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STUDY ON THE CHARACTERISTICS OF THE SPORTS GROUP
IN PERFORMANCE RHYTHMIC GYMNASTICS

Mihaela Manos (a)*, Lavinia Popescu (b)

*Corresponding author

(a) National University of Physical Education and Sports, 140 Constantin Noica St., Bucharest, Romania

(b) National University of Physical Education and Sports, 140 Constantin Noica St., Bucharest, Romania

Abstract

This study brings to the attention of field specialists the importance of group theory in the practice of performance sport by rhythmic gymnastics teams. The topic addressed is part of a longitudinal experimental research conducted on the national group team and illustrates the optimal training concept. The instructional strategies identified, studied and assessed in this research focused on the major operational objectives of high-performance sports activity and circumscribed around three defining aspects of sporting success: the individual, the group and the organisation of training. Starting from the premise according to which building a homogeneous, cohesive sports group is a priority objective of the activity carried out by teachers-coaches, we aimed to establish the criteria regarding the formation, development and manifestation of the rhythmic gymnastics sports group and to identify interpersonal relationships within the team, in terms of cohesion factors. Such an approach will finally allow the implementation of efficient action-oriented and ameliorative methods in order to make up a homogeneous and cohesive group and achieve the proposed performance objectives. The technique used to measure the expression of group relationships was the sociometric one. The obtained results highlight the group cohesion and dynamics, as well as the existence of homogeneity imposed by both the specificity of the event and the training activity, which lasts long and is much more intense than sports competition.

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1. Introduction

The history of psycho-sociology has recorded, since the third decade of the last century, numerous theses on the criteria of formation, development and manifestation of social groups, considering as legitimate the normal parameters that influence the group work (Park & Burgess, 1921; Le Bon, 2004; Katz, 1953; Moreno, 1934; Chelcea, 1998, 2010; Iluț, 1997; Moscovici, 1998, 2006; Carron, Brawley, & Widmeyer, 1998; Zlate & Zlate, 1982; Golu, 1988, 1989, 2004).

The contemporary sports phenomenon increasingly highlights the importance of group theory in the practice of performance sports at the team level. We can talk today about a coherent system of ideas on the sports group psychology. Most research on the small sports group focuses on the system of preferential relationships, the team cohesion and dynamics (Carron, Bray, & Eys, 2002; Esfahani, Soflu, & Assadi, 2011), the leadership typology and task cohesion (Smith, Arthur, Hardy, Callow, & Williams, 2013) or on cohesion, intra-team communication and team member satisfaction and desire to remain (Onağ & Tepeci, 2014). Building a homogeneous, cohesive sports group is one of the priority objectives in the activity carried out by the teacher-coach, because, as stated by Carron et al. (2002), the connection between cohesion and performance is reciprocal, meaning that strong cohesion increases team performance, and team success increases group cohesion.

2. Problem Statement

Studying the sports group represents an important link in the knowledge process, because the athlete directly experiences social relationships, thus proving their level of integration into the group.

If we consider the national rhythmic gymnastics teams, whose preparation lasts about 11 months per year in training camp conditions, with the entire system of related privations, we will understand more easily how these athletes build progressively and naturally their own existential environment. Thus, it can be conceived as a socially constituted environment, as a specific socio-ecological system where athletes live and invest their efforts to achieve common and individual goals. For these reasons, we aimed at a systematic approach to the role played by the group in the context of performance sports training. From the very beginning, a first distinction arises, namely the one between the sports team in individual events and the sports team in group events. However, regardless of the approach to the issue, we note that, in both types of sports teams, there is collective work aimed at achieving sports performance, but which underpins the self-assertion dimensions.

