The use of means specific to gymnastics, stretching type, led students to a more efficient use of lesson time by increasing its density, since passive break volume was decreased.

By introducing stretching exercises within the range of rest, "downtimes" from the lesson were eliminated, fact that has led to more efficient lesson. Not being exhausting, stretching exercises can be performed successfully by all students, even by those who have a lower level of general motor skills.

Using these stretching programs specially designed for school activities can improve muscle flexibility and joints mobility, thus leading to increased effort capacity of students, and thus to achieving the objectives of school physical education. Introducing stretching at major classes (VII-VIII) of secondary school, after being appropriated general basis of movement (bending, rotations, extensions, arching, twisting, etc.) may be an alternative to traditional lesson, that responds to requirements of a modern lessons adapted to the new.

REFERENCES

1. Badiu T., et al (2003) - *Teaching strategies algorithmic and heuristic type used in school physical education*, Educational Foundation "Dunarea de Jos" Publishing House, Galati, Romania.
2. Bratu I., (1982) - *The method and limits of the modern methods of instruction in physical education process,* Physical Education and Sports Magazine no. 9, Bucharest, Romania.
3. Dragnea A. (1984) - *Measurement and evaluation in physical education and sport*. Sport Tourism Publishing House, Bucharest, Romania.
4. Dragnea A. (2002) - *The theory of sport*, FEST Publishing House, Bucharest, Romania.
5. Raţă G., (2004) - *Didactics of physical education and sport*, Alma Mater Publishing House, Bacau, Romania.
6. Teodorescu L, (1989) - *Rethinking and updates in theoretical problems of physical education and sport*, Physical Education and Sports Magazine no. 9, Bucharest, Romania.
7. Torje D.C (2005) - *The theory and methodology of the Ministry of Interior staff training in physical education*, Ministry of Internal Affairs Publishing House, Bucharest, Romania.

THE RESEARCH CONCERNING THE INTENSITY OF THE LINEAR CORELATION APPLIED AT THE SELECTION OF THE FOOTBALLERS

Aurelian DRAGAN, Gabriela OPAIT

„Dunarea de Jos" University of Galaţi

Abstract: This paper presents a comparison between the F.C. Otelul Galati football team players and the F.C.M. Dunarea Galati team players regarding the selection of the players between 6 and 8 years old. The purpose of this research consists in to identify the specific methods and means concerning the efficient achievement of the selection process. The statistical methods of the research used are: the „Pearson Correlation Coefficient", the „Coefficients of Variation Method" and the „Least Squares Method" used for to reflect the architecture of the best trend model and the intensity of the corelation between 30 m dash and the long jump. The statistical analysis expresses the effectiveness of the methods and means used for the selection of the footballers, because the results of the research were positive, the progress between the F.C. Otelul Galati team players and the F.C.M. Dunarea Galati team players being visible.

Key words: intensity, correlation, selection, football.

INTRODUCTION

The selection in football of the players between 6 and 8 years old musts to account by the rhythm of somatic growth and psycho-driving rise of the footballers. Also, the selections must to permanently confront the inventory of quality for each age, with the requirements of the performance in football.

The state of the art in this domain is represented by the essential research belongs to Radulescu M., who presented methods and means for a optimal selection [6].

AIM

The aim of the theme proposed for research consists in to identify the specific methods and means in the view of the achievement regarding the effectiveness of the process of selection and preparation of the players aged between 6 and 8 years old, for to make up and to prepare the football school representative.

HYPOTHESIS

This paper has the next hypothesis: we suppose that if we know the specific particularities of selection regarding the age of 6-8 ani years old, we establish the best structure of the football school representative.

MATERIAL AND METHODS

The experimentul it carried out on the period 2013-2014 at F.C. Otelul Galati and F.C.M. Dunarea Galati team. In this research we included twenty 6-8 years old players. In the aim of the achievement concerning this paper, we used the next research methods: the scientifical documentation, the statistical method and the observation method.

In this research, we achieved the next tests concerning the selection: 10 m dash, 20 m dash, 30 m dash, long jump, keeping the ball in the air with the handy leg, keeping the ball in the air with the clumsy leg. The tests were applied in three stages: the initial in October 2013, the intermediate in December 2013 and final in May 2014.

