ORGANIZING THE WOMEN'S FOOTBALL TEAM ACCORDING TO THE INTER-INDIVIDUAL PREFERENCES OF ITS MEMBERS

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Abstract

The study represents the research conducted within author graduation project for the specialisation of football coach.

The research involved the application of the J.L Moreno Sociometric Test (9.05.2016) on the members of the student women`s team of the University of Craiova (n=14, aged 19-24 years), regarding the sympathetic relationships (leisure time) and the axiological ones (performance). The latter reflects the inter-individual preferences in foreshadowing the base lot (10 players out of 14) and the starters (4+1 out of the remaining 10) in order to participate in the National University Futsal Women's Championship (27, 28 May 2017), initiated by me.

Also, the extended lot of 10 players (informally chosen by all the players) is the same as the one officially chosen by me, the only discussion being regarding the last place, choosing the no. 5 player (with the Preferential Status Index= -0, 31, no choice and the lowest number of rejections: 6), at the expense of no. 10 (with the Preferential Status Index= -0,54, 0 choices but 7 rejections), the final decision being in favour of the player chosen by the group.

The starting line-up (4+1), set as a result of the players` preferences, is the same as the other, with only very slight differences.

The success of the application of the sociometric test depends, on one hand, on the observation of the existing relationships, and, on the other hand, on the sociometric reorganisation of the researched collective according to the informal structure revealed by the test.

***Key words**: cohesion , sympathetic, axiological, collective sociogram, sociometric matrix*

Introduction

The group is "an ensemble of people with common characteristics, purposes and interactions, participating in the same social states and processes, and having the consciousness of a group membership". [1]

In the field of sport, interaction has multiple forms, meaning that sportsmen, sportswomen, coaches, doctors, specialists, spectators, etc. establish interactions with the environment, the components of which they are.

The sportsman`s behaviour, for example, takes place in a situational field in which the objective of reflection is the opponent, the teammate, the coach or the many other people in the field. They can become interlocutors and partners. Each of them, sportsman or interlocutor, changes the statutes by becoming a source of stimuli or receptors, through behaviours that influence all the characters included in the activities which are specific to the sport. [2]

Also, each group has a certain structure and dynamics, presents a certain affective cohesion, common goals, relative homogeneity, autonomy and stability.

Within the group, each sportsman has a certain status, a certain real position, a position of valorisation (high status) or of devalorisation (low status). [3]

The small group should be understood as a system with a hierarchical internal structure that involves the interaction of the components, mechanisms of regulation and self-regulation, of integrity. Within the group, the individual is a "social atom," with a character of a subject, because he chooses or rejects, and of an object because he is elected, rejected, or stays indifferent to others. [4]

The cohesion between the members of a sports team results from participating together in trainings and matches, for longer periods, during which they acquire large amounts of reciprocal information, all determining how the teammates feel about each other. It is the interaction that underlies the depth of interpersonal relationships in performing groups such as sports ones, in particular.

Material and methods

The subjects involved in the research were the female students of the University of Craiova team, some of them being trained since 2012 (at the moment being enrolled in the 2nd year of the Master`s programme), when it was started the "Victorina Simion Cup" (female futsal). But, in 2016 its been decided that this competition should have continuity at a national student level.

Therefore, it’s been developed a project, which was supported by the University of Craiova, by the City Hall of Craiova and the Romanian Football Federation. The project also continued in 2017 when, after being presented before the Federation of School and University Sports, it was decided that the subject of female student futsal be officially included in the student competition calendar.

Every year, new students from the 1st year of study have been selected to be a part of the team due to the departure of students from the graduating years.

The methods of research were those which are usually applied in the case of research, among which we mention: study of specialized literature, observation, conversation, investigation.

The sociometric method (sociometric investigation) is based on the sociometric test that determines the location of an individual in the field of personal relationships or in the overall psychological structure of the group:

Stages in sociometric research:

A - The sociometric investigation is carried out mainly by using a sociometric test that takes the form of a questionnaire, which is recommended to be applied to all the members at once and in which the formulation of the questions starts from the following objectives: the determination of the sympathetic, axiological relations, of the interpersonal perception, affective expansion, etc.

B – Analysis of the results of the sociometric test and of the sociometric matrix (in the form of a double entry table – as an example, Figure no. 2).

C - Synthetic representation of data using sociometric indices, and individual and collective sociograms (Figure 1).

P. Golu, starting from the point of view of G. Bastin, considers the following 10 indices to be the most important: $\overline{p}$ = number of received choices; $\overline{n}$ = number of received rejections; p = number of issued choices; n = number of issued rejections; $\overline{\overline{p}}$ = number of mutual choices; $\overline{\overline{n}}$ = number of mutual rejections; $\overset{\circ}{p}$ = number of individuals the subject believes to be chosen by; $\overset{\circ}{n}$ = number of individuals the subject believes to be rejected by; $\hat{p}$ = number of individuals which think they have been chosen by the subject; $\hat{n}$ = number of individuals which think they have been rejected by the subject. [5]

Only the following indices have been calculated in this paper:

1. *Social acceptance index* - is obtained based on the calculation of the total number of choices received by each individual for each criteria and the sum of these partial totals.

