance of competitive programs.

In the control group, a significantly worse result (2,3%) is shown, which confirms the effectiveness of modern choreography in the training process of sports pairs of the Juvenile category in the experimental group during the pedagogical experiment.

The difference in the mean values of the experimental and control groups of the pedagogical experiment is 10,5%.

During the pedagogical experiment, we discovered the original movements of modern choreography that were applied in the training process of the experimental group and their positive impact on the criteria for evaluating the competitive program "Main move", "Dance figures", "Composition".

The defining factors of the positive impact on the criterion "Main move" is the use of the disk style of the performance of the grand batman (which is identical in structure and dynamics to the basic movements of the acrobatic rock'n'roll) and the execution of the conditional passy with the maximum amplitude (raising the hip to the highest possible level).

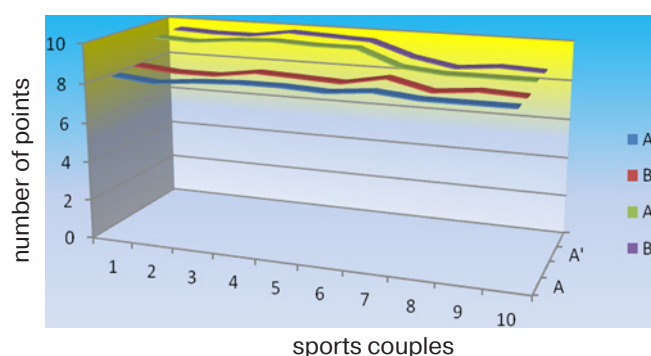


Fig. 1. Indicators for assessing the fulfillment of the criterion of the competitive program "Main move" in EG:

A – indicators of evaluation of partners' fulfillment of the criterion of the competitive program "Main move" at the beginning of the pedagogical experiment; B – indicators of the evaluation of the partners' performance of the criterion of the competitive program "Main move" at the beginning of the pedagogical experiment; A' – indicators of the partners' performance evaluation of the criterion of the competitive program "Basic Course" after the pedagogical experiment; B' – indicators of the evaluation of the partners' performance of the criterion of the competitive program "Main move" after the pedagogical experiment.

Table 8

Statistical indicators of the performance of the competitive program of a sports couple (male partner, female partner) from acrobatic rock'n'roll after pedagogical experiment ($p < 0,05$)

Sport couple number	Experimental group (n=20)	Control group (n=20)	t	t _{gr}	p
	$\bar{X} \pm m$				
1	9,77±0,07	9,05±0,07	7,27	2,71	<0,05
2	9,68±0,09	8,92±0,06	7,03	2,71	<0,05
3	9,75±0,09	9,08±0,03	7,06	2,71	<0,05
4	9,83±0,06	8,95±0,04	12,20	2,71	<0,05
5	9,78±0,09	8,82±0,03	10,12	2,71	<0,05
6	9,63±0,15	8,92±0,05	4,62	2,71	<0,05
7	9,28±0,17	8,85±0,09	2,24	2,71	>0,05
8	9,08±0,16	8,65±0,07	2,52	2,71	>0,05
9	9,12±0,15	8,78±0,04	2,19	2,71	>0,05
10	9,13±0,16	8,85±0,06	1,64	2,71	>0,05

Remark. Criteria for evaluating the performance of the competition program "A" + "B" + "C", where A – Main move; B – Dance figures; C – Composition.

The determining factors of the positive influence on the criterion "Dance figures" is the use of the variations in the levels of the positions of the athletes from the acrobatic rock'n'roll during the competitive program (parterre positions, variations in the entrance to the stalls, rides, jumping original movements).

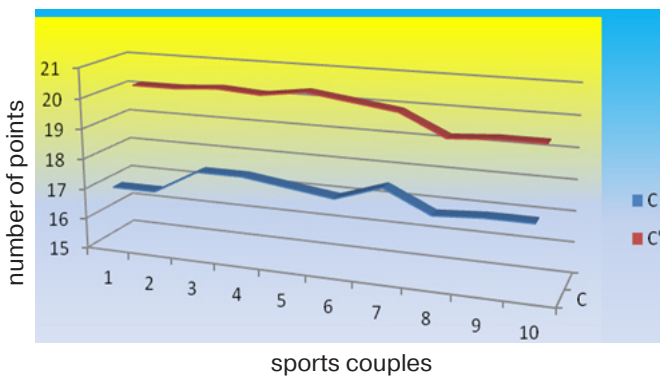


Fig. 2. Indicators for assessing the fulfillment of the criterion of the competitive program "Dance figures" in EG:

C – indicators for assessing the performance by sports couples of the criterion of the competitive program "Dance figures" before the beginning of the pedagogical experiment; C' – indicators of the performance of sports pairs by the criterion of the competitive program "Dance figures" after the pedagogical experiment.

Determinants of the positive influence on the "Composition" criterion are a variety of disc-type shots (run-kick, double kick, etc.), Use of the movements of modern dance discipline "hip-hop" (a variety of springboard jumps – Bounce species).

Conclusions

1. Analysis of the special scientific and methodological literature testifies to the insufficient level of research of the technical preparedness of the Juvenile category in acrobatic rock'n'roll at the stage of preliminary basic training.
2. Content of the training and training process aimed at improving the technical preparedness of the Juvenile category

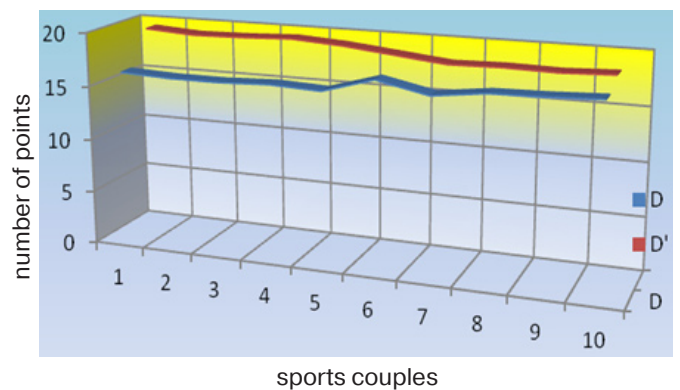


Fig. 3. Indicators for assessing the fulfillment of the criterion of the competitive program "Composition" in EG:

D – indicators for evaluating the performance by sports couples of the criterion of the competitive program "Composition" at the beginning of pedagogical research; D' – indicators of the performance of sports pairs by the criterion of the competitive program "Composition" after pedagogical research.

athletes in acrobatic rock'n'roll at the stage of preliminary basic training is developed.

3. Statistical indicators of the increase in the level of technical preparedness of the Juvenile category athletes in acrobatic rock'n'roll at the stage of preliminary basic training.

Improved in the experimental group, the average values of the percentage by 12,8% deviation from the initial level of technical training of athletes in the category "Juvenile" acrobatic rock'n'roll in the performance of competitive programs.

In the control group, a significantly worse result (2,3%) is shown, which confirms the effectiveness of modern choreography in the training process of sports pairs of the Juvenile category in the experimental group during the pedagogical experiment.

Prospects for further research will be aimed at determining the significance and the role of technical training for junior category athletes in acrobatic rock'n'roll.

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