RESULTS OF THE RESEARCH

In the table 1 and table 2 we represented the values of the tests used at the selections of the F.C. Otelul Galati football team players and F.C.M. Dunarea Galati football team players:

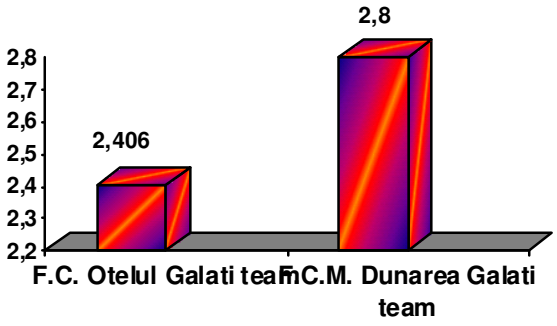
Table 1 The tests for F.C. Otelul Galati team

No.	Name and firstname	10 m dash	20 m dash	30 m dash	Long jump	Keeping the ball in the air with the handy leg	Keeping the ball in the air with the clumsy leg
1.	B.M.	2"25	4"12	5"87	1,70	202	69
2.	B.A.	2"44	4"19	6"18	1,50	100	10
3.	S.L.	2"57	4"31	6"12	1,40	82	25
4.	R.R.	2"25	3"74	5"56	1,70	190	13
5.	L.A.	2"38	4"43	6"37	1,55	60	26
6.	N.S.	2"37	4"31	6"00	1,50	31	4
7.	Ş.D.	2"44	4"43	6"62	1,40	22	10
8.	F.D.	2"50	4"62	6"58	1,20	43	12
9.	V.R.	2"43	4"25	6"43	1,60	56	5
10.	F.V.	2"38	4"44	6"45	1,40	64	3
11.	B.R.	2"50	4"39	6"61	1,10	117	20
12.	I.A.	2"37	4"12	6"24	1,55	45	23
13.	O.N.	2"55	4"30	6"37	1,50	74	11
14.	N.A.	2"43	4"24	6"19	1,60	60	10
15.	N.D.	2"37	4"05	6"07	1,55	55	11
16.	S.R.	2"55	4"37	6"38	1,60	42	16
17.	B.R.	2"32	4"19	6"05	1,55	76	14
18.	B.T.	2"37	4"32	5"80	1,70	31	21
19.	P.R.	2"25	4"21	6"01	1,70	189	22
20.	P.C.	2"41	3"94	5"81	1,55	36	3
$\bar{x}$		**2"406**	**4"248**	**6"185**	**1,517**	**78,75**	**16,4**

Table 2 The tests for F.C.M. Dunarea Galati team

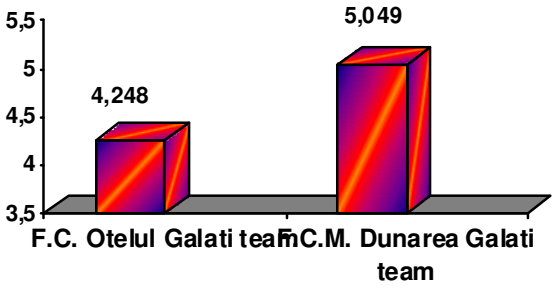
No.	Name and firstname	10 m dash	20 m dash	30 m dash	Long jump	Keeping the ball in the air with the handy leg	Keeping the ball in the air with the clumsy leg
1.	D.T.	2"87	5"31	6"98	1,40	23	5
2.	C.S.	3"00	5"56	6"96	1,25	17	7
3.	F.P.	2"78	5"20	6"70	1,50	32	14
4.	T.A.	2"46	4"84	6"24	1,35	45	2
5.	C.A.	3"21	5"82	7"41	1,30	5	9
6.	S.L.	2"85	5"45	6"78	1,45	7	7
7.	G.B.	2"66	4"66	6"58	1,20	35	1
8.	B.C.	2"93	5"13	7"31	1,45	26	5
9.	N.O.	2"38	4"18	6"05	1,65	21	6
10.	V.A.	2"64	5"27	6"97	1,50	17	9
11.	Z.A.	2"71	5"30	7"42	1,00	12	17
12.	O.F.	2"99	5"29	7"11	1,25	18	22
13.	A.D.	3"06	5"06	7"21	1,65	18	6
14.	J.A.	3"03	5"28	6"97	1,30	11	9
15.	P.L.	2"59	4"65	6"86	1,40	24	4
16.	G.A.	2"68	5"03	7"08	1,35	34	2
17.	G.C.	2"86	4"88	6"68	1,55	62	7
18.	M.N.	2"92	4"99	6"87	1,60	51	9
19.	C.F.	2"77	4"82	6"72	1,40	14	10
20.	E.D.	2"62	4"27	6"23	1,55	22	6
$\bar{x}$		**2"800**	**5"049**	**6"856**	**1,405**	**24,7**	**7,85**

