Ileana JURAVLE, Mărioara SALUP

University ''Stefan cel Mare'' of Suceava, Romania

Abstract

The purpose of this paper is the application of athletics methods and resources in order to develop speed motor ability of children aged between 12-14 years old. At this age, prepubertal age, the rate of psycho-physiological and physical development intensifies, influencing motor skills development also. Through specific methods and athletics resources we wanted to know in what extent the speed development (response speed, execution speed and repetition speed) can be influenced at this age. The methods that are included in this study are: disability method, repetition method, competition method, exercises method, etc. Obtained results confirmed that the chosen resources and methods have helped speed development for children from the experimental group compared with the results obtained from those from the control group.

Keywords*: speed, prepubertal age, trening methods, athletics;*

INTRODUCTION

Organized practice of physical exercises has a positive role on children's body development and growth. The transition period from childhood to adolescence is complicated not only from the psychological point of view but also in terms of physical development.

The motor skills development during this period is very important for those who practice sports regularly but also for those who practice exercise only in physical education classes in school.

Motor qualities are defined by T. Ardelean as essential attributes of muscle activity expressed through motor acts that are conditioned by the structure and functional capabilities of different human body systems which are influenced by mental processes and capabilities (Ardelean T., 1983).

Speed is a motor quality that can be developed less; it is considered the ability to practice an action in a short time (Raţă, G., Raţă, BC, 2006).

Athletics greatly influence the development of body, as it is characterized by a variety of available ways, particularly attractive and natural (Dragnea A. 1996). This type of sport can be practice on an early age, being included in the curriculum from first grade (Duck, G., Ababei, C., 2003).

MATERIALS AND METHODS

Assessment of the role and place of physical education and sport in contemporary society can be made only if we take into account that exercises have been a continuous presence in people lives in appropriate forms. Sports practice in various ways is known for thousands of years. The purpose of this paper is to determine whether the application of athletics specific methods lead to the development of speed motor quality of children aged between 12-14 years old.

We started from the hypothesis that at this age the human organism undergoes a sensitive period of development both in the physically and mentally point of view, which has important implications for education of speed motor quality. Thus, by applying athletics specific methods we wanted to know to what extent speed can be developed. The proposed methods for speed development are: repetition method, disability method, walking exercise method, relay race method, games method and competitive method. Repetition method represents execution of a mechanical work with submaximal, maximal and supramaximal intensity. Disability method is based on the use of a handicap in advance regarding the start of a speed exercise. Walking exercise method involves cover a distances in speed, preceded by a moose walking. Component subjects of the experimental group and the control group were applied a number of tests that have established speed development level. In the experimental and control groups took part a total of 30 children. Applied tests were: 50m flat, "Naveta" 4x10m test, 93639 test, Agility test 20m, tapping test and Adams test. Those tests evaluated speed reaction, traveling speed, execution speed and repetition speed.

In this study, all subjects participated to the initial testing and final testing. Subjects from the experimental group followed a training program that lasted 6 weeks. The training program aimed to develop reaction speed and traveling speed, execution and repetition speed through specific methods of athletics. For speed developing we chose different methods that includes: speed relay race that require immediately reaction attention, starts from different positions on different signals, various jumps, dynamic balance exercises or games and performing sports. All these methods were chosen according to subject's age, were learned and perfected correctly under optimum conditions, etc.

RESULTS AND CONCLUSION

The obtained results by the subjects from the experimental group and the control group were statistically processed and graphical interpreted. Also, we presented some subjects anthropometric data of both groups.