2. *Sociometric Status Index* $$\text{S.S.I. (A)} = \frac{number_of_people_who_have_chosen_A}{N-1}$$

3. *Group Cohesion Index* $$\text{C.c.} = \frac{number_of_pairs_of_choices}{\frac{N(N-1)}{2}}$$

4. *Preferential Status Index* $$\text{P.S.I. (A)} = \frac{number_of_choices_and_rejectons}{N-1}_of_A$$

”Synthesizing, the sociometric test has the following definition:

a) the purpose and reason of the application of the test;

b) gaining the confidence of the sportsmen and ensuring the confidentiality of the answers;

c) specifying the answers of preference, indifference or rejection.” [6]

Therefore, in this research we have applied the Jacob Levy Moreno sociometric test one week before the participation at the National University Futsal Women's Championship – 1st (Pilot) Edition that took place in Craiova, in order to find out the players` suggestions and to take them into account when putting together the base lot (10 players out of 14) and the starting line-up (4+1 of 10) in addition to the lot that I had thought about.

The research was conducted at the Faculty of Physical Education and Sports, the investigated sample being formed out of the members of the student women`s team of the University of Craiova, with a lot of 14 students, aged 19-24 years.

Research hypothesis

1. We consider that, in putting together a sports team, we should also take into account the subjective aspects (psychical processes - affectivity, motivation and will) that determine the competitive conduct, not just the objective aspects that only coaches determine.

2. the sociometric methods, in this case the J. L. Moreno sociometric test, represent useful tools in finding the team formula capable of delivering a superior efficiency based on cohesion as a result of the mutual preferences in conducting

the activity. The test can easily be adapted and understood by the subjects.
The members of the team can be found in Table no. 1. to each student being assigned a number, randomly ordered by years of study (in order not to influence the answers). They are written under the same form in the sociometric matrix. (Figure no. 1).

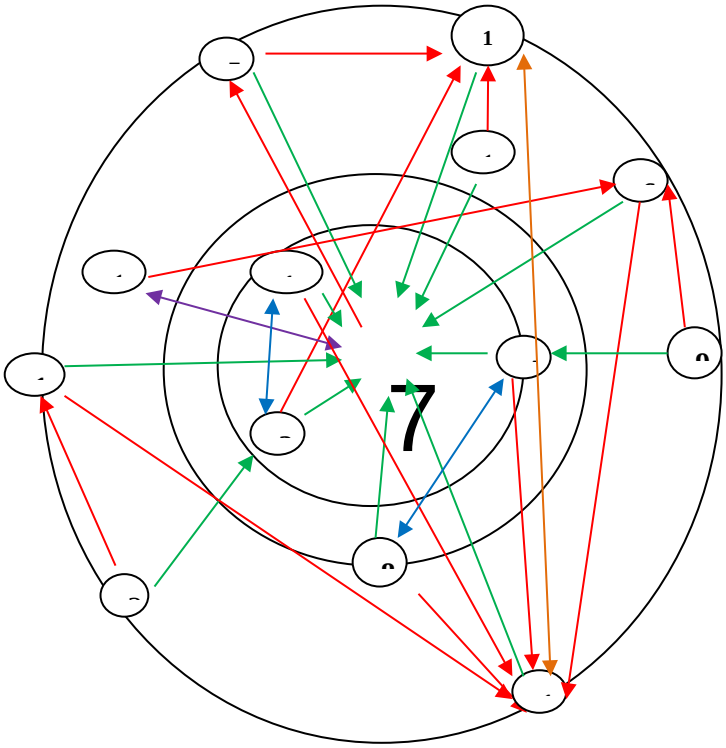
Last and first name	Number	Faculty / Year
B. M. A.	1	FEFS / I EFS
B. A. A.M.	2	FEFS / I EFS
N.D. A.	3	FEFS / I EFS
R. R.	4	FEFS / I EFS
R.C. E.	5	FEFS / I K
A. A.N.	6	PIPP / II
D. N.	7	FEFS / II EFS
R. A.	8	FEFS / II EFS
T. A.	9	FEFS / II EFS
U. N. A.	10	FEFS / III K
U. A.	11	FEFS / III K
O. D.	12	FEFS / M - I
P. R.	13	FEFS / M - I
M. D. C.	14	FEFS / M - II

Table no. 1. – Structure of the student women`s team of the University of Craiova

Results

The questions from the applied test included both **axiological relationships**, case in which the questions were related to the activities carried out in order to obtain a **performance**, and **the sympathetic relationships**, case in which the questions were related to carrying out joint activities, during **leisure time**.
For the interpretation of the answers, two collective sociograms have been put together, only the axiological collective sociogram (Figure 1) being presented in this paper presenting, and two sociometric matrices of the axiological / performance relationships (Figure no. 2) and of the sympathetic / leisure time relationships (Figure no. 3).

Figure no. 1 - Collective sociogram for axiological relationships (obtaining performance)



Legend: ↔ Mutual choices from the first option (pairs); ↔ Mutual choices from the second option (pairs)
Issued choice; Issued rejection; Mutual rejection.

In Figure no. 2 we have presented the sociometric matrix based on the preferences or rejections of each individual regarding her teammates in terms of axiological relationships. Horizontally, there are the choices and rejections issued by the subject, and vertically, there are the choices and rejections received by the subject.
The matrix was put together taking into account the first choice, it being considered the maximum for conducting the sociogram, and the next four choices for interpretation and being able to prefigure the starting line-up.

/	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	/		+	+		-	+	+			-	+		
2	-	/	+	+			+			-	-	+	+	
3	-	+	/	+		-	+			-	-	+		+
4	-		+	/			+	+	-	-	-	+		+
5	-		+	+	/	-	+	+	-		-	+		
6	-		+	+		/	+	+	-					+
7			+	+	-	-	/	+		-	-	+	+	
8	-		+	+			+	/	-		-	+		+
9	-		+	+	-	-	+	+	/		-	+		
10	-		+		-	+	+	-	-	/		+	+	
11	-	-	+	-	-	+	+				/	+	+	
12	-	+	+	+			+	+	-	-	-	/		
13				+		-	+	+		-	-	+	/	+
14	-		+	+			+	+	-	-	-	+		/

Figure no. 2. Sociometric matrix of axiological relationships
Legend: + = issued and received choices; - = issued and received rejections.

Subject no.	Social Acceptance Index	S.S.I.	P.S.I.	Cohesion coefficient
1	0	0	- 0.85	0.011 (o pair – from the first choice) 0.033 (3 pairs – from the second choice)
2	2	0.15	0.08	
3	12	0.92	0.92	
4	11	0.85	0.77	
5	0	0	- 0.31	
6	2	0.15	- 0.31	
7	13	1	1	
8	9	0.69	0.62	
9	0	0	- 0.54	
10	0	0	- 0.54	
11	0	0	- 0.85	
12	12	0.92	0.92	
13	4	0.31	0.31	
14	5	0.38	0.38	

Table no. 2. - Values of the indexes calculated for the questions regarding the axiological/performance relationships

/	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	/		+			-								
2		/	+											
3		+	/											
4		+		/										
5			+		/				-					
6						/							+	
7							/	-	+					
8								/		-		+		
9				+					/					
10				-						/	+			
11				-						+	/			

12									-			/		+
13									-			+	/	
14												+		/

Figure no. 3. Sociometric matrix of sympathetic relationships

Subject no.	Social Acceptance Index	S.S.I.	P.S.I.	Cohesion coefficient
1	0	0	0	0.033
2	2	0.15	0.15	
3	3	0.23	0.23	
4	1	0.08	- 0.08	
5	0	0	0	
6	0	0	- 0.08	
7	0	0	0	
8	0	0	- 0.15	
9	1	0.07	- 0.08	
10	1	0.07	0	
11	1	0.07	0.08	
12	3	0.23	0.23	
13	1	0.08	0.08	
14	1	0.08	0.08	

Table no. 3. – Values of the indexes calculated for the questions regarding the sympathetic/leisure time relationships

Discussions

By quantitatively interpreting the preferential structures of the sociogram in Figure no. 1. it denotes the following qualitative state of the socio-emotional atmosphere within the group, in which the chains of mutual attraction (12) and the reciprocity pairs (3) predominate in favour of the rejection chains (11) and of a single reciprocal rejection pair:

- The core of the lot is made out of players 7, 3, 12 and 4, players that are also found in the base lot profiled by the preferences. The most popular player is number 7 (the informal leader chosen by the group being the same as the formal leader chosen by me/the coach).
- There are no triangle, square, circle attractions, which denotes that the group is not subdivided; there are no subgroups formed, so it is homogeneous in terms of axiological relationships.
- With only a single mutual rejection, one cannot speak of a socio-negative or stressful atmosphere; on the contrary, the rejection can be random and only for the moment, the atmosphere in the group being a socio-emotional one, confirmed by the greater number of mutual attractions (3 pairs).

No preferential status with a value of 0 was registered, which indicates that, in the investigated group, there are no players that are treated indifferently or isolated in some way at the periphery of the affective-sympathetic relations. (Table no. 2)

The value of the cohesion coefficient is maximal when it is = 1. when the magnitude of the attraction covers the entire surface of the psychological interaction. In the case of the research carried out, this coefficient is = 0.033, but it is not a negative one (-1), which shows that there is cohesion within the group through the bilateral relationships between the members of the group. And, if we take into account only one pair resulted from the first option, which is considered the maximum one, the cohesion coefficient would be of 0.011, which carries roughly the same interpretations. (Table no. 2)

The team that was prefigured as a result of the sportswomen` preferences is the same one that I had thought of, with only small differences regarding the hierarchy within the group of the 5 members of the starting line-up (the first 5 in the Table no. 4), the competition being under the structure 4+1 (feminine futsal) with small changes of the starting line-up , which I would perform only in case of injuries.

Running no.	Last and first name	Number	No. of choices
1	D. N.	7	13
2	O.D.	12	12
3	N. D.	3	12
4	R. R.	4	11
5	R. A.	8	9
6	M. D.	14	5
7	P. R.	13	4
8	A. A.	6	2
9	B.A. A.	2	2
10	R. C.	5	0

Table no. 4. – Lot of 10 sportswomen (starting line-up) as a result of the interpretations

The enlarged 10-player lot (informally chosen by all the sportswomen – Table no. 4) is also the same with the one that I had formally chosen, the only discussion being regarding the last place, choosing the number 5 player (with P.S.I. = -0. 31, no choice and the lowest number of rejections: 6), against the number 10 player (with P.S.I. = -0.54, 0 choice, but with 7 rejections according to Table no. 2). The final choice being in favour of the player preferred by the group.

Interpreting the answers to the questions which were related to the activities carried out in order to obtain a performance, which reflect the axiological relationships, a positive, toning socio-emotional atmosphere has emerged, as well as a high degree of understanding between the members of the group, with beneficial effects also on the performance of the sports activity. This is reinforced by the achievement of the team, namely winning the 1st place in the National University Futsal Women's Championship – 1st (Pilot) Edition, as well as the fact that the team, for the most part, has a continuity in its training of 5 years, year after year.

Interpreting the sociomatric matrix of the sympathetic relationships (Figure no. 3), based on the answers regarding the preferences for leisure time, we found the following :

▪ The most popular sportswomen chosen by the group are number 12 and 3, which have the highest Social Acceptance Index (3) and P.S.I. = 0.23, S.S.I.=0.23, also the highest according to Table no. 4. The number 12 sportswoman has been in the group for the last 4 years, and the number 3 sportswomen has just entered the group. Because in the group there are both older and newer players, we consider the rise of two leaders as normal, just in the leisure time, the new players integrating later better in the group, the rest of the interpretations confirming that there are no subdivions/subgroups.

▪ In the collective sociogram from the Figure no. 1 (the axiological one, in which the performance is targeted), the number 7 player was considered to be the most preferred, being the informally chosen leader, with P.S.I.= 1 and having the Social Acceptance Index = 13 (Table no. 2). Regarding the sympathetic relationships, the same sportswoman has a P.S.I.= 0 and the Social Acceptance Index is also 0 (Table no. 3). Therefore, we can state that she was appreciated according to her fair value, for obtaining the achievements, but, regarding the leisure time, she was not preferred by the members of the team. In 2016, being a player in the Women's Football Super League and because her team is from Iași, she responded only periodically to the invitations for competition preparation from the faculty where she is a student.

▪ The sympathetic relationships for spending leisure time have set up 3 pairs of attractions, compared to one pair in the case of the axiological relationships, which shows a better group cohesion (0.011) during leisure time and a higher objectivity regarding the choices made for obtaining performance. (Table no. 3).

Interpreting the answers regarding the sympathetic relationships, we can say that, outside the team, the members of the group are even more united, spending their leisure time together, even though for obtaining performance they prefer other sportswomen. Therefore, contrary to those theoretically stated by the majority of the researchers, they have not been practically proven in this research. The group cohesion is even higher in spending leisure time with major influences in the axiological relationships for obtaining performance.

Personal believe is that a modality to develop ties between the members of the lot, is trying "inviting" them to different places and circumstances in order to spend together their leisure time, getting to know each other and favouring the closeness between one another.

Conclusions

1. The advantage of this test procedure is that it allows us not only to identify the preferred people but also to find out, quantitatively speaking, the level of interpersonal cooperation (monomodal, monodyadic, monotryadic, etc.), the most preferred by the group in one situation or another. This can help optimize the interaction between preferential relationships and functional (work) relationships within the group, in the sense of reciprocal adjustments.
2. The success of applying the sociometric test depends, on one hand, on capturing the existing relationships (cohesion between the team members) and on the other hand, on the sociometric reorganization of the investigated group according to the informal structure revealed by the test.
3. The interpersonal relationships and small groups are true evolutionary systems, so the sociometric test should be applied periodically, it being easily applied.

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