

## The bio-dynamic level of 9–10-year-old children – an objective factor in the design of dynamic activities for the afterschool program

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### Abstract

The evaluation of the somatic, functional and dynamic potential of the school population in Romania made in 2011 highlights the maintenance of the tendency to exceed the values of height and weight and body harmony of the current generation compared to previous generations, which is the premise of increasing risk to maintain health. The S.a.S. system is a complementary program to the compulsory school program in which other dynamic activities can be introduced than those provided in the core curriculum for the harmonious growth and physical development of children. The aim of the research was to determine the level of bio-dynamic development of children aged 9-10 in Arad County. The subjects of the research were 300 children, girls and boys from 5 schools. To answer the question of whether there is proportionality in the somatic and dynamic development of subjects and whether they fall within normal values according to their age, the evaluation aimed at two distinct and interdependent plans: the plan of somatic growth and development; dynamic capacity plan. 8 specific tests and trials were used. The results show that there is a tendency to gain weight, especially among boys, and the level of effort capacity of most subjects is only satisfactory. Children's mobility skills need to be improved in terms of speed and dexterity, strength and balance. The obtained results can represent an objective factor in the design of the subsequent motor activities in the program SaS.

**Keywords:** childrens, physical development, motor skills, school after school.

### Introduction

Man is born with predispositions of intellectual, physical, motor, emotional, aesthetic, etc., predispositions that he cultivates over time according to will, interests and motivations (Mateescu A., 2017, p.2). Harmonious physical growth and development, but also the level of effort capacity, can be influenced from an early age by the systematic practice of motor activities, but as Schmidt F. (2012, p. 159) states, "the growth and development of children is not It develops at a uniform pace, but over time there are periods of acceleration and slowdown in growth, with varying lengths, depending on age, living conditions and individual characteristics of children "and therefore we must take into account all these features. Body posture is also targeted, which is a dynamic stereotype that can be improved by physical exercise or can worsen if not intervened in time timp (Nosk M., Razumeyk N., Iermakov S., Yermakov T, 2016, p. 988). One of the indicators of a healthy lifestyle is the time allocated to motor activities, because it contributes to the development of muscle groups, improves cardiovascular and respiratory capacity. (Rybolko, L., Yopa, T., Hagner-Derengowska, M., Kaluzny, K., Demikiewicz, D., Muszkieta, R., Ostrowska, M., 2021, Motor activity as an indicator of a healthy way of life, *Journal of Physical Education and Sport*, <https://efsupit.ro/images/stories/octombrie2021/Art%20374.pdf>)

Determining the somatometric indicators of growing children, we consider it important to monitor their health, growth rate and physical development and last but not least can signal any growth and / or developmental abnormalities at various ages.

Body weight and health are in a relationship of interdependence. Health can affect, for better or worse, body weight and vice versa, any decrease or increase in body weight can influence, for better or worse, health. (Balint T., Dobrescu T., Rață M., Cristuță A., 2010, p. 14). Therefore, framing your body weight within normal limits is one of the most important ways to maintain your health, to avoid the risk of getting sick. Weight gain comes with the risk of developing health problems, such as cardiovascular disease, heart failure, high blood pressure, heart attack, stroke, joint disease, some types of diabetes and some types of cancer. (<https://www.cdt-babes.ro/articole/indicele-de-masa-corporala-imc.php>). 40% of children who are overweight or obese, and 60% of young people who develop this problem, will face the negative effects it generates throughout their entire lives (Kapedani, K., Mema, F., 2022, The situation of obesity and overweight children in Albania, *Journal of Physical Education and Sport*, <https://www.efsupit.ro/images/stories/iulie2022/Art%20209.pdf>).

At pre-pubertal age, general dynamic activity develops and improves, and mobile skills develop as a result of exercise. Dragnea A. (1999, p. 138) states that at this age the psychophysical characteristics that are extremely favorable for the acquisition of new dynamic structures and that can be consolidated and improved later must be fully exploited. In terms of the structure of the neurons, the brains of young schoolchildren are 1974-----

almost like those of adults, which are undergoing transformations that lead to a better flexibility of thinking. The psychic and physiological peculiarities of children aged 8-10 are predisposed to acquire simple and complex dynamic activities, correct and sustainable learning skills, if the training methodology is correct. (Mihăilescu L., Mocanu A., 2010, p.93). Also, specialist studies say that it is the cerebellum that plays a critical role in learning sensorimotor tasks and developing cognitive skills cognitive (Manto, M., Jissendi, P., 2012, Cerebellum: links between development, developmental disorders and motor learning”, *Frontier in Education*, <https://www.frontiersin.org/articles/10.3389/fnana.2012.00001/full>).

Although research shows the close connection between physical activity and a healthy life due to the beneficial effects of sports, unfortunately, many schools are still trying to increase the number of hours of math, science, foreign languages, etc. to the detriment of the time that should be allocated to psychomotor activities (Kingston, U, Adamakis, M.,Coata, J., 2020, Acute effects of physical education, structured play, and unstructured play in children's executive functions in primary school, *Journal of Physical Education and Sport*, <https://efsupit.ro/images/stories/noiembrie2020/Art%20442.pdf> )

At this age, children can easily learn to ride a bike, swim, skate, ski, etc. (Găișteanu M., p. 46). The capacity for dynamic learning is remarkable, but in order to fix some movements a systematic repetition is needed (Dragnea A., Bota A., 1999, p.136). Experts also agree that there is no age limit for the development of dynamic skills, but there are methods and means to be used depending on the physiological development of young students and periods of more intense development or relative stagnation that we must take them into account in planning their development (Dumitru M., 2012, p.3). Given the assessment of the somatic, functional and dynamic potential of the school population in Romania and the official statistics of the World Health Organization which places Romania on the third place in Europe in the ranking of overweight and on the second place in childhood obesity, we consider insufficient 2 hours of physical education from the core curriculum. At European level, research from 2018 shows that only between 20 and 40% of children aged 5 to 17 in Europe met the WHO recommendations of 60 minutes of moderate to vigorous intensity physical activity (Sallen J., Heim C., Labudova J., Onofre M, 2022, Basic Motor Competencies of 6- to 8-Year-Old Primary School Children in 10 European Countries: A Cross-Sectional Study on Associations With Age, Sex, Body Mass Index, and Physical Activity, *Sec. Movement Science and Sport Psychology, Frontiers in Education*, <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.804753/full>). Unicef points out the worrying fact that between 10-20% of children around the world suffer from some kind of mental disorder and this is largely due to insufficient physical exercise (Baena- Morales, S.,Ferriz- Valero, A.,Garcia- Taibo, O. (2022) Influence of cooperative strategies and mindfulness on the perception and control of emotions in primary physical education. A proposal to improve sustainability in the social dimension, *Journal of Physical Education and Sport*, <https://www.efsupit.ro/images/stories/iulie2022/Art%20200.pdf>).

Bringmann's research has shown that weekly physical education classes and especially extracurricular sports activities lead to improved endurance in students as well as improved psycho-dynamic performance, both cardio-respiratory and metabolic, with pre-teenage children being fit for training. aerobic, but instead the anaerobic capacity for effort is reduced. (Hangu S., 2013, p. 71). Teachers who support children in school physical education have a significant role, they also greatly influence the way they choose to spend their free time actively. Making PE lessons enjoyable has been shown to contribute to lifelong interest in sport (Oya, K.,Isihara, Y., 2022, Characteristics of enjoyment of physical activity by gender and favorability of physical education classes, *Journal of Physical Education and Sport*, <https://www.efsupit.ro/images/stories/iulie2022/Art%20217.pdf>).

A good opportunity to carry out extracurricular sports activities is the program S.a.S. (school after school). Since traditional physical education classes result in a decrease in children's physical condition level and a loss of their interest in such classes, it is recommended to look for effective, new and attractive ways such as elements of rhythmic gymnastics, step aerobics, dance classes , relays and games, which contribute to a harmonious development and increase the level of interest of children (Andrieieva, O., Kashuba, V.,Yarmak, O., Cheverda, A.,Dobrodub, E., Zakarina, A., 2021, Efficiency of children's fitness training program with elements of sport dances in improving balance, strength and posture, *Journal of Physical Education and Sport*, <https://efsupit.ro/images/stories/octombrie2021/Art%20382.pdf>).

There is evidence to suggest that when supplemented with appropriate teaching methods, environments designed to encourage active learning increase motor skill levels in children compared to traditional classroom environments (Hartikainen, J., Haapala, A., Poikkeus, Lapinker, E., Pesola, A.,Rantalainen T., Saaklahti, A., Gao Y., Finni T., 2021, Comparison of Classroom-Based Sedentary Time and Physical Activity in Conventional Classrooms and Open Learning Spaces Among Elementary School Students, *Frontiers in Education*, ) <https://www.frontiersin.org/articles/10.3389/fspor.2021.626282/full>. In Slovakia, for example, optional sports activities have been paid since 2004 (Slovakova, M., Bandicova, E., Eozim, R., Daubnerova, J., 2022, The effect of goal-directed extracurricular physical activities on development of physical abilities in children of early school age, *Journal of Physical Education and Sport*, <https://www.efsupit.ro/images/stories/mai2022/Art%20139.pdf>).

Programele de tip școală după școală (Ș.D.Ș.) s-au dezvoltat sub diverse forme în diferite colțuri ale lumii, având în comun același scop - de a oferi copiilor și tinerilor un loc sigur în care să meargă în afara orelor

de școală. În România, conform reglementărilor în vigoare, programul Ș.D.Ș. se adresează atât elevilor din învățământul primar, cât și elevilor din învățământul secundar și este definit ca un program complementar programului școlar obligatoriu, care oferă oportunități de învățare formală și nonformală, pentru îmbogățirea cunoștințelor, abilităților și deprinderilor, pentru consolidarea competențelor dobândite, pentru accelerarea învățării, precum și pentru învățarea remedială. (Ordinul Ministrului Educației 5349/2011 privind Metodologia programului Ș.D.Ș., Raportul Evaluării Impactului Reglementărilor: Conținutul și implementarea unui Program Național „Școală după școală”, 2016, p.11). După Diniz J.A., Careiro da Costa F., Onofre M., (2006, p.13), the good part is the recognition and importance of family, school and community intervention in the physical activities carried out by young people and the Ș.D.Ș program is seen as a priority.

Knowing that there are favorable periods for learning different skills, for the formation of general and specific skills and for social-emotional development and knowing that during these periods a series of windows of opportunities for child development are opened, we consider it appropriate to complement the designed dynamic activities. and carried out within the S.a.S., by developing the pattern of a program of dynamic activities focused on the prophylaxis of overweight and obesity, harmonious physical development, mental development and the cultivation of proactive social behavior. Researchers have found that using a combination of implicit and explicit approaches to character building is most beneficial for children, giving them more opportunities to develop life skills depending on how the sports environment is structured and the types of skills that teachers/coaches choose to teach (Corliss, B., Kramers, S., 2022, How Sports Can Prepare You for Life, *Frontier in Education*, <https://kids.frontiersin.org/articles/10.3389/frym.2022.666078>).

### Materials and methods

For an efficient design of the dynamic activities carried out in the S.a.S. in Arad County, we considered it necessary to determine by measurement and testing the biomotor level of children. The research sample consisted of 300 children aged 9-10 years, from Arad County (151 boys and 149 girls), from 5 schools: 29 boys and 32 girls from Mihai Eminescu High School; 25 boys and 28 girls from Nicolae Bălcescu Secondary School; 33 boys and 33 girls from Aron Cotruș Secondary School; 55 boys and 52 girls from the National College of Preparandia Dimitrie Țichindeal; 9 boys and 10 girls from the Caius Iacob Arad Secondary School. We mention that the customs of scientific research in working with minors were respected: a collaboration protocol was established between the Doctoral School of Sports Science and Physical Education, the University of Pitești and each school unit and the parents also signed the participation agreement. The tests and control tests took place in the school units between April 2021 and January 2022. The first measurements made were those that determined: height, (measured in meters); weight (measured in kg); and calculated the body mass index (I.M.C.), the one that reports the child's weight to his height and the Ruffier index (I.R.) In children, the body mass index (B.M.I.) changes periodically because they are growing and developing, with height and weight values constantly changing. As a benchmark of our research we took the following indicative values: (<https://calculator-imt.com/ro-md/imc-copii/>)

Table 1. Representative B.M.I. values for girls, 9-10 years

BMI category	Severe underweight	Underweight	Normal	Overweight	Severe overweight
<b>BMI value</b>	<b>13,4</b>	<b>14,2</b>	<b>16,9</b>	<b>20,7</b>	<b>23,4</b>

Table 2. Representative B.M.I. values for boys, 9-10 years

BMI category	Severe underweight	Underweight	Normal	Overweight	Severe overweight
<b>BMI value</b>	<b>13,9</b>	<b>14,6</b>	<b>17,1</b>	<b>21,4</b>	<b>25,0</b>

In order to evaluate the children's physical condition, we used a functional, cardiovascular test (Ruffier test), assessing the evolution of the heart rate at a standard effort, respectively 30 knee flexions performed at a constant pace. The results of the Ruffier test showed us how adapted the body is to a sustained effort, but also its ability to return after the effort. Thus, depending on the value of the index, we have the following values and ratings:

Table 3. Ratings for Ruffier Index values

RATINGS	VALUE
<b>VERY GOOD</b>	<b>&lt; 0</b>
<b>GOOD</b>	<b>0- 5</b>
<b>MEDIUM</b>	<b>5- 10</b>
<b>SATISFYING</b>	<b>10- 15</b>
<b>UNSATISFYING</b>	<b>&gt; 15</b>

To determine the motor capacity in children aged 9-10, we used 8 control tests:

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--to determine the speed of travel- running with a top start on the distance of 25 m;  
 -for evaluation of speed and agility, but also the ability of the individual to start, stop and balance, in a series of very fast movements over short distances, with departure and return at different predetermined points - the "Hexagon" test ;  
 - for balance assessment - "Flamingo" test. In this test the student must stay in balance for as long as possible on one leg on a 10 cm slat. width, the other leg being flexed back and held at the ankle with the hand on the same side;  
 -for assessing abdominal strength - lifting the torso from the back with the hands at the nape of the neck in 30 seconds, the legs bent and the soles on the ground. The correct number of repetitions is recorded  
 -for evaluating the back muscles- extensions of the torso from the front to the back with the hands at the nape of the neck in 30 seconds. The number of correct repetitions is recorded;  
 -for evaluating the muscles of the legs- the long jump from the spot, the length of the jump being measured from the line drawn on the ground behind which the student stands with his toes and until the last mark left on the ground after the jump (heel, hand, sitting);  
 -for the evaluation of the muscles of the arms- tractions with both arms, simultaneously, on 2 gymnastic benches placed one in the extension of the other, without stopping. The test is not against the clock, only the number of stops is recorded;  
 -for the level of psycho-dynamic coordination -the psycho-motor coordination test. Blindfolded, the student walks on a straight line with a length of 7 m., Visibly drawn on the ground, stopping where he thinks he has covered the 7 m., Respectively where he appreciates that it is the end of it. An X is drawn between the student's feet where he stopped and measured with „ - ,, or „ + ,, from the stop at the end of the 7 m line. (,, - ,, if he stopped before the end line and „ + ,, if it exceeded the end of the line). As no statistical indicators can be calculated for this test, it will not be found in the following tables, but we also analyzed and interpreted the results of this test, separately from the others.

## Results

### a) Analysis and interpretation of results of physical development and the level of the effort capacity to the whole group:

Following the research I have analyzed the results registered by the subjects in the sample from the point of view of the statistical indicators determined by each physical test or sports exam. Table 4 and 5 contain statistical indicators determined at the level of a group: boys and girls.

Table 4- Statistical indicators at physical development and effort capacity-boys (151)

Sample researched	Measurements	Statistical indicators		
		M	S	CV
	Height ( m.)	1,3810	0,0552	4,00%
	Weight(kg.)	36,8543	7,5348	20,44%
	( BMI)	19,2932	3,3167	17,19%
	( RI.)	12,5980	1,6679	13,24%

The optimal height level for boys aged 9-10 is between 1.29-1.38m. The arithmetical average of the whole sample of boys is 1.3810 which means that they are around the optimal value and the value of the standard deviation shows us the fact that the majority of the results is around this average number. The variation factor being low, means that the group is homogenous.

An aspect that can be worrying is the value of the arithmetical average at weight. With 36.8543 kg it is above the optimal level at this age (between 25-32 kg). The value of the standard deviation is 7.5348 and show that the results are very close to the average but the variation ratio is 20.19%, meaning that the group is not very homogenous.

The optimal value for B.M.I. for boys should be 17 but the arithmetical average of the sample of boys is a little bit higher (19.2932). The homogeneity of the group is medium with a value of the variation ratio of 17.19% .

The effort capacity and the power of the body to recover after physical exercise was determined with the help of the Ruffier test, the average of 151 boys being that of 12.5980. This value qualifies them at the "satisfying" level. At this test the group proved to be a homogenous one.

Table 5 –Statistical indicators at physical development and effort capacity –girls (149)

Sample researched	Measurements	Statistical indicators		
		M	S	CV
	Height ( m.)	1,3403	0,0495	3,69%
	Weight(kg.)	32,1678	5,9589	18,52%
	( BML)	17,8450	3,1898	17,88%
	( RI.)	12,4087	1,5189	12,24%

The arithmetical average of the whole sample of girls (1.3403) fits the optimal values for their age (1.28-1.39 m) and the homogeneity of the group is good (3.69). Compared to the arithmetical average of the boys' weight which surpassed the optimal value, the girls' average is closer to the optimal value (32.1768 kg). On the other hand the homogeneity of the group is not that good, with a variation ratio of 17.88%, the group being a heterogeneous one. As for the girls we may notice a slight tendency to exceed BMI compared to the optimal value, the average being of 17.84 and the value of the standard deviation (3.1898) prove us the fact that most of the results validate this average. The I.R. average of the 159 girls is 12.40, their grade being "satisfactory". We can also notice a good homogeneity of the group according in terms of I.R. (12.24%).

**b) Analysis and interpretation of results of motional capacity of the children aged 9-10 at a group level:**

Further on in the research I have analyzed the results of all the subjects in the sample in terms of statistical indicators according to the reference system for each test. In tables 6 and 7 we can find the statistical indicators determined at a group level for boys and girls.

Table 6- The value of the statistical indicators for the sample of boys (151)

Assessment/ Evaluation test	Fast running 25 m (s.)	The Hexagon Test (s.)	The Flamingo Test (min.)	Raising the torso (nr. rep.)	Stretching of the body (nr. rep)	Long jump from a standstill (m)	Pulling on the gymnastics bench (nr. of stops)
<b>Statistical indicators</b>							
<b>Arithmetical average</b>	5,9505	9,3831	40,7297	20,8446	28,2230	1,3152	0,0878
<b>Standard deviation</b>	0,5481	2,2582	45,5720	3,3586	4,5349	0,1541	0,2831
<b>Variation ratio</b>	9,21%	24,07%	111,89%	16,11%	16,07%	11,72%	322,25%

For the 25m fast running the Evaluation System for Sports at primary classes, mostly at the 3<sup>rd</sup> and the 4<sup>th</sup> grade (aged 9-10) shows that the optimal score for running the distance in order to get the mark "very well" is 5.7 seconds for boys and 6.0 seconds for girls (<https://www.efsdoc.ro/wp-content/uploads/2017/02/grile-evaluare-primar.pdf>). The average of the values obtained by the sample of boys is that of 5.9505 sec., a value that is situated above the minimal level of 6 and the variation ratio is small which shows the homogeneity of the group at this test.

At the "Hexagonal" test the average value that has been registered is that of 9.3831 sec. The variation ratio for all the schools is around 20, the group being somehow homogeneous.

At the "Flamingo" test the average registered by the boys was that of 40.7297 minutes and that happened because their attention was distracted from the beginning of the test by the external environment or their colleagues and due to this they kept a balance beyond 10 sec. The value of the variation ratio is very high, being around 84.16%-152.78% that shows lack of homogeneity in the researched sample.

At raising the torso test the arithmetical average of the boys sample is 20.8446. The marking schemes from the National Evaluation System show at this level and for the mark "very well" a number of 11 repetitions, performed correctly, without a time limit. The evaluation has been done for 30 seconds, in which there were 20.84 repetitions which rank the students on a medium level regarding abdominal muscles.

At stretching the body test the average of the correct movements in 30 seconds is that of 28.2230.

At the long jump from a standstill test the average of the length for boys is 1.31m. Compared to the marking scheme from the National System which stipulates 1.35m for "very well" we can notice that the average in our preliminary research is 4cm lower. The standard deviation has a small value which is between 0.12-0.15 and the variation ratio between 9.19%-11.92%, the homogeneity of the sample being a good one.

Pulling on the gymnastics bench test was an easy one for the students and as an evidence for this is the number of stops, 0.08, on the two gymnastic benches. Thus we can notice that the students have a common strength in their arms managing to finish the test easily.

Table 7- The value of statistical indicators, the girls sample (149)

Assessment/ Evaluation test	Fast running 25 m (sec)	The Hexagon test (sec)	The Flamingo test (sec)	Raising the torso (nr. rep.)	Stretching of the body (nr. rep)	Long jump from a standstill (m)	Pulling on the gymnastics bench (nr. of stops))
<b>Statistical indicators</b>							
<b>Arithmetic average</b>	5,9362	8,9513	43,5933	20,8133	28,2533	1,3053	0,1133
<b>Standard deviation</b>	0,4249	2,9247	47,2496	3,1862	4,0385	0,1547	0,3170
<b>Variation ratio</b>	7,16%	32,67%	108,39%	15,31%	14,29%	11,85%	279,71%

For the 25m fast running the Evaluation System for Sports at primary classes, mostly at the 3<sup>rd</sup> and the 4<sup>th</sup> grade (aged 9-10) shows that the optimal score for running the distance in order to get the mark "very well" is 5.8-6.0 seconds for girls. (<https://www.efsdoc.ro/wp-content/uploads/2017/02/grile-evaluare-primar.pdf>). The average value of the girls' sample is 5.93, which is better than the boys' sample.

The Hexagon test requires reaction speed, agility and spatial orientation. For the whole girls' sample the average value is 8.95 sec. The standard deviation for girls is between 1.18-2.92 while the variation ratio is 13.95-32.67.

The Flamingo test was a real challenge for the students as they had to keep their balance on one leg on a narrow surface. The average registered by the girls was that of 43.59.

At raising the torso test the arithmetical average for correct repetitions in 30 seconds was that of 20.81. The National Marking Scheme stipulates for this age level for girls a number of 10 repetitions performed correctly without a time limit for the mark "very well". The evaluation has been done in 30 seconds, in which an average of 20.81 repetitions rank the students on a medium level regarding the abdominal muscle development.

What is more the stretching of the body test has been done in 30 seconds, as well, and the average for the whole sample of girls is 28.25.

Unlike the boys, the girls have shown a better coordination in moving the arms and the legs and the average of the length of the jumps for the girls is 1.30m.

The average of the stops made by the girls during the pulling on the two gymnastic benches is 0.11. From this point of view we can notice that they have a good strength in their arms, as well.

At the test of spatial orientation and appreciating the distance, just like in the boys' case, most of the girls (132) have chosen to stop before the finishing line with a maximum of 1.42m and only 18 have surpassed it with a maximum of 0.52m.

### Discussions

The results obtained during the research show us the fact that according to their height both boys and girls fit the level of their age (1.29-1.39m). A worrying reason could be the results of the boys' weight, the average value being with 3-7 kg more than the average value admitted by the optimal standard for this age. Except from one of the schools, the girls fit the optimal weight level, that is between 30-32 kg. Due to these values the B.M.I. shows us an ascending path, mostly for boys, who have the tendency of becoming overweight.

The Ruffier indicator was the one that gave us information about the capacity of the body to adapt to effort and to recover after training and the results obtained are from medium to big ones while most of the subjects could get the "satisfactory" mark.

Due to the Covid-19 pandemic, the results could be justified somehow because the students were limited in training or doing sports so that their exercise capacity and physical resistance decreased. The students had to attend online sports classes for a long time (several months) and the quality was weaker compared to the ones at school face to face. The analysis of the results obtained after the evaluation of the subjects for the determining the motion capacity, allowed us to conclude the following:

- the average of the results obtained at the running test on the 25 m speed by the girls is in an optimal scale (5.93), and from the sample of boys we expected to record better times than 5.95 as their result was. By observing the subjects regularly, I noticed that few of them have a good reaction speed at the start and some of them have deficiencies in running technique, (especially in the specific movement of the arms) and many of them tend to slow down before the finishing line, thus wasting time;
- "Hexagon" was a new test, which is not among the classic assessment tests in physical education, but the subjects easily understood what it consisted and showed average speed and agility, the times obtained by them being satisfactory. (9.38 s.- boys and 8.95 s.- girls);
- the level of balance, found with the help of the Flamingo test, is very different from one subject to another, the results obtained dividing them into 3 main categories: subjects who lost their balance very quickly (after less than 5 s.), some who managed to maintain a stable position over 3 min. and the category represented by the vast majority, those who maintained their balance for 1-2 min. Most have shown a good ability to concentrate, associating this with the instinct of staring at a fixed point;
- due to the fact that many of the classes were held online the students had the possibility to do the exercises to strengthen their abdominal muscles, their back, their arms, so that the results they got at these tests were good enough, the average for raising the torso being of 20.81( boys) and 20.84(girls), for stretching the body 28.22(boys) and 28.25(girls). At pulling on the gymnastic bench only a small number of students finished the test with disruptions.
- walking on the 7m line drawn on the ground showed us a good appreciation of the direction of travel, the differences occurring in the appreciation of the distance they had to travel, in this case predominating the subjects who stopped before the end of the 7m. Some of them walked the distance hesitantly, even showing thrill. Fear of not exceeding the 7m point. I consider that it was the one that determined them to prefer to stop even 1-2 m. before.

## Conclusions

Being aware of the current situation of children aged 9-10, identifying the problems facing this generation and anticipating future trends, we conclude that the intervention with new methods, contents and techniques, applied within the After School Program can be useful and beneficial for improving the current condition. Within the pattern / program that we want to implement in the After School Program, we will have to consider both the use of methods that contribute to a better and balanced physical development, and some that increase the level of general and specific motional capacity. The chosen teaching-learning-practice strategy must be a harmonious complement to what the compulsory curriculum offers and the approach followed must take into account the personal development windows occurring at this age. Theoretical knowledge, physical development and experience gained in a non-formal system must have a medium and long-term impact, and they can be useful and easily exchangeable in later situations. The methods and techniques to be chosen and used must face the health problems, must prevent the onset of overweight and must educate the young person so that sport to become an important and constant element for him throughout his life. Education for a proper eating style is also part of the goal set.

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