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APPROACHING PSYCHOMOTRICITY IN RHYTHMIC GYMNASTICS TRAINING

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Abstract

Successful psychomotor education must take into account the entire complex of proprioceptive and exteroceptive sensations, the motor, kinaesthetic, balance, tactile, visual and internal factors that control movement initiation. Participants. The group consists of 16 rhythmic gymnasts aged 7-8 years, engaged in performance for 2-3 years, from School Sports Club No. 1 of Constanta. Methods: Psychomotor tests were grouped according to what they were seeking, as follows: Motor Adjustment – 4 tests; Perception of body schema – 3 tests; Perception of spatial and temporal information – 2 tests. Depending on the psychomotricity components, we applied 4 specific tests for each hand apparatus (rope, hoop, ball, clubs and ribbon). Discussions and conclusions: From a statistical point of view, the group presents differences between the two tests (initial testing and final testing) at $p < 0.001$ for all applied tests. Correlating the results obtained in the psychomotor final tests with those obtained in the specific final tests, we have noted that the ball tests correlate with 20 of the 56 recorded indices, the clubs tests are also correlated with 19 psychomotor parameters, followed by the 14-parameter rope, the 12-parameter hoop and the 6-parameter ribbon. Psychomotor preparation through specific means focused on developing coordination, body schema, laterality and spatial-temporal organization is used in training gymnasts, but repeatedly, so as to prevent boredom, which sets in very quickly in the early years of performance.

Keywords: Psychomotricity components, complex of proprio- and exteroceptive sensations, rhythmic gymnastics.

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1. Introduction

From 1974 until today, psychomotricity has been a research subject complemented by the knowledge of the intellect and the body, in connection with space, with apparatus, using relaxation methods, tranquillity, music, concentration, colours, breathing techniques, listening to sensations.

Successful education of psychomotricity must take into account the entire complex of proprioceptive and exteroceptive sensations, the motor, kinaesthetic, balance, tactile, visual and internal factors that control movement initiation (Aucouturier, Darrault, & Empinet, 1995). Experiencing motor sensations where the body is the subject of internal and external communication is a way of achieving a type of training that tends to individual progress. Knowing your own body through awareness of your own thoughts, feelings, sensations is equivalent to directing your own intelligence to the continual creation and expansion of your own ideas (Camerini & De Panfilis, 2004).

The dynamics that develops in this situation allows us to intervene for:

- putting athletes in situations of creating interrelations that allow the development of a large number of connections between neurons;
- eliminating factors that alter mental mechanisms;
- providing the possibility of concrete experimentation of the concepts of time and space in relation to others;
- creating working conditions that require the experimentation of different paths/ways to solve the themes distributed to individuals, so as to create a healthy competition.

Negrea and Mușat (2016) make a synthesis of the specialists' opinions about the concept of psychomotricity, which gives us an overview of the subject approached in this research.

Numerous studies (Eppler & Adolph, 1996; Savelsbergh, Van der Maas, & Van der Geert, 1999) have highlighted four significant stages of the child's age, which tell us how to distribute playful motor activity, how to intervene with basic skill training, special training, general and specific technical training, and with different percentages in training. These divisions are called "sensitive phases" by Montessori (2018) and are nothing else but limited developmental periods in which a more intense reaction to the training stimuli is perceived. After these periods, there are stereotypes that, in time, lead to the weakening of certain qualities, but which can be recovered later (Nicolleti, 1992).

Psychomotor education aims at educating the child in relation to the environment and the adult (Shingjergji, 2013).

Psychomotricity check allows recording data with reference to:

- motor behaviour (general dynamic coordination, eye-hand coordination, balance);
- perceptual-motor behaviour (perception of one's own body, temporal perception, spatial organization, the response to the imposed rhythm);
- neuromotor behaviour.

The observation induced by this scheme and data collection allow for an analysis of the initial situation, which is necessary for the psychomotor balance. From here, specific and intermediate goals can be proposed to change for the better, improve attitudes and capabilities, correct mistakes, fill gaps, prevent misconduct, and problem learning can take shape. The set goals are directed by the coach in the individualisation and proposal of play activities, which are the means of psychomotor education.