If we analyse the table 1 and the table 2¸ we observe that:



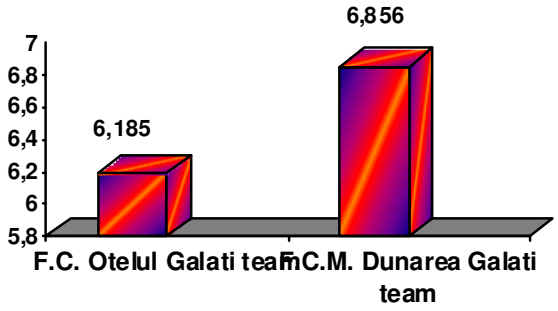
Type 1 The comparative analysis between the arithmetical averages at 10 m dash for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

We observe that at **10 m dash** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 0,394 seconds in the favour of the F.C. Otelul Galati team.



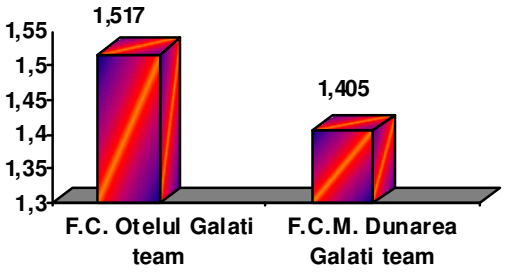
Type 2 The comparative analysis between the arithmetical averages at 20 m dash for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

Also, we observe that at **20 m dash** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 0,801 seconds in the favour of the F.C. Otelul Galati team.



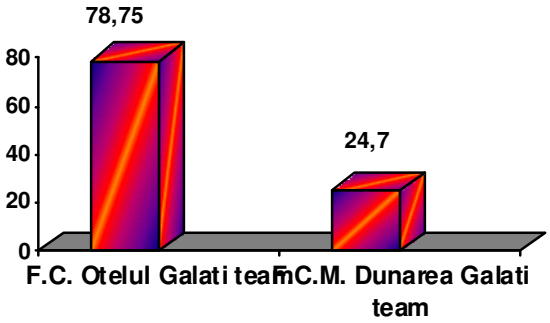
Type 3 The comparative analysis between the arithmetical averages at 30 m dash for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

In the type 3 we can to observe, that at **30 m dash** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 0,671 seconds in the favour of the F.C. Otelul Galati team



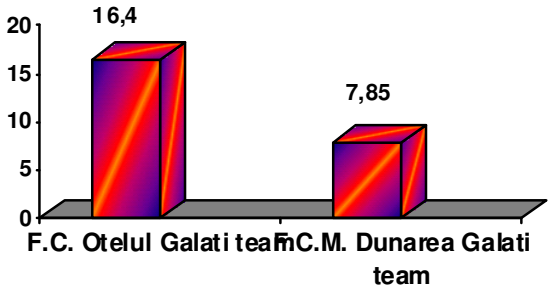
Type 4 The comparative analysis between the arithmetical averages at long jump for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

Also, we observe, that at **long jump** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 11,2 cm, in the favour of the F.C. Otelul Galati team



Type 5 The comparative analysis between the arithmetical averages at the keeping the ball in air with the handy leg for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

We observe, that at the **keeping the ball in air with the handy leg** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 54,05 repetitions, in the favour of the F.C. Otelul Galati team.



Type 6 The comparative analysis between the arithmetical averages at the keeping the ball in air with the clumsy leg for the F.C. Otelul Galati team and F.C.M. Dunarea Galati team

We observe, that at the **keeping the ball in air with the clumsy leg** test, the difference between the F.C. Otelul Galati team and F.C.M. Dunarea Galati team is of 8,55 repetitions, in the favour of the F.C. Otelul Galati team

Next, we want to identify the trend model and the intensity of the corelation between **30 m dash** and **the long jump** for the F.C. Otelul Galati football team players.