2.1. Characteristics of the sports group in rhythmic gymnastics

If we approach the methodological differentiation between sports groups (Cratty, 1973) and adjust it to competitive rhythmic gymnastics events, the following typology is outlined (Table 01):

Table 01. Typology of rhythmic gymnastics teams

Rhythmic gymnastics team	
Individual event	Group event
The sports group is restrained and the criteria for participation in competitions impose a limit to the number of full and substitute athletes in both specific events.	
<i>Shared and relatively stable goals for all athletes in the group</i>	
Co-actional group: 3-4 girl athletes	Interactional group: 5-6 girl athletes
Each gymnast performs individually her competition programme, approaching 1-2-3-4 exercises according to the strategy used by the coach in the team composition. The result of each gymnast is cumulated to obtain the final ranking.	All gymnasts perform simultaneously during an exercise, which, in terms of technical-artistic composition and execution, must respect the specificity of group work. The role of each gymnast, including substitutes, must be clearly differentiated. The quality of relationships between team members largely determines performance.

2.2. Dynamics of the rhythmic gymnastics team

Each rhythmic gymnastics team represents an active and dynamic centre. It goes through several stages during its evolution, outlining its own history.

The inner dynamics of the group maintains the individual potential at a certain level and pace. The more rational the internal functioning, the better its results, and thus the effects of the group dynamics will lead to:

- forming a type of individual, but also collective personality through the implementation of new values, beliefs and behavioural patterns;
- optimising the level of sociable learning ability;
- solving situations due to the need for planning the activity;
- establishing shared goals and making decisions about how to act.

In rhythmic gymnastics, the “brilliant” period of a team is relatively short. This is directly related to the peak periods of each athlete and the length of their careers. With few exceptions, gymnasts participating in individual events give up sports activity around the age of 18-19 years. The situation differs in the group event, where an athlete’s career is longer by far, reaching the age of 21-24 years (for example, the group team gymnasts from Japan, Bulgaria, Spain and Romania, participants in the 1999 World Championship). This is largely due to the specificity of this competitive event, where the composition and execution of technical elements require athletes with superior motor background and rich competitive experience. Obviously, they will be selected, using criteria specific to the event, among the most valuable gymnasts who have participated in individual events.

We exemplify below the dynamics of the senior national group team (Figure 01) that has covered, during its evolution, almost all stages described in the specialised psychological literature:

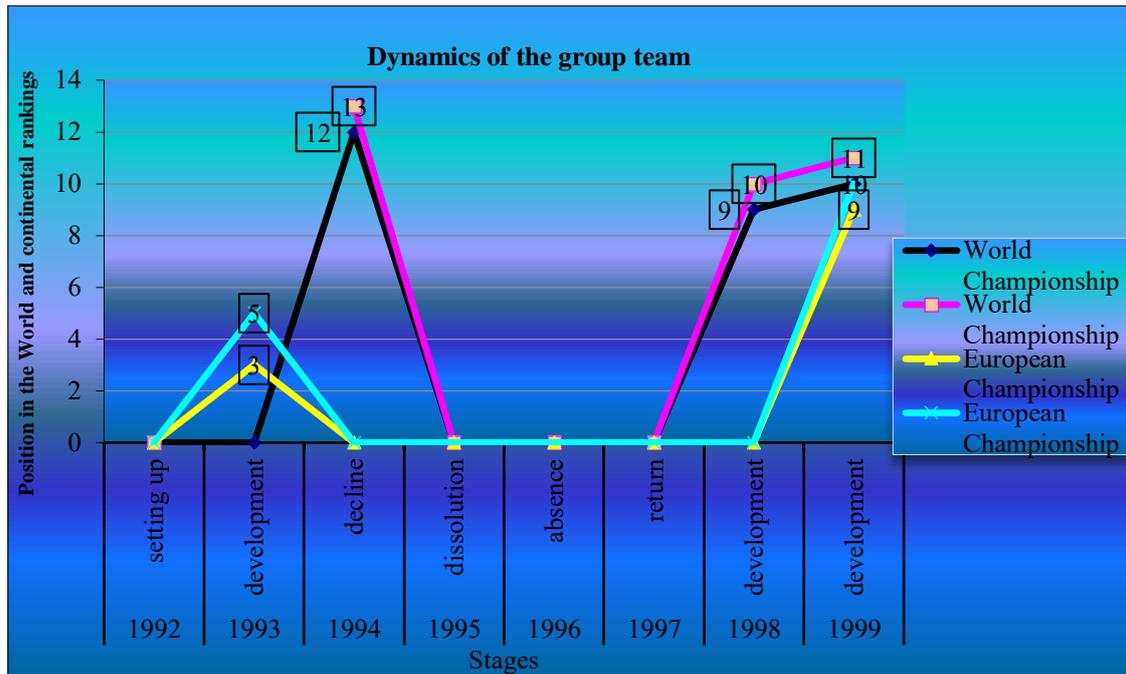


Figure 01. Dynamics of the senior national group team

2.3. Formation of the rhythmic gymnastics team

It takes long to build a gymnastics team that works as a whole and where each girl athlete can exploit her potential and achieve her aspirations (Table 02).