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We can schematise a psychomotor intervention process as follows (Figure 01):

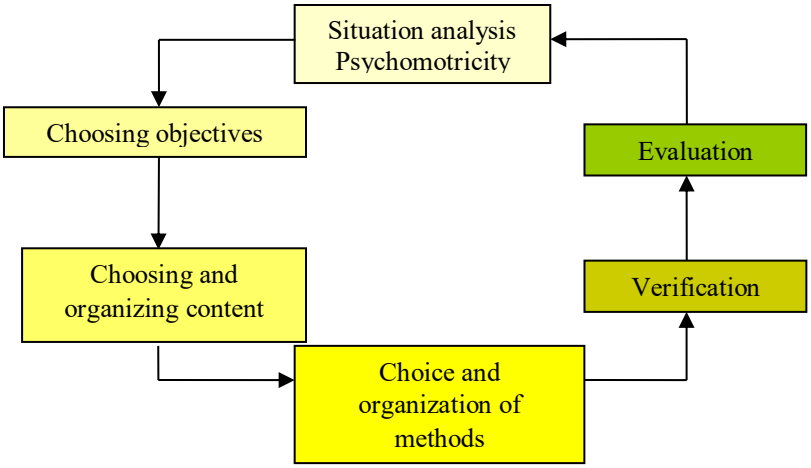

Figure 01. The process of psychomotor intervention

2. Problem Statement

Studies related to the introduction of some means into the training of junior gymnasts to stimulate the components of psychomotricity are relatively few.

According to Miletić, Katić and Males (2004), the rhythmic gymnastics training process intended for novices should be programmed, with pre-set objectives for the development of flexibility, explosive strength, speed and peripheral joint strength, and the decrease in adipose tissue.

Kioumourtzoglou, Derri, Mertzanidou and Tzetzis (1997) measured the motor performance of 60 elite rhythmic gymnasts to identify the important abilities for the achievement of excellence in this sport. Analysis showed that scores on measures of whole-body coordination, dynamic balance and static balance were higher for elite groups of athletes than for corresponding control groups.

Studying the effect of a rhythmic gymnastics program and a Greek traditional dances program on the dynamic balance ability of 27 girls, Mavrovouniotis, Proios, Argiriadou and Soidou (2013) showed that, after the 12-week intervention programs, dynamic balance increased.

Another study that took into account a psychomotricity component was conducted by Purenović-Ivanović, Popović, Stanković and Bubanj (2016) on 127 national and international level rhythmic gymnasts (age: 11.93±3.09 years) and confirmed the importance of coordination skills for success in rhythmic gymnastics, but only for younger age categories.

So, we see that there are concerns with discovering ways to stimulate psychomotor components in rhythmic gymnastics.

3. Research Questions

For the correct learning of the apparatus technique, it is necessary to pre-train the motor and psychomotor qualities, none of which developing independently from the other (Gantcheva & Loquet, 2012). Speed, strength, skill, mobility are of particular importance in achieving a correct apparatus technique, but also the psychomotor qualities, which become indispensable when talking about capturing

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and processing information and making adaptive responses resulting in an exercise executed fairly, expressively and spectacularly, of high technical and artistic value (Consentino & Di Piazza, 2002).

We believe that applying the rhythmic gymnastics specific operating systems to the training process will stimulate the natural development of psychomotricity components in junior level gymnasts.

4. Purpose of the Study

- Clarify the concept of psychomotricity and establish theoretical landmarks regarding the psychomotricity components.
- Stimulate natural development of the psychomotricity components by applying the rhythmic gymnastics specific operating systems to the training process.
- Identify and implement tests to verify the psychomotor level of junior gymnasts.
- Check the working hypotheses and analyse psychomotor balance.

4.1. Organizing exploratory approach

In order to verify the development level of psychomotricity components and the basic technical level of gymnasts, we opted for School Sports Club No. 1, Constanta, Rhythmic Gymnastics Section. The group was composed of 16 beginner gymnasts aged between 7-8 years, engaged in performance for 2-3 years, participating in a relatively small number of official competitions. For 21 months, the proposed motor systems were allocated 158 hours and 15 minutes of effective repetition to improve psychomotricity. 20 minutes were allocated during the preparatory workout, totalling 106 hours and 40 minutes, 15 minutes in the pre-competitive period, namely 50 hours and 45 minutes, and 5 minutes (so, 50 minutes) in the competition period, when the recommended exercises were repeated.

