- When choosing the drills one must take into account their degree of applicability.
- They must be specific for the area the player acts in.

CONCLUSIONS:

- If you do not enter the penalty area you cannot score.
- The classical forwards are back in the game, the last but one defender, not with a fake no. 9.
- The role of the classical forward in compact defenses is to head the ball from the crosses came from the lateral side
- The forward must keep the ball until the players in the second line arrive.
- Train the still phases.
- Train the 1x1 game, on both the offensive and defensive phase.
- Our duty is to help players take the best decisions.
- To help players be better throughout the game or in certain situations of the game.
- The coach is the key to success.

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STUDY ON THE INFLUENCE OF STRETCHING EXERCISES IN INCREASING JOINT MOBILITY AND MUSCLE ELASTICITY TO 14 YEAR-OLD SOCCER PLAYERS

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Abstract

Mobility or flexibility is considered by many specialists the fifth motor quality (Cârstea G.,1993; Dragnea A., 2002). It reaches its maximum value around the age of 15-16, even later[1]. Frey, quoted by C. Bota (2000)[2] considers that „flexibility includes joint mobility and the ability to stretch or muscle elasticity", while S. Macovei (1999)[3] defines flexibility as: „the ability to mobilize joints by the intervention of external forces. The author mentions the following among the components of flexibility: muscular and ligamentous flexibility, neuromotor flexibility, joint flexibility.The purpose of this study is to assess the level of physical development, but also the level of joint mobility and muscle elasticity of 14 year-old soccer players, based on measurements of body parts and segments of athlete teenagers from „Dunărea" Galaţi Football Club.To determine the morphological capacities of the 14 year-old soccer players from „Dunărea" Galaţi Football Club,

*10 body measurements were performed (height, handspan, weight, biacromial diameter, bitrohanterian diameter, thoracic diameter, chest perimeter, upper limb perimeter, lower limb perimeter, abdominal perimeter), and to determine the degree of flexibility/mobility, 6 measurements were used (coxofemoral mobility -front view, spinal mobility – lateral view, spinal mobility – back view, combined mobility of the spine and hip joints, the degree of keeping feet apart and Apley's test).**Results***

The results of the performed measurements underlined the fact that the 14 year-old soccer players are optimally developed from the morphological point of view. The recorded values were higher than the average values of children of the same age not preactising sports. – Drăgan I. and collaborators (1989).As for the degree of mobility of soccer players, a low level of development of this motor skill was noticed, the recorded values emphasizing the need for an appropriate planning to improve flexibility. The data from the individual measurements were statistically processed on the computer with Microsoft Excel, according to the measured indicator.
Keywords: *soccer players, morphological development, flexibility, mobility, stretching*

INTRODUCTION

Known as the most popular and most widespread game in the world, soccer counts over 25 millions registered players, of all ages. Morphologically speaking, players should have medium height, an appropriate weight for their height and skeletal structure, but mostly increased muscle mass and reduced adipose tissue. The lower body of the athletes must be well-developed, with flexible and mobile joint, muscle and tendon structures to perform innumerable maneuvers of great finesse, precision and vigour to resist forced asymmetric movements, but mainly violent shocks during the game. (Drăgan I. et all, 1989).

Puberty (10-14 of age) is characterized by numerous functional and morphological changes, fundamental for the transition from childhood to the adult age. Among these changes we mention: an increase of growth and physical development, disproportionate growth of upper and lower limbs, development of skeletal muscle by stretching muscle fiber, improvement of the activity of major body functions (the cardiovascular system, the respiratory system), development of functional plasticity of the higher nervous activity etc.

Due to the development of the body on several levels, especially to an increase in the plasticity of the neural cortex and in the mobility of the nervous processes, there is a higher possibility to improve all motor qualities, particularly speed, skilfullness and flexibility.