Table 1. Antropometrical data representation of experimental and control children groups
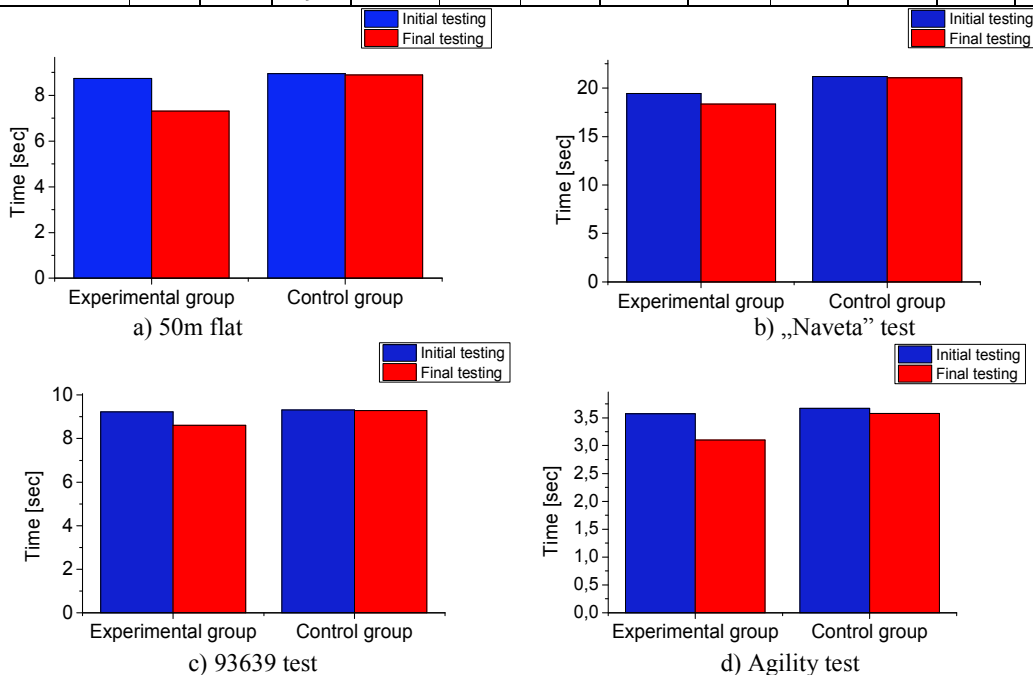
	Nr. Crt.	Name	Body hight (cm)	Body mass (kg)		Nr. Crt.	Name	Body hight (cm)	Body mass (kg)
EXPERIMENTAL GROUP	1.	D.M.	148	45	CONTROL GROUP	1.	V.A.	160	51
	2.	B.G.	153	47		2.	C.E.	149	39
	3.	T.A.	161	49		3.	I.N.	154	47
	4.	D.E.	142	40		4.	V.L.	161	51
	5.	U.R.	158	50		5.	C.S.	153	46
	6.	O.I.	161	57		6.	T.A.	165	55
	7.	H.L.	154	48		7.	J.M.	146	49
	8.	E.E.	158	55		8.	V.S.	159	47
	9.	S.C.	149	40		9.	B.B.	147	40
	10.	E.T.	151	43		10.	M.E.	155	51
	11.	U.G.	157	44		11.	A.O.	142	39
	12.	C.C.	148	42		12.	G.M.	150	46
	13.	N.E.	153	47		13.	P.G.	158	51
	14.	H.O.	159	50		14.	B.C.	145	45
	15.	L.D.	147	45		15.	S.A.	156	57

Below table show the values obtained on the six tests by children from the experimental group compared to the average of the values obtained by children from the control group for the first and final testing.

Table 2. Average values representation obtained by experimental and control groups on the 6 tests

Group	50m flat (sec)		"Naveta" test 4x10m (sec)		93639 test (sec)		Agility test 20m (sec)		Tapping test (rep)		Adams test (rep)	
Average	T.I.	T.F.	T.I.	T.F.	T.I.	T.F.	T.I.	T.F.	T.I.	T.F.	T.I.	T.F.
Experimental group	8,74	7,31	19,43	18,35	9,23	8,61	3,57	3,10	41,5	48,9	28,1	32,5
Control group	8,95	8,89	21,19	21,06	9,32	9,28	3,67	3,58	39,3	40,5	24,3	24,9