5. Research Methods

Massenz and Simonetta (2002) grouped psychomotor tests according to what they were seeking, thus:

A. Motor Adjustment

1. Ocular, podal and manual dominance test (speed and strength) – the evidence is purely informative, so it cannot be measured and analysed statistically (A1)

2. General dynamic coordination test (A2)

3. Segmental eye-hand coordination test (A3)

4. Reflex-adapting postural balance test (A4)

B. Body Schema Perception

1. Laterality test (B1)

2. Segmental motor dissociation test (B2)

3. Test of perception and control of the body in motion (B3)

C. Perception of Spatial and Temporal Information

1. Test of perception and decentralised space organization (C1)

2. Temporal perception test (C2) (pp. 69-77)

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Depending on the components of psychomotricity, we applied tests for each hand apparatus, as follows (Tables 01-05):

Table 01. Specific tests for rope

ROPE		
Body schema	Ro1	Catching the rope with the launching leg outside the visual range
Laterality	Ro2	3 successive *enjambées* (split leaps) into the rope
Coordination	Ro3	Side *grand-écart* (split) balance while dropping one end of the rope under the active leg
Speed of movement	Ro4	Quick steps into the rope – contretemps

Table 02. Specific tests for hoop

HOOP		
Body schema	Ho1	Stag leap with ring through the hoop
Laterality	Ho2	3 successive releases with the right hand and the left hand
Coordination	Ho3	Extension of the trunk support in the knee by turning the hoop around the horizontal axis with two hands
Speed of movement	Ho4	10 tuck jumps through the hoop held with two hands – contretemps

Table 03. Specific tests for ball

BALL		
Body schema	Ba1	Arabesque balance with the ball running on both hands and back
Laterality	Ba2	3 successive bounces with the foot (right, left, right)
Coordination	Ba3	Walkover forward with trunk bent, back lifting, ball rolled on the floor
Speed of movement	Ba4	Running the ball on the floor, 2 successive rolls, re-catching the ball on the palm – contretemps

Table 04. Specific tests for clubs

CLUBS		
Body schema	Cl1	*Fouetté* turn with small circles in the horizontal plane
Laterality	Cl2	Standing with arms extended laterally, figure eight in the horizontal plane simultaneously, asymmetrically
Coordination	Cl3	Free leg front, figure eight in the sagittal plane with the clubs held to the body
Speed of movement	Cl4	4 successive small throws with the favourite hand (2 clubs air swings) – contretemps

Table 05. Specific tests for ribbon

RIBBON		
Body schema	Ri1	2 successive *tours plongés* (dive tours) with big circle
Laterality	Ri2	3 successive Sissonne jumps with figure eight in the sagittal plane (right, left, right)
Coordination	Ri3	Stag leap with ring, with 3 big circles over the head
Speed of movement	Ri4	10 spirals in the air – contretemps

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Each item was executed three times, gymnasts being evaluated by two coaches who scored or not the difficulty, depending on the execution level. Exceptions are the elements for evaluating the movement speed, where the athletes are timed once, and the recordings are made in seconds.

The specifics of these exercises require general and segmental coordination, because apparatus handling must be synchronised with body movements. Different forms of apparatus, sizes and different material condition the handling technique (Jastrjembskaia & Titov, 1999).

6. Findings

As shown in Table 06, in the initial testing, the group participating in our research has the following dynamics:

- in the first psychomotor test, general coordination, the group average is X+Ds=1.5+0.51, scattering the individual averages. The coefficient of variation (Cv) reveals a low homogeneity of the group, athletes encountering difficulties in achieving this requirement, probably due to the jumping over the obstacle with legs together.

Table 06. Comparative analysis of data obtained in the psychomotor test – Initial testing

Initial testing (IT)		**X±Ds**	**Cv%**
A2		1.5±0.51	34.42
A3 Throw	R.	2.125±0.71	33.82
	L.	2.375±0.61	26.06
A3 Bounce	R.	2.187±0.75	34.28
	L.	2.25±0.77	34.42
A4	R.	2.75±0.57	20.99
	L.	2.812±0.83	29.65
B1	R.	0.875±0.34	39.03
	L.	0.187±0.40	214.99
B2	Walk	5.937±0.99	16.80
	Run	5.687±0.94	16.64
B3		0.75±0.44	59.62
C1		4.75±1.527	32.15
C2		0.625±1.70	273.25

- in the second test, eye-hand coordination, the average has the same value in both executions carried out with the right hand and the left hand. Dispersion of individual values is higher in tests performed on the right side, because two gymnasts prefer the left hand. The Cv characterises the group as a heterogeneous one; also in this test, but the floor bounce option, athletes recorded an average of X±Ds= 2.187±0.75 for execution with the right hand and X±Ds=2.25±0.77 for execution with the left hand. Dispersion of individual values is average, the Cv value showing a medium homogeneity of the group.

