

**OBSERVATIONAL STUDY REGARDING SOMATICAL  
DEVELOPMENT FOR THE MIRON COSTIN SECONDARY  
SCHOOL SUCEAVA 12 YEARS OLD STUDENTS**

*Petrariu Ileana<sup>1</sup>*

*Stefan cel Mare University of Suceava<sup>1</sup>*

**Keywords:** adolescence, students, somatic development, evaluation tests

**Abstract:** This scientific work was conducted in order to present details regarding the somatic development level of the 12-year-old students at the Miron Costin Secondary School in Suceava. In this study, a total of 100 students were tested: 42 girls and 58 boys. They have been subjected to a series of tests to assess the level of somatic development (height, body mass, arm span, BMI).

**Introduction:** Physical development is the result as well as the action to influence the correct and harmonious growth of the body, materialized in morphological (somatic) and functional indexes in the healthy body.

The level of morpho-functional indices is the cumulative result of hereditary, environmental and social environmental factors. Physical exercise is part of the last category.

**The aim** of the research is to evaluate the somatic development level of 12-year-old students at the Miron Costin Secondary School in Suceava. In this study, 100 students were somatically tested, out of which 42 were girls. The somatic evaluation consisted of measuring the height of the body, the arm span and the body mass. At the same time, the body mass index was calculated to see in which category the students fall.

In order to achieve the proposed goal, the following **objectives** were formulated:

1. Studying the theoretical concepts and the practical experience of the physical education specialists and sport that perform their activity at the level of gymnasium education, on the methodology of application of the means specific to the general physical development.

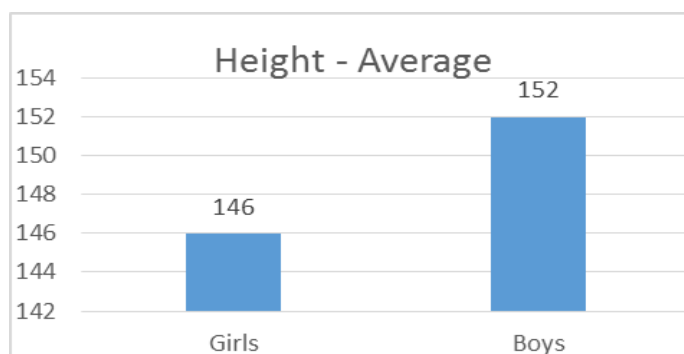
2. The assessment of the somatic development level of gymnasium students.

### The experiment itself

In this study, 58 boys and 42 girls (100 students) were tested. The table No. 1 are presented the results obtained for the somatic testing of the 100 students.

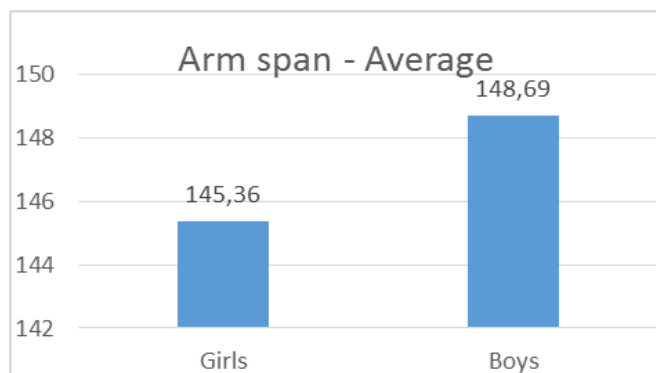
Somatic testing of 12-year-old girls					
Statistical index	Height	Arm span	Body mass	BMI	BMI INTERPRETATION
Average	1,46	145,36	40,90	18,88	90,4% normal weight