Table 02. Stages in the formation and functioning of the rhythmic gymnastics team

Stages	Description	Observations
Stage 1	Group formation with a specific purpose: selection of the team athletes	Group formation is non-spontaneous and begins once the selection action has ended (regardless of the level at which it is achieved: club team, national team). Each girl athlete presents with her own set of social experiences and aspirations related to self-assertion on the sports and social levels.
Stage 2	Group gymnasts initially have relatively diverse interests and desires, the obvious differences in talent deepening the heterogeneity of the group.	The tasks and orders of the coaches will be the first arguments in favour of cohesion, goal unity and fundamental objectives that aim at forming a functional group.
Stage 3	Regardless of the athlete's receptive structure, all of them, without exception, will be subject to the same common denominator set by the coach: observing the group discipline.	Once this first prerequisite has been fulfilled, favourable conditions for achieving the cohesive and homogeneous group structure are naturally created.
Stage 4	Once the working methodology has been understood, depending on the particularities of the sports group, the coach will promote the idea that the team will gradually go beyond the stages in which external control is exercised and imposed.	This stage involves, first of all, more time allocated to joint training (and activities with varied content), which must be profitably used to raise the athletes' awareness of the tasks assigned in the shared and individual action of achieving sports performance.
Stage 5	A psychological relationship, a certain fusion of athletes into a common whole.	The goal of the group becomes the goal of each athlete.

Rhythmic gymnastics teams, in terms of cohesion factors, have the following traits (Table 03):

Table 03. Characterisation of rhythmic gymnastics teams in terms of cohesion factors

The team in individual events	The team in group events
Same age or small age difference	Almost the same age
Relative homogeneity in terms of physical and technical-artistic training	High homogeneity required by the specificity of the event (somatically, level of physical and technical-artistic training)
Strong phenomena of emulative competition	Phenomena of cooperation and competitiveness between full and substitute athletes
Personal achievement motivation	Motivation to achieve the common goal Task orientation
Relative cohesion	Very good cohesion

3. Research Questions

To achieve the performance objectives proposed for the national group team, our study focused on identifying interpersonal relationships, the degree of homogeneity and cohesion of the group of athletes.

4. Purpose of the Study

Starting from the premise that the effects of the training process conducted in a favourable psychosocial climate are reflected in the nature of interpersonal relationships, we aim to check whether the development of positive interpersonal relationships within the sports group increases the team cohesion and performance.

5. Research Methods

In this study, the sociometric method was used. The group team members performed a sociometric test, an instrument measuring attractions and rejections between individuals within a group (Chelcea, 1975), by responding to a questionnaire where the items were grouped two by two (elections-rejections) and aimed at three particularly important situations that might exist between gymnasts: sports training activity; participation in competitions; spending leisure time.

Other questions were related to the gymnasts' preferences regarding the formation of competition teams and designation of the leader.

To comply with the methodological requirements, the first test was applied 4 months after establishing the national group team, and the second test, 3 weeks before the first competition. Three responses were allowed, in order of preferences, for questions 1-2, 3-4, 5-6, 7-8, 11-12, each election being rated +5, +3, +1 points; for rejections, the same rating was used, but with the minus sign (-). At question 9, referring to the team composition in order of preference, the rating was 6 points for the first position, 5 points for the second position etc. Question 10 was about the team leader.

The responses, by group of questions, were tabulated into sociometric matrices, and the results were summarised. In turn, these matrices and summary tables were used to make the sociograms and calculate the preferential status index (PSI) for each gymnast participating in the test.