a) 50m flat

b) „Naveta" test

c) 93639 test

d) Agility test
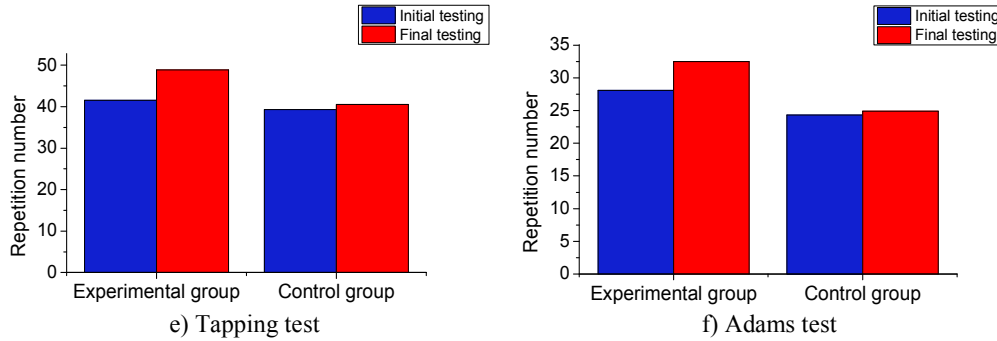
e) Tapping test   f) Adams test

Figure 1. Graphical representation for the tests performed both, for experimental and control groups

Above graphics show that on the 6 tests the results obtained by the experimental group were higher than the results obtained by the control group.

Children from the experimental group showed an improvement of speed development motor skill.

Table 3. Evolution of the obtained results representation of subjects for the 6 tests

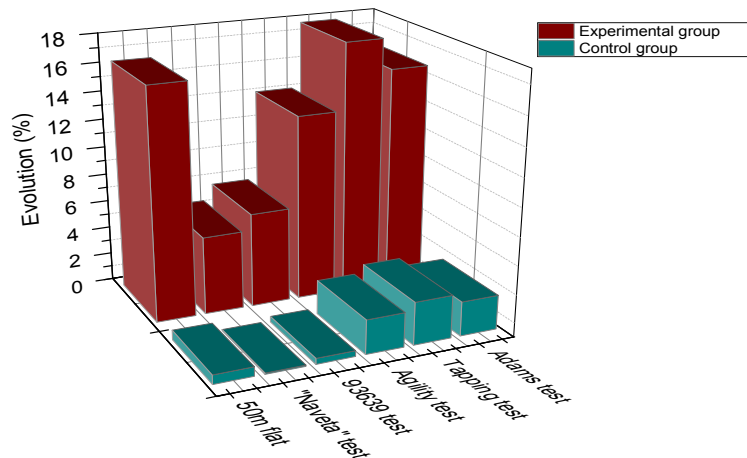| Group/Tests	50m flat(s)	„Naveta" test 4x10m (s)	93639 test (s)	Agility test 20m (s)	Tapping test (rep.)	Adams test (rep)
Experimental group	16,36%	5,55%	6,71%	13,16%	17,83%	15,65%
Control group	0,67%	0,09%	0,42%	2,45%	3,05%	2,46%

Figure 2. Graphical representation of average evolution for experimental and control groups on the 6 tests

Table 3 shows the subjects evolution on the speed development where we can observe that those who took part of the experimental group had a much higher level than those from the control group. The difference between the two groups was 11.02%. The subjects of the experimental group achieved an average of 12.54% improvement for the 6 samples and the control group fared just 1.52%.

REFERENCES

Ardelean, T., Tatu. C., Alexandrescu D.C. (1983). Atletism. Editura Didactică şi Pedagogică. Bucureşti

Dragnea.A. (1996). Antrenament sportiv. Editura Didactică şi Pedagogică. Bucureşti

Raţă.G, Raţă. B.C. (2006). Aptitudinile în activitatea motrica. Editura EduSoft. Bacau

Ababei.C. Raţă.G. (2003). Predarea atletismului în şcoală. Editura Alma Mater. Bacău

PHYSICAL METHODS APPLIED IN THE REHABILITATION OF ISCHEMIC HEART DISEASE