- if we formulate the null hypothesis H_0 *:* which mentions the assumption of the existence for the model of tendency of the corelation between *Y factor = long jump* and *X factor = 30 m dash,* as being the function $y_{x_i} = a + b \cdot x_i$, then the parameters *a* and *b* of the adjusted linear function, can to be calculated by means of the next system:

$$\begin{cases} n \cdot a + b \sum_{i=1}^{n} x_i = \sum_{i=1}^{n} y_i \\ a \sum_{i=1}^{n} x_i + b \cdot \sum_{i=1}^{n} x_i^2 = \sum_{i=1}^{n} x_i \cdot y_i \end{cases}$$

Thus, $a = \dfrac{\sum_{i=1}^{n} x_i^2 \sum_{i=1}^{n} y_i - \sum_{i=1}^{n} x_i \sum_{i=1}^{n} x_i y_i}{n \sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i^2)}$ and $b = \dfrac{n \sum_{i=1}^{n} x_i y_i - \sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i}{n \sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i^2)}$

Table 3 The estimate of the value for the variation coefficient in the case of the adjusted

linear function, in the hypothesis concerning the linear evolution of the long jump for F.C. Otelul Galati football team players

No.	30 M DASH	LONG JUMP	*LINEAR TREND*			
			x_i^2	$x_i y_i$	$y_{t_i} = a + bx_i$	$\left\|y_i - y_{x_i}\right\|$
1.	**5"87**	**1,70**	**34,4569**	**9,9790**	**1,64**	**0,06**
2.	**6"18**	**1,50**	**38,1924**	**9,2700**	**1,52**	**0,02**
3.	**6"12**	**1,40**	**37,4544**	**8,5680**	**1,54**	**0,14**
4.	**5"56**	**1,70**	**30,9136**	**9,4520**	**1,76**	**0,06**
5.	**6"37**	**1,55**	**40,5769**	**9,8735**	**1,45**	**0,10**
6.	**6"00**	**1,50**	**36,0000**	**9,0000**	**1,59**	**0,09**
7.	**6"62**	**1,40**	**43,8244**	**9,2680**	**1,35**	**0,05**
8.	**6"58**	**1,20**	**43,2964**	**7,8960**	**1,36**	**0,16**
9.	**6"43**	**1,60**	**41,3449**	**10,2880**	**1,42**	**0,18**
10.	**6"45**	**1,40**	**41,6025**	**9,0300**	**1,41**	**0,01**
11.	**6"61**	**1,10**	**43,6921**	**7,2710**	**1,35**	**0,25**
12.	**6"24**	**1,55**	**38,9376**	**9,6720**	**1,50**	**0,05**
13.	**6"37**	**1,50**	**40,5769**	**9,5550**	**1,45**	**0,05**
14.	**6"19**	**1,60**	**38,3161**	**9,9040**	**1,52**	**0,08**
15.	**6"07**	**1,55**	**36,8449**	**9,4085**	**1,56**	**0,01**
16.	**6"38**	**1,60**	**40,7044**	**10,2080**	**1.44**	**0,16**
17.	**6"05**	**1,55**	**36,6025**	**9,3775**	**1,57**	**0,02**
18.	**5"80**	**1,70**	**33,6400**	**9,8600**	**1,67**	**0,03**
19.	**6"01**	**1,70**	**36,1201**	**10,2170**	**1,67**	**0,03**
20	**5"81**	**1,55**	**33,7561**	**9,0055**	**1,66**	**0,11**
Total	**6"185**	**1,517**	**766,8231**	**187,103**		**1,66**

If we calculate the statistical data for to adjust the linear function, we obtain for the parameters *a* and *b* the values:

$$a = \frac{766{,}8231 \cdot 30{,}35 - 123{,}71 \cdot 187{,}103}{20 \cdot 766{,}8231 - (123{,}71)^2} = 3{,}918798436$$

$$b = \frac{20 \cdot 187{,}103 - 123{,}71 \cdot 30{,}35}{20 \cdot 766{,}8231 - (123{,}71)^2} = -0{,}388214094$$

Hence, the coefficient of variation for the adjusted linear function is:

$$v_I = \left[\frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^I \right|}{n} : \frac{\sum_{i=1}^{n} y_i}{n} \right] \cdot 100 = \frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^I \right|}{\sum_{i=1}^{n} y_i} \cdot 100 = \frac{1{,}66}{30{,}35} \cdot 100 = 5{,}47\%$$