- in the balance test, we see a weak benefit at the initial testing, the calculated arithmetic mean value reaching only X±Ds=2.75±0.57 seconds for execution on the right side. The Cv and standard deviation reveal a medium homogeneity, and the spreading of group values tends to “high”. In the test performed on the left side, the average value is close to the one calculated for the right side, which reveals that coaches have worked with the same weight on both sides even before the start of our experiment.

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- as the previous tests have shown, our experimental group is predominantly composed of gymnasts that use the preferred side, namely the right side, which is also obvious from the calculation of values for the laterality test. However, the average value is small for execution on the right side, dispersion emphasising that standard deviation is large, and the homogeneity of the group is very low.

- average values for the segmental motor dissociation test show relatively good results for the executions of gymnasts on both sides. The Cv and standard deviation values characterise the homogeneity of the group as a medium one, with very low individual dispersion.

- to observe the level of perception of their moving body, we used test number 7. Its difficulty was that athletes had to reproduce the pace of their own walk by clapping their hands. Thus, the average was X±Ds=1.125±0.5, meaning a low level of the group, the homogeneity also being very low in this test.

- analysing spatial organization and perception, we have noted that the group is quite heterogeneous in this parameter due to the high individual variation.

- time perception has a very low average, individual values being very scattered, and hence the very low homogeneity of this group at the initial testing.

Table 07. Comparative analysis of data obtained in the psychomotor test – Intermediate testing

Intermediate testing (Int.T)		**X±Ds**	**Cv%**	**t IT-Int.T**	**P**
A2		2.062±0.57	27.81	4.39	<0.001
A3 Throw	R.	3.625±0.95	26.41	4.33	<0.001
	L.	3.5±0.89	25.55	4.39	<0.001
A3 Bounce	R.	3.437±0.81	23.67	3.56	<0.005
	L.	3.25±0.68	21.01	4.57	<0.001
A4	R.	4.187±0.65	15.64	8.06	<0.001
	L.	3.75±0.93	24.82	5.91	<0.001
B1	R.	1.5±0.51	34.42	4.86	<0.001
	L.	0.875±0.5	57.14	6.33	<0.001
B2	Walk	7.562±1.15	15.24	5.05	<0.001
	Run	7.437±1.15	15.50	4.57	<0.001
B3		1.187±0.54	45.80	9	<0.001
C1		5.625±1.62	28.94	7.13	<0.001
C2		1.25±2.23	178.88	5	<0.001

Intermediate testing indicates much better values than the initial one in all tests. Homogeneity of the group tends to medium, the scattering of individual values being lower. Yet, we see in Table 07 that the group is heterogeneous, gymnasts responding completely different to some tests.

We note the very good level of the group in the Segmental motor dissociation test (B2), executions on both sides showing X±Ds=7.562±1.15 seconds (walking) and X±Ds=7.437±1.15 seconds (running). Other tests have similar ratios to those calculated for the initial testing.

The progress of the group is significant at p <0.001, from the initial to the interim testing in all tests, except for the eye-hand coordination test performed with floor bounce with the right hand, where the statistical threshold is p <0.005.

At the final testing, the experimental group recorded values close to maximum possible points for each test, except for the postural adaptation test, where, within the 10 seconds during which athletes had to

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hold their *passé* position, the average was only X±Ds=6.625±1.20 for the right leg support and X±Ds=5.5±1.50 for the left foot.

Individual scattering in all tests is very small, a sign that most athletes have contributed to the average value with good executions. Regarding the Cv, its value is still high, indicating a heterogeneous group in the final testing.

Table 08. Comparative analysis of data obtained in the psychomotor test – Final testing

Final Testing (FT)		**X±Ds**	**Cv%**	**T IT-FT**	**p**	**T Int.T-FT**	**p**
A2		2.625±0.5	19.04	6.26	<0.001	3.57	<0.005
A3 Throw	R.	4.437±0.96	21.72	15.36	<0.001	9.48	<0.001
	L.	4.437±0.72	16.39	10.68	<0.001	5.58	<0.001
A3 Bounce	R.	4.25±0.93	21.90	9.66	<0.001	5.83	<0.001
	L.	4.312±0.94	21.94	10.68	<0.001	5.47	<0.001
A4	R.	6.625±1.20	18.17	10.65	<0.001	6.44	<0.001
	L.	5.5±1.50	27.37	8.6	<0.001	3.52	<0.005
B1	R.	2.375±0.80	33.94	5.19	<0.001	0.80	>0.05
	L.	2.062±0.77	37.42	7.34	<0.001	5	<0.001
B2	Walk	8.937±1.06	11.88	9.90	<0.001	4.21	<0.001
	Run	8.5±1.31	15.48	9.30	<0.001	4.56	<0.001
B3		2.312±0.60	26.03	12.19	<0.001	3.41	<0.005
C1		7.312±0.87	11.94	9.94	<0.001	4.86	<0.001
C2		4.375±1.70	39.03	8.47	<0.001	5.91	<0.001

Average difference from the intermediate to the final testing has a statistical significance at $p < 0.005$ (general coordination, postural adjustment with the right leg support, perception and control of the body in motion) and at $p < 0.001$ (all other tests). This group shows positive dynamics between the two tests due to the proper phasing of individual programs and the rigorous implementation of the proposed new operational systems throughout the experiment.

From the initial testing to the final testing, psychomotor components were assessed by appropriate and timely stimulation with exercises selected from the technical repertoire of rhythmic gymnastics and psychomotricity. In statistical terms, the group presents differences between the initial testing and the final testing, which are statistically significant at $p < 0.001$ in all applied tests (Table 08).

Initial psychomotor tests reveal weaknesses of the athletes regarding psychomotor components, which are so necessary to practice this sport at a high level, and the final testing shows the progress over the 2 years and half of training, during which the proposed new operational systems have been rigorously applied.

In order to emphasise the relationship between psychomotricity components and the technique of handling the apparatus and the body in rhythmic gymnastics, we correlated the results obtained in the psychomotor tests with those obtained in the specific tests focused on the components of psychomotricity.

We have thus gained another view of the close link between psychomotricity and rhythmic gymnastics, noting at the same time the value of the psychomotor potential of athletes from the initial to the final testing.

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In the initial testing, we see only few correlations for each apparatus, the level of both psychomotor and technical development being very low.

In the final testing, the ball tests correlate with 20 of the 56 recorded indices, being best represented in the correlation matrix (Table 09).

The clubs are correlated with 19 psychomotor parameters, followed by the rope (with 14 parameters), the hoop (with 12 parameters) and the ribbon (with 6 parameters).

The tests for determining motor adaptation correlated with the specific rope tests are best represented in the correlation matrix (Table 09), being close to those for the ball. This result confirms that, due to the shape and particularities of handling these pieces of apparatus, the gymnasts' psychomotor qualities are much used, coordination and postural adaptation being particularly important components.

The tests applied to athletes to evaluate their perception of the body schema correlated with 50% of specific tests with the ball and clubs, these apparatus being best represented in relation to laterality, segmental and perceptual dissociation tests and controlling the body in motion. By designing the specific tests in connection with the psychomotricity components, we have been able to point to the ball, highlighting what is most representative for this apparatus, namely that the gymnast must perform the physical and technical movements related to the technical elements, so that the apparatus becomes the natural extension of movements, of the body, this information from the external environment, in conjunction with one's own motor possibilities, being very useful.

For the clubs, the segmental motor dissociation is best correlated, thus pointing to the close relationship between the ways of action prescribed by the Code of points for this apparatus and the achievement of complex compositions based on the importance of the connection between apparatus, body and music.

Table 09. Correlation matrix for the final testing

FT	A2	A3				A4		B1		B2		B3	C1	C2
		Throw		Bounce										
		right	left	right	left	right	left	right	left	right	left			
Ro_1	-0.1	0.29	0.43	0.4	0.44	0.25	0.5	0.37	0.33	0.08	0.03	-0.1	0.16	-0.02
Ro_2	-0.43	-0.12	0.07	-0.04	-0.19	-0.02	-0.27	-0.5	0.31	0.3	0.03	0.04	0.26	-0.2
Ro_3	0.51	0.46	0.37	0.34	0.23	0.01	0.43	0.48	0.48	-0.25	0.15	0.43	0.36	0.57
Ro_4	-0.43	-0.19	0.34	-0.12	-0.49	-0.26	-0.32	-0.32	0.31	-0.08	-0.05	-0.2	-0.16	-0.35
Ho1	0.26	0.25	0.06	0.18	0.56	0.04	0.51	0.55	0.59	-0.13	0.05	0.36	0.46	0.62
Ho2	0.09	0.31	0.73	0.09	0.20	-0.25	0.04	0.12	0.13	0.04	0.09	0.29	0.52	0.36
Ho3	0.27	0.15	0.03	0.06	0.12	-0.34	0.07	0.34	0.41	-0.08	0.1	0.51	0.2	0.14
Ho4	-0.3	-0.13	-0.04	-0.36	0.18	-0.14	0.43	0.26	0.09	-0.68	-0.45	0	-0.15	0.21
Ba_1	0.27	0.46	0.42	0.18	0.38	0.11	0.29	0.65	0.56	-0.25	0.08	0.37	0.27	0.64
Ba_2	0.51	0.59	0.18	0.45	0.23	-0.02	0.06	0.53	0.7	0.07	0.26	0.71	0.52	0.36
Ba_3	0.41	0.41	0.45	0.26	0.33	0.03	0.26	0.74	0.69	-0.22	0.28	0.44	0.24	0.66
Ba_4	-0.3	-0.13	0.48	-0.36	0.18	-0.14	0.44	0.26	0.1	-0.69	-0.46	0	-0.15	0.2
Cl_1	0.51	0.4	0.24	0.36	0.65	0.29	0.38	0.57	0.71	0.16	0.12	0.48	0.58	0.4
Cl_2	0.17	0.28	0.63	0.18	0.14	0.17	0.09	0.3	0.47	0.45	0.13	0.45	0.38	0.48
Cl_3	0.42	0.57	0.16	0.35	0.45	0.13	0.25	0.6	0.56	0.2	0.2	0.62	0.56	0.49
Cl_4	0.09	0.03	0.14	0.22	0.22	0.5	0.02	0.07	0.11	0.36	0.31	-0.2	-0.15	-0.19
Ri1	0.38	0.07	0.37	0.06	0.21	0.34	0.29	0.27	0.25	-0.24	0.03	0.19	-0.02	0.48
Ri2	0.08	0.45	0.24	0.09	0.13	-0.14	0.25	0.45	0.36	0.04	-0.18	0.47	0.38	0.51
Ri3	0.36	-0.13	0.43	-0.17	0.30	-0.07	0.04	0.19	0.35	0.05	-0.06	0.24	0.26	0.33
Ri4	0.05	0.08	0.39	0.28	0.16	0.65	0.29	0.21	0.27	-0.26	0.23	-0.1	-0.36	-0.11

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The correlation of specific tests for each apparatus with the ones for determining the level of perception of the spatial-temporal information revealed several statistically significant correlations for the ball and clubs. Due to the fact that handling these apparatus is performed in various and complex ways, psychomotor components and especially those related to the perception of the surrounding space and time are very much demanded.

The action of the ball, due to its shape and weight, constantly requires receiving spatial information through kinaesthetic, tactile etc. sensations, which are necessary for achieving the rolls, re-catch outside the visual field.

In the same way, the action of the clubs implies a considerable development of coordination, as a component of psychomotricity. Asymmetric, simultaneous, sequential handling requires the athlete to have complex neuromuscular control, coordination qualities, sensations and specialised attitudes.

Both the positive and the negative correlations show the close connection between the technical execution of bodily elements, along with the apparatus elements, and the psychomotricity components.

The fact that we recorded more correlations with certain apparatus merely shows that some technical elements or apparatus technical elements have not been inspired, the specific tests in question requiring other qualities from athletes, other components of psychomotricity.

Also, the technical level of the athletes led to such results, the points accumulated in the specific tests by a few gymnasts being modest due to their poor performance in the tests performed during the experimental investigations. That is why we consider it necessary to have an individual approach to each gymnast, thus observing their initial level and the dynamics of the psychomotor parameters targeted in our research.

7. Conclusion

The integration of psychomotor exercises and games contributed to increase the general level of psychomotricity and the specific coordination qualities of gymnasts (Damian, 2002). Thus, the psychomotor potential allows athletes to gain access to great performance, but only if some very important factors are taken into account: motor skills, mental skills, family support, experience and, not least, the coach's experience and the ambition and conscientiousness of the athletes.

Psychomotor preparation through specific means focused on developing coordination, body schema, laterality and spatial-temporal organization is used in training gymnasts, but repeatedly, so as to prevent boredom, which sets in very quickly in the early years of performance.

The representation of body schema becomes tangible through this research, the main pawn in determining the training objectives. Starting from a good representation of the body schema, the gymnast will be aware of their body movements, plans and axes of movement, managing a good segmental placement, an exceptional perception of apparatus movement through the space.

We consider our action appropriate since we have performed the intermediate testing when we started to deal with each gymnast's skills, by implementing programs that take into account individual shortcomings, but especially favourable predispositions. They must be applied consistently and continuously in training and after a subsequent test, and also modified according to the results obtained. The work opens new directions of research on the scientific and methodical line in rhythmic gymnastics.

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