Assuming that flexibility is a complex motor quality, whose expression (joint mobility and muscle elasticity) determines an increase in the individuals' ability to move and a rapid adaptation to the constantly changing environment they work in, **the hypothesis** of this study emerges. It is materialized starting from the idea that the systematic use of stretching exercises in 14 year-old soccer players' coaching may guarantee an important increase of the flexibility level, by the improvement of muscle elasticity and joint mobility and of athletic performance in competitions. In this way it contributes to the prevention of postural deficiencies (deficient attitudes).

Stretching may be practiced anywhere and at anytime as there is no need for special equipment. It can be easily learned, and it has visible results after only a few lessons.

AIMS

To measure, record and analyze the parameters of physical development in 14 year-old soccer players from „Dunărea" Galaţi Football Club.

MATERIALS AND mETHODS

a. Research protocol

The research took place in „Dunărea" Galaţi Football Club, during 3.03.2014-3.06.2014 (3 months), in the gym and on the soccer field of the football club.

b. Subjects

The sample group included 11 athletes, aged 14, who have been playing soccer since they were 4-5 .

c. Assessed parameters:

Morphological Indicators:

- height **(Î)** – measured by a stadiometer, between the vertex and the support surface ;
- span **(A)** – maximum arm opening from middle fingertips;
- weight **(G)** –the nutritional status of the human body is assessed and it is performed by the use of a scale;
- biacromial diameter **(D_{BA})** – (compass) – the value between the compass ends placed on the acromion protrusions (distance between shoulders);
- bitrohanterian diameter **(D_{BT})** – (compass) – the value between the compass ends placed on the two trochanters;

• thoracic diameter **(D_T)** – (compass) – transverse thoracic diameter **(D_{TT})** – the ends of the compass rest horizontally, on the mid axillary line, 4th rib level; anterior-posterior thoracic diameter **(D_{TA})** – one end of the compass at the bottom of the appendix, and the other end on the spinous apophysis of the 4th thoracic vertebra;

• chest perimeter **(P_T)**; chest perimeter at rest **(P_{TR});** chest perimeter in deep inspiration **(P_{TI});** chext perimeter in expiration **(P_{TE})** – measured by metric tape placed on the back under the inferior angle of the scapula and in front under areola for boys, and for girls under the 4th rib and sternum joint;

• upper limb perimeter **(P_{MS})**; right arm perimeter **(P_{BD})**; left arm perimeter **(P_{BS})**; right forearm perimeter **(P_{AD})**; left forearm perimeter **(P_{AS})** – mesured by metric tape on its maximum level of thickness;

• lower limb perimeter **(P_{MI})**; right thigh perimeter **(P_{CD})**; left thigh perimeter **(P_{CS})**; right leg perimeter **(P_{GD})**; left leg perimeter **(P_{GS}) –** measured by metric tape on its maximum level of thickness;

• abdominal perimeter **(P_A)** – measurement of waist circumference by metric tape placed horizontally, at the level of the umbilicus.

Mobility indicators:

• anterior spinal mobility **(M_A)** – gymnastics bench, ruler graduated in centimeters – point 0 situated at the bench level, graduations from 1 to 50 cm above and under. The performer is in the sitting position, trunk bent, on the gym bench, slides fingertips along the ruler – maintains for 2-3 seconds to record data. The number of centimeters above 0 are recorded as „-" (minus), and those under 0 by „+" (plus),

• lateral spinal mobility **(M_L) –** graduated ruler – performer with trunk bent laterally, palm sliding on the ruler – maintains for 2-3 seconds – number of centimeters over 0 is recorded on each side – right **(M_{LD})** and left **(M_{LS})**;

• posterior spinal mobility **(M_P) –** bridge position from lying on the back – the distance between the position of legs and palms is measured by metric tape;

• combined mobility of the spine and hip joints **(M_{CS}) –** from sitting straddle, bend trunk forward – the distance between the trunk (at the appendix level) and soil is measured in cm by metric tape;

• feet mobility or feet apart **(M_P) –** from sitting straddle position – maximum opening of feet – the distance between legs is measured at the knee level by metric tape;

• Apley's test **(T_A) –** from standing position, right arm up, left arm down **(T_{AD})** / left arm up, right arm down **(T_{AS}) –**bend arms backwards– the distance between the indexes (pointers) is measured.

d. The Statistical methods used

The data collected from the sample group were statisticslly processed, using the following indicators: the sum of the results, the arithmetic mean, the standard deviation, the mean difference and the coefficient of variation.

ANALYSIS OF RESULTS

The results of the measurements have emphasized the fact that the 14 year-old soccer players from „Dunărea" Galaţi Football Club, have a medium height of 164 cm, an average span of 166.1 cm and weight of 52.4 kg. The average of the biacromial diameter is higher than the bitrohanterian diameter by 7.7 cm, and the transvers thoracic diameter is 6 cm higher than the anterior-posterior thoracic diameter. The average of limbs has equal values on both segments (arms and legs), the arms average being 23 cm, and the forearms average 22.2 cm, thighs 45.8 cm, and legs 32.2cm – table 1.

Table 1
MORPHOLOGICAL INDICATORS

Name	Î	A	G	D_{BA}	D_{BT}	D_T		P_T			P_{MS}				P_{MI}				P_A
						D_{TT}	D_{TA}	P_{TR}	P_{TI}	P_{TE}	P_{BD}	P_{BS}	P_{AD}	P_{AS}	P_{CD}	P_{CS}	P_{GD}	P_{GS}	
TV	166	168	60	40	31	27	21	83	93	82	23	23	23	23	48	48	33	33	77
BBG	171	174	58	39	31	30	21	81	87	78	24	24	23	23	48	48	34	34	70
VTF	167	164	54	40	30	29	18	81	90	79	27	27	25	25	48	48	33	33	67
SVA	166	167	53	39	31	27	21	82	88	78	23	23	23	23	48	48	31	31	66
SRM	157	158	44	36	28	26	19	74	81	71	21	21	20	20	42	42	31	31	64
JRM	161	165	49	35	30	26	20	74	82	73	21	21	21	21	45	45	29	29	67
PA	169	176	55	38	31	28	19	78	84	75	23	23	21	21	46	46	33	33	71
CAC	170	171	52	36	29	26	20	79	86	76	23	23	22	22	45	45	31	31	65
IED	157	157	43	34	27	25	19	74	81	70	22	22	21	21	42	42	33	33	64
CIE	166	177	61	39	32	30	22	89	96	86	24	24	24	24	46	46	34	34	73
CD	155	151	48	36	27	26	19	75	83	73	22	22	22	22	46	46	33	33	65
∑	1805	1828	577	412	327	300	219	870	951	841	253	253	245	245	504	504	355	355	749
x	164	166,1	52,4	37,4	29,7	27,2	19,9	79	86,4	76,4	23	23	22,2	22,2	45,8	45,8	32,2	32,2	68
σ	5,6	8,30	6,02	2,11	1,73	1,73	1,22	4,74	4,96	4,80	1,67	1,67	1,48	1,48	2,22	2,22	1,55	1,55	4,18

± m	1,70	2,50	1,81	0,63	0,52	0,52	0,36	1,43	1,5	1,45	0,50	0,50	0,44	0,44	0,67	0,67	0,46	0,46	1,26
Cv%	3,44	4,99	11,4	5,64	5,84	6,37	6,13	5,99	5,74	6,28	7,27	7,27	6,68	6,68	4,86	4,86	4,81	4,81	6,14

Measurements performed to determine the level of mobility of 14 year-old soccer players in Galati, at the initial testings they showed low values at all tests – fig 1.

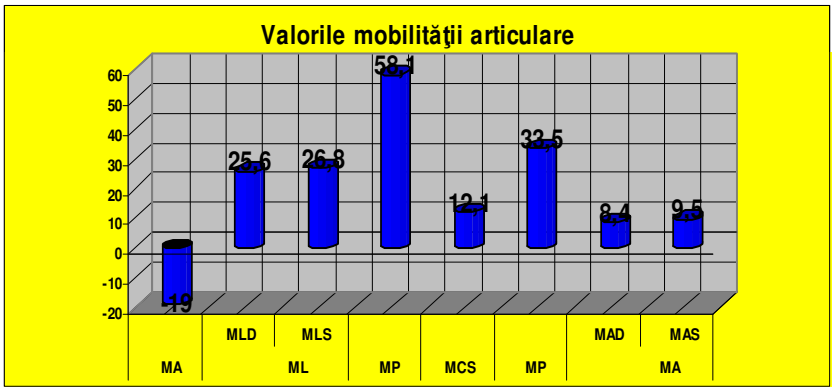

Fig. 1 Results of joint mobility for 14year-old soccer players

After analyzing the results of the initial testing, an experimental training program was designed, to raise the mobility indices to 14 year-old soccer players. 3 complex of exercise routines, of 20 stretching exercises each, were also designed for a 3 month span. Each program proposed 4 weekly cycles, 5 times a week, each lesson with a 30 minute episode of stretching exercises.

On conceiving the complexes of exercises several aspects were taken into account: the purpose and the physical condition of the athletes. Thus, the difficulty of the complexes was increasing gradually: program 1 – low dificulty, program 2 – medium difficulty, program 3 –high difficulty.

Among the applied exercises we can illustrate the following:

P.I. Standing straddle. *Final action and position* –twist trunk to the right and simultaneously lift right arm backwards, opposite arm bent forwards resting on the right shoulder- maintain for 10" x 3 repetitions with relaxation for 10"-action repeated in the opposite way;

P.I. Standing straddle, arms bent, hands on your head. *Final action and position* –head flexion with pressure on the neck, chin to chest- maintain for 10"x 3 repetitions and relaxation 10" ;

P.I. Standing straddle. *Final action and position* – bend head to the left and simultaneously bend left arm, palm pressures head on the crown- maintain for 10" x 3 repetitions and relaxation for 10"- action repeated in the opposite way.

After the application of the experimental training program for the optimization of mobility indices for 14 year-old soccer players, the results of all measurements were significantly better – table 2.

Table 2 RESULTS OF MUSCLE MOBILITY AND ELASTICITY INDICATORS

No.	M_A		M_L				M_P		M_{CS}		M_P		T_A			
			M_{LD}		M_{LS}								T_{AD}		T_{AS}	
Testings	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF	TI	TF
1.	-22	-10	28	15	30	15	-49	40	10	5	27	40	6	3	8	5
2.	-20	-10	33	18	30	20	-69	55	12	5	34	40	8	4	10	6
3.	-20	-8	25	12	28	14	-61	50	14	6	30	48	8	5	8	4
4.	-17	-8	20	10	23	12	-40	33	8	0	38	50	7	2	8	4
5.	-21	-10	31	18	29	18	-68	58	13	8	32	44	9	5	10	6
6.	-15	-4	27	15	27	15	-50	45	14	6	28	40	11	5	12	5
7.	-22	-10	29	15	29	15	-70	52	12	6	33	49	6	2	8	3
8.	-	-10	27	12	30	14	-6	53	15	8	35	43	7	3	9	4

	23						3									
9.	-16	-6	20	10	22	12	64	55	12	7	33	44	9	5	10	6
10.1	-15	0	22	10	25	14	46	40	11	4	40	49	10	5	10	5
11.	-18	-8	20	10	22	12	60	52	13	3	39	50	12	4	12	5
∑	**-209**	**-84**	**282**	**145**	**295**	**161**	**640**	**533**	**134**	**58**	**369**	**497**	**93**	**43**	**105**	**53**
x	**- 19**	**-7,6**	**25,6**	**13,1**	**26,8**	**14,6**	**58,1**	**48,4**	**12,1**	**5,2**	**33,5**	**45,1**	**8,4**	**3,9**	**9,5**	**4,8**
± m	**-11,4**		**12,5**		**12,2**		**9,7**		**6,9**		**11,6**		**4,5**		**4,7**	

Thus, at the final testing the following could be observed:

- anterior spinal mobility improved by 11.4 cm;
- lateral spinal mobility improved by 12.5 cm, respectively by 12.2 cm;
- posterior spinal mobility improved by 9.7 cm;
- combined moblity with values improved by 6.9 cm;
- feet mobility or span had superior values – 11.6 cm;
- mobility determined by Apley's test, was improved by 4.5 cm respectively 4.7.

After analyzing the achieved results, the following **conclusions** could be drawn**:**

1. The stretching exercises help to increase joint mobility (coxo-femoral, scapular-humeral and facet joints etc.) and the elasticity of the muscle groups.
2. Stretching helps maintain and improve the amplitude of segmental movements and reduces the risk of injuries during the game.
3. The stretching exercises contribute to the general health of athletes.
4. They help correcting deficient attitudes or deficiencies caused by unhealthy positions of the body.
5. The level of performance during the growth period is closely related to the degree of morphological and functional maturation of athletes.
6. The increase of the sports performance can be achieved on the basis created by the development level of motor qualities and the level of assimilation and training of motor skills.

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STUDY ABOUT GROWTH OF ATRACTIVNES IN PHYSICAL EDUCATION CLASSES BY USING MEANS FROM GYMNASTICS IN SECONDARY SCHOOL

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Abstract
In this paper we want to present the outcomes of an experiment carried out during one school year within secondary school students from the eighth grade. This experiment sought to observe whether the replacement of general physical development exercises, that are compulsory within each physical education lesson, will result in greater attractiveness for students of this age.
Keywords: *gymnastics, secondary school, physical education, physical exercises.*

INTRODUCTION

The process of teaching physical education is a complex and active process involving the student’s direct initiative and responsibility in their own preparation. As part of the physical education, an active pedagogy is formed regarding the behaviors that promote collective labor relations, moral behavior and character traits claimed nowadays by social pressure regarding preparation and training of young people.

Today, no one disputes the role and importance of physical education and sport for both boys and girls, and the effects are not limited to the body, they influence the whole intellectual, social and moral personality.

Physical education is mainly aimed at the harmonious development of the body, strengthening health and cultivating physical qualities (European Commission, 2007).

The lesson is designed as an independent teaching entity, “a cell” that underlies the educational process and contains all the elements and characteristics of the process. Basing and directing the other variables’ configuration remain the purposes and objectives of the lesson (Albulescu I., 2000).

Physical education lesson differs from other school lessons in content, structure, methodology, dynamics, space and specificity of the learning process. The regularities of learning are specific; they aim at developing motor abilities and acquisition of knowledge in the practice of physical exercises and also to educate the motor and moral-volitional qualities of the body.

In the specialized literature there are many definitions found that have tried to highlight what is the lesson. It is a pedagogical microstructure which brings together, in a functional unit, all the actions and means involved in the educational process in one hour of school (Oprea O., 1979). From another point of view the lesson is a teaching action unit which tends deliberately towards a certain goal, under well-defined conditions, using appropriate means to reach appropriate conditions for the intended purpose. (Cerghit I., 1983).

Continuous use of the same standard forms (structures) hinders lesson objectives and active engagement of students in learning. When the form is given the main role, “formalism" appears in building the lessons, where the objectives and content are subject to various schemes and abstract shapes. In this case we give importance to the scheme, to the form, detrimental to the goals which obviously has influence on the possibilities of creative manifestation process (Iconomescu T., 2013).

One of the central issues and always current in the pedagogical process is the ability of teachers to achieve their objectives through the use of methods and means to stimulate interest in the participation of those involved in the learning process.