6. Findings

6.1. Sociometric matrix

Table 04. Sociometric summary table – Test 1

Test 1																										
Code	Elections (+)										Rejections (-)										Total +		Total -		Total points	Ranking
	1-2		3-4		5-6		7-8		11-12		1-2		3-4		5-6		7-8		11-12		+	-				
	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0		
S.M.	3	7	2	6	3	7	2	4	2	8	4	6	2	6	3	9	2	2	2	6	12	32	13	29	-3	4
G.A.	5	10	5	19	5	20	5	17	6	20	0	0	1	6	1	5	0	0	2	2	26	86	2	13	73	1
G.M.	3	9	4	18	3	7	5	17	3	13	1	1	3	5	0	0	1	3	0	0	18	64	5	9	55	2
H.G.	3	3	3	7	2	4	1	1	4	10	3	13	4	12	4	11	5	18	3	11	13	25	19	65	-40	6
T.R.	1	3	1	3	0	0	3	4	1	3	6	16	5	11	4	15	4	10	5	10	6	13	24	62	-49	8
V.A.	3	9	2	6	5	9	4	10	4	12	2	6	3	9	2	2	2	6	2	6	18	46	11	29	+17	3
V.E.	2	7	2	8	4	15	2	8	3	9	4	8	3	3	2	8	5	17	4	15	10	45	18	51	-6	5
A.M.	1	3	1	3	3	5	0	0	1	3	6	16	5	10	4	16	4	8	5	10	6	14	24	60	-46	7
Legend		9 elections 0 points																								

Table 05. Sociometric summary table – Test 2

Test 2																										
Code	Elections (+)										Rejections (-)										Total +		Total -		Total	Ranking
	1-2		3-4		5-6		7-8		11-12		1-2		3-4		5-6		7-8		11-12		+	-				
	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0		
S.M.	3	7	2	6	3	7	2	4	2	8	4	6	2	6	3	9	2	2	2	6	12	32	13	29	-3	4
G.A.	5	10	5	19	5	20	5	17	6	20	0	0	1	6	1	5	0	0	2	2	26	86	2	13	73	1
G.M.	3	9	4	18	3	7	5	17	3	13	1	1	3	5	0	0	1	3	0	0	18	64	5	9	55	2
H.G.	3	3	3	7	2	4	1	1	4	10	3	13	4	12	4	11	5	18	3	11	13	25	19	65	-40	6
T.R.	1	3	1	3	0	0	3	4	1	3	6	16	5	11	4	15	4	10	5	10	6	13	24	62	-49	8
V.A.	3	9	2	6	5	9	4	10	4	12	2	6	3	9	2	2	2	6	2	6	18	46	11	29	+17	3
V.E.	2	7	2	8	4	15	2	8	3	9	4	8	3	3	2	8	5	17	4	15	10	45	18	51	-6	5
A.M.	1	3	1	3	3	5	0	0	1	3	6	16	5	10	4	16	4	8	5	10	6	14	24	60	-46	7
Legend		9 elections 0 points																								

Table 06. Sociometric test indicators

Subjects	Sociometric test indicators			
	Preferential status index (PSI)		Group cohesion index (GCI)	
	Test 1	Test 2	Test 1	Test 2
A	+ 0.14	+0.28	+0.14	+0.35
B	+3.42	+3.14		
C	+1.85	+3.14		
D	-0.85	+2.14		
E	-2.57	+0.57		
F	+1	+0.14		
G	+1.14	+0.71		

H	+2.57	- 0.13		
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6.2. Team sociograms