- in the situation of the alternative hypothesis H_1 *:* which specifies the assumption of the existence for the model of tendency of the corelation between *Y factor = long jump* and *X factor = the 30 m dash*, as being the quadratic function $y_{x_i} = a + b \cdot x_i + cx_i^2$, the parameters *a*, *b* şi *c* of the adjusted quadratic function, can to be calculated by means of the system:

$$\begin{cases} n \cdot a + b \sum_{i=1}^{n} x_i + c \sum_{i=1}^{n} x_i^2 = \sum_{i=1}^{n} y_i \\ a \sum_{i=1}^{n} x_i + b \cdot \sum_{i=1}^{n} x_i^2 + c \sum_{i=1}^{n} x_i^3 = \sum_{i=1}^{n} x_i \cdot y_i \\ a \cdot \sum_{i=1}^{n} x_i^2 + b \sum_{i=1}^{n} x_i^3 + c \sum_{i=1}^{n} x_i^4 = \sum_{i=1}^{n} x_i^2 \cdot y_i \end{cases}$$

Table 4 The estimate of the value for the variation coefficient in the case of the adjusted quadratic function, in the hypothesis concerning the parabolic evolution of the long jump for F.C. Otelul Galati football team players

No.	30 M DASH	LONG JUMP	*PARABOLIC TREND*					
			x_i^2	x_i^3	x_i^4	$x_i^2 \cdot y_i$	$y_{x_i} = a + bx_i + cx_i^2$	$\lvert y_i - y_{x_i} \rvert$
1.	**5''87**	**1,70**	**34,4569**	**202,262003**	**1187,277958**	**58,576730**	**1,64**	**0,06**
2.	**6''18**	**1,50**	**38,1924**	**236,029032**	**1458,659418**	**57,288600**	**1,52**	**0,02**
3.	**6''12**	**1,40**	**37,4544**	**229,220928**	**1402,832079**	**52,436160**	**1,54**	**0,14**
4.	**5''56**	**1,70**	**30,9136**	**171,879616**	**955,6506650**	**52,553120**	**1,76**	**0,06**
5.	**6''37**	**1,55**	**40,5769**	**258,474853**	**1904,959667**	**62,894195**	**1,45**	**0,10**
6.	**6''00**	**1,50**	**36,0000**	**216,000000**	**1296,000000**	**54,000000**	**1,59**	**0,09**
7.	**6''62**	**1,40**	**43,8244**	**290,117528**	**1920,578035**	**61,354160**	**1,35**	**0,05**
8.	**6''58**	**1,20**	**43,2964**	**284,890312**	**1874,578253**	**51,955680**	**1,36**	**0,16**
9.	**6''43**	**1,60**	**41,3449**	**265,847707**	**1709,400756**	**66,151840**	**1,42**	**0,18**
10.	**6''45**	**1,40**	**41,6025**	**268,336125**	**1730,768006**	**58,243500**	**1,41**	**0,01**
11.	**6''61**	**1,10**	**43,6921**	**288,804781**	**1908,999602**	**48,061310**	**1,35**	**0,25**
12.	**6''24**	**1,55**	**38,9376**	**242,970624**	**1516,136694**	**60,353280**	**1,50**	**0,05**
13.	**6''37**	**1,50**	**40,5769**	**258,474853**	**1646,484814**	**60,865350**	**1,45**	**0,05**
14.	**6''19**	**1,60**	**38,3161**	**237,176659**	**1468,123519**	**61,305760**	**1,52**	**0,08**
15.	**6''07**	**1,55**	**36,8449**	**223,648543**	**1357,546656**	**57,109595**	**1,56**	**0,01**
16.	**6''38**	**1,60**	**40,7044**	**259,694072**	**1656,848179**	**65,127040**	**1,44**	**0,16**
17.	**6''05**	**1,55**	**36,6025**	**221,445125**	**1339,743006**	**56,733875**	**1,57**	**0,02**
18.	**5''80**	**1,70**	**33,6400**	**195,112000**	**1131,649600**	**57,188000**	**1,67**	**0,03**
19.	**6''01**	**1,70**	**36,1201**	**217,081801**	**1304,661624**	**61,404170**	**1,59**	**0,11**
20.	**5''81**	**1,55**	**33,7561**	**196,122941**	**1139,474287**	**52,321955**	**1,66**	**0,11**
Total	**6''185**	**1,517**	**766,8231**	**4763,589503**	**29910,37282**	**1155,92432**		**1,74**