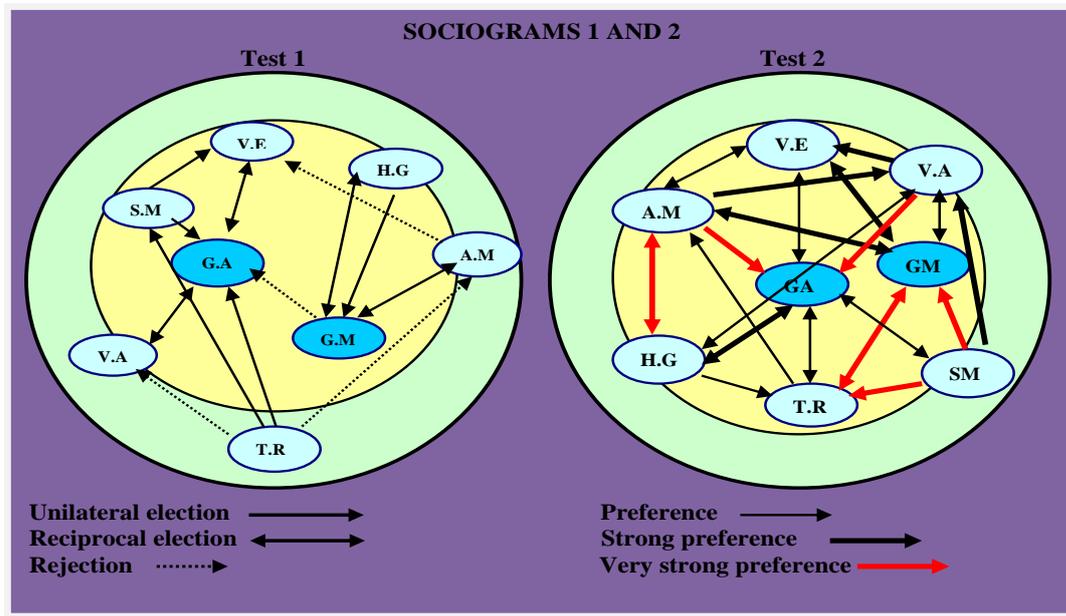


Figure 02. Team sociograms for the group event – Tests 1 and 2

6.3. Data interpretation (Test 1)

The sociogram (Figure 02), made after applying Test 1 to the group team, shows low group dynamics. The group is not cohesive, the team has no its own “style” and gradually loses enthusiasm and confidence in greater possibilities. Group membership “obliges” them to adopt attitudes characteristic to the activity and goal of the group.

To become cohesive, this group must have a conscious motivation, which is partially absent. There is a category of secondary reasons that encourages them to join the group and remain (the need for closeness), to the detriment of other conscious reasons that make the election more rational.

This group has a common interest, so it is neither about individual attraction, like the sympathy for one of the group members, nor about the need for affiliation, but about a profit that is also common.

The group is competitive, but with the specification that when repetitive disillusionments and failures occur, instead of strengthening, the group may tend to “dissolve”.

Group members are not at the same level and there are many elements that differentiate and rank them.

6.4. Data interpretation (Test 2)

In the second test (Figure 02), the group shows homogeneity and cohesion. Regarding the leader, two types can be noted: an imposed leader (G.A.), contested by the group members when technical and tactical decisions are made, and an informal leader (G.M.), elected on more subjective criteria.

Athletes have correctly expressed their elections and rejections. We do not believe in a lack of sincerity or mistrust in keeping the secret about the test results, but rather believe that the team has achieved very good results in the competitions marking that period. Success made them more tolerant.

7. Conclusion

The in-depth knowledge of the athletes, from a psychological point of view (personality traits, motivation, cohesion between the group members in terms of progress and differences), provides the opportunity to educate and improve these special sides, which can enhance elite performance in individual and group events.

Analysing the group with regard to the cohesion factors, the observations made during training and competitions and the conclusions drawn by the team psychologist on the basis of specific tests, we have found that the team has high cohesion resulting from both the pleasure to practice this sport in group and the need for achievement and performance.

Achieving group cohesion represented a complex social modelling process, which required the harmonisation of individual trends and intentions and their merging into an affective group atmosphere. The effort consisted in reaching an intentionality shared by the group members with regard to the main goals and tasks, which led to effectiveness, by also taking into account the need to harmonise the goal of the group with the individual one and the personal motivation of each athlete.

From the above, we can highlight the need for a careful approach to the system of relationships established within the group of gymnasts and also to the influence that the team and the psychosocial climate can have on the personality of the athletes, because the established relationships can be an important factor in the rhythmic gymnastics performance activity and the long-term participation in competitions.

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