If we calculate the statistical data for to adjust the quadratic function, we obtain for the parameters *a, b* and *c* the next values

$$\begin{cases} 20 \cdot a + b \cdot 123{,}71 + c \cdot 766{,}8231 = 30{,}35 \\ a \cdot 123{,}71 + b \cdot 766{,}8231 + c \cdot 4763{,}589503 = 187{,}103 \\ a \cdot 766{,}8231 + b \cdot 4763{,}589503 + c \cdot 29910{,}37282 = 1155{,}92432 \end{cases}$$

$$a = 3{,}949153835 \ ; \ \ b = -0{,}397847307 \ ; \ \ c = 0{,}000762384$$

So, the coefficient of variation for the adjusted quadratic function has the value:

$$v_{II} = \left[\frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^{II} \right|}{n} : \frac{\sum_{i=1}^{n} y_i}{n} \right] \cdot 100 = \frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^{II} \right|}{\sum_{i=1}^{n} y_i} \cdot 100 = \frac{1{,}74}{30{,}35} \cdot 100 = 5{,}73\%$$

- in the case of the alternative hypothesis H_2 *:* which describes the supposition the assumption of the existence for the model of tendency of the of the corelation between *Y factor = long jump* and *X factor = the 30 m dash*, as being the exponential function $x_{t_i} = ab^{t_i}$, then the parameters *a* and *b* of the adjusted exponential function, can to be calculated by means of the next system:

$$\begin{cases} n \cdot \lg a + \lg b \cdot \sum_{i=1}^{n} x_i = \sum_{i=1}^{n} \lg y_i \\ \lg a \cdot \sum_{i=1}^{n} x_i + \lg b \cdot \sum_{i=1}^{n} x_i^2 = \sum_{i=1}^{n} x_i \cdot \lg y_i \end{cases}$$

Table 5 The estimate of the value for the variation coefficient in the case of the adjusted exponential function, in the hypothesis concerning the exponential evolution of the long jump for F.C. Otelul Galati football team players

No.	30 M DASH	LONG JUMP	*EXPONENTIAL TREND*				
			$\lg y_i$	$x_i \lg y_i$	$\lg y_{x_i} = \lg a + x_i \cdot \lg b$	$y_{x_i} = ab^{x_i}$	$\lvert y_i - y_{x_i} \rvert$
1.	**5"87**	**1,70**	**0,230448921**	**1,362735168**	**0,215601373**	**1,64**	**0,06**
2.	**6"18**	**1,50**	**0,176091259**	**1,088243981**	**0,179296412**	**1,51**	**0,01**
3.	**6"12**	**1,40**	**0,146128035**	**0,894303578**	**0,186323179**	**1,54**	**0,14**
4.	**5"56**	**1,70**	**0,230448921**	**1,281296003**	**0,251906339**	**1,79**	**0,09**
5.	**6"37**	**1,55**	**0,190331698**	**1,212412917**	**0,157044983**	**1,44**	**0,11**
6.	**6"00**	**1,50**	**0,176091259**	**1,056547554**	**0,200376714**	**1,59**	**0,09**
7.	**6"62**	**1,40**	**0,146128035**	**0,967367596**	**0,127766787**	**1,34**	**0,06**
8.	**6"58**	**1,20**	**0,079181246**	**0,521012599**	**0,132451299**	**1,36**	**0,16**
9.	**6"43**	**1,60**	**0,204119982**	**1,312491488**	**0,150018216**	**1,41**	**0,19**
10.	**6"45**	**1,40**	**0,146128035**	**0,942525830**	**0,147675961**	**1,41**	**0,01**
11.	**6"61**	**1,10**	**0,041392685**	**0,273605648**	**0,129937915**	**1,35**	**0,25**
12.	**6"24**	**1,55**	**0,190331698**	**1,187669797**	**0,172269645**	**1,49**	**0,06**
13.	**6"37**	**1,50**	**0,176091259**	**1,121701320**	**0,157044983**	**1,44**	**0,06**
14.	**6"19**	**1,60**	**0,204119982**	**1,263502693**	**0,178125285**	**1,51**	**0,09**
15.	**6"07**	**1,55**	**0,190331698**	**1,155313408**	**0,192178819**	**1,56**	**0,01**
16.	**6"38**	**1,60**	**0,204119982**	**1,302285489**	**0,155873856**	**1,43**	**0,17**
17.	**6"05**	**1,55**	**0,190331698**	**1,151506774**	**0,194521074**	**1,56**	**0,01**
18.	**5"80**	**1,70**	**0,230448921**	**1,336603744**	**0,223799270**	**1,67**	**0,03**
19.	**6"01**	**1,70**	**0,230448921**	**1,384998017**	**0,199205586**	**1,58**	**0,12**
20.	**5"81**	**1,55**	**0,190331698**	**1,105827166**	**0,222628143**	**1,67**	**0,12**
Total	**6"185**	**1,517**	**3,573045933**	**21,91195077**			**1,84**

Consequently, if we calculate the statistical data for to adjust the exponential function, we obtain for the parameters *a* and *b* the values:

$$\begin{cases} 20 \cdot \lg a + \lg b \cdot 123{,}71 = 3{,}573045933 \\ \lg a \cdot 123{,}71 + \lg b \cdot 766{,}8231 = 21{,}91195077 \end{cases}$$

$$\lg a = \frac{\begin{vmatrix} 3{,}573045933 & 123{,}71 \\ 21{,}91195077 & 766{,}8231 \end{vmatrix}}{\begin{vmatrix} 20 & 123{,}71 \\ 123{,}71 & 766{,}8231 \end{vmatrix}} = 0{,}903053418$$

$$\lg b = \frac{\begin{vmatrix} 20 & 3{,}573045933 \\ 123{,}71 & 21{,}91195077 \end{vmatrix}}{\begin{vmatrix} 20 & 123{,}71 \\ 123{,}71 & 766{,}8231 \end{vmatrix}} = -0{,}117112784$$

Accordingly, the coefficient of variation for the adjusted exponential function has the next value:

$$v_{\exp} = \left[\frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^{\exp} \right|}{n} : \frac{\sum_{i=1}^{n} y_i}{n} \right] \cdot 100 = \frac{\sum_{i=1}^{n} \left| y_i - y_{x_i}^{\exp} \right|}{\sum_{i=1}^{n} \delta_i} \cdot 100 = \frac{1{,}84}{30{,}35} \cdot 100 = 6{,}06\%$$

We apply the coefficients of variation method as criterion of selection for the best model of trend.
We notice that:

$$v_I = 5{,}47\% < v_{II} = 5{,}73\% < v_{\exp} = 6{,}06\%$$

So, **the path followed by *Y* factor is a linear trend** of the shape $y_{x_i} = a + bx_i$, with other words it confirms the hypothesis H_0^*.

For to reflect the intensity of the linear correlation between *30 m dash* and the *long jump* we use Pearson correlation coefficient noted with *r*:

Table 6 The calculation of the value for Pearson correlation coefficient in the case of the linear correlation between 30 m dash and the long jump for F.C. Otelul Galati football team players

No.	30 M DASH	LONG JUMP	x_i^2	$(y_i)^2$	$x_i y_i$
1.	5"87	1,70	34,4569	2,8900	9,9790
2.	6"18	1,50	38,1924	2,2500	9,2700
3.	6"12	1,40	37,4544	1,9600	8,5680
4.	5"56	1,70	30,9136	2,8900	9,4520
5.	6"37	1,55	40,5769	2,4025	9,8735
6.	6"00	1,50	36,0000	2,2500	9,0000
7.	6"62	1,40	43,8244	1,9600	9,2680
8.	6"58	1,20	43,2964	1,4400	7,8960
9.	6"43	1,60	41,3449	2,5600	10,2880
10.	6"45	1,40	41,6025	1,9600	9,0300
11.	6"61	1,10	43,6921	1,2100	7,2710
12.	6"24	1,55	38,9376	2,4025	9,6720
13.	6"37	1,50	40,5769	2,2500	9,5550
14.	6"19	1,60	38,3161	2,5600	9,9040
15.	6"07	1,55	36,8449	2,4025	9,4085
16.	6"38	1,60	40,7044	2,5600	10,2080
17.	6"05	1,55	36,6025	2,4025	9,3775
18.	5"80	1,70	33,6400	2,8900	9,8600
19.	6"01	1,70	36,1201	2,8900	10,2170
20.	5"81	1,55	33,7561	2,4025	9,0055
Total	6"185	1,517	766,8231	46,5325	187,103

$$r = \frac{n\sum_{i=1}^{n} x_i y_i - \sum_{i=1}^{n} x_i \cdot \sum_{i=1}^{n} y_i}{\sqrt{[n\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2][n\sum_{i=1}^{n} (y_i)^2 - (\sum_{i=1}^{n} y_i)^2]}} =$$

$$= \frac{20 \cdot 187{,}103 - 123{,}71 \cdot 30{,}35}{\sqrt{[20 \cdot 766{,}8231 - (123{,}71)^2][20 \cdot 46{,}5325 - (30{,}35)^2]}} = -0{,}71$$

In conclusion, because the value of Pearson correlation coefficient tends to - 1, there is a very strong correlation between *30 m dash* and *the long jump*.

CONCLUSIONS

- The research conducted at F.C. Otelul Galati and F.C.M. Dunarea Galati confirmed the effectiveness of methods and means for a optimal selection, because the results of the research were positive, the progress between the F.C. Otelul Galati football team players and F.C.M. Dunarea Galati football team players being visible in the favour of the F.C. Otelul Galati team.
- The coachs of the players with the age between 6 and 8 years old must to focus on speed, ability and resistance at specific efforts only with the ball [6].
- We propose to the coachs to use the movement games for the development of the agility and coordination, all applied on a fond of competition adapted for the particularities of the age between 6 and 8 years old.

REFERENCES

1. Cojocaru V., (2000), *The strategy of the preparation for the youngers of high performance"*, Axis Mundi Publishing House, Bucharest, p. 26-40.
2. Dragan A., (2006), *Football for youngers*, Valinex Publising House, Chisinau, p. 47-78.
3. Dragan A., (2007), *Interdiscipliners approachs in football*, Academica Publishing , Galaţi, p. 26-72.

4. Dragan A., (2009), *The optimization of the lesson of training at the discipline football*, Galati University Press Publishing House, Galaţi, p. 180-216.
5. Opait G., (2006), *Statistics*, Academica Foundation of Dunarea de Jos University - Publishing House, Galaţi, p. 64-78.
6. Radulescu M., Cojocaru V., Dragan A., (2003), *The guide of football coach at children and young players*, Axis-Mundi Publishing House, Bucharest, p. 74-82.

THE STATISTICAL REFLECTION OF THE APPROACHES CONCERNING THE TRAINING MODEL FOR THE INCREASE OF THE SPEED

Gabriela OPAIT, Aurelian DRAGAN
„Dunarea de Jos" University of Galaţi

Abstract: This paper reflects the methodical of the training for to increase the speed for the F.C. Otelul Galati football team players. The purpose of this research consists in the elaboration of the methods and means which can to influence the increase of the game speed for the F.C. Otelul Galati football team players. The statistical methods of the research used are: the „Coefficients of Variation Method" and the „Least Squares Method" applied for to calculate the parameters of the regression equations and for to identify the best trend model. The statistical analysis reflected the effectiveness of the methods and means used for to increase the game speed of the F.C. Otelul Galati footballers, because the results of the research were positive, the progress between the initial and final tests being visible.
Key words: trend, regression, forecast, speed.

INTRODUCTION

For to drive the speed training the coach musts to have a documentation and a evidence of the players on the periods of the competitional year and on games, and in this way he cans to achieve the management of the effort, a planning of the preparation and a maximum efficiency in each play. The state of the art in this domain is represented by the essential research belongs to Cojocaru V. and Radulescu M. who elaborated a strategy for the preparation for to increase the speed in the football game of the players [1], [7].

AIM

The aim of the theme proposed for research consists in to establish the optimal methods and means for to increase the game speed of the F.C. Otelul Galati footballers and for to demonstrate them effectiveness in the modern football.

HYPOTHESIS

This paper has the next hypothesis: we suppose that the symbiosis of the shapes regarding the speed with others factors of the training, will can to conduct at the increase of the game speed for the F.C. Otelul Galati football team players.

MATERIAL AND METHODS

The experimentul it carried out on the period 2013-2014 at F.C. Otelul Galati and in research we included eighteen 10-12 years old players. In the aim of the achievement concerning this paper, we used the next research methods: the scientifical documentation, the statistical method and the observation method.
In this research, we achieved the nexts tests concerning driving level: 30 m dash, 30 m dash with the ball, the driving of the ball through milestones in speed, 3 racing in penalty area, the hitting of the hanged ball with the head in 15 seconds, the no. 1 complex sample, the no. 2 complex sample. The tests were applied in three stages: the initial in October 2013, the intermediate in December 2013 and final in May 2014.

RESULTS OF THE RESEARCH

If we analyse the table 1¸ we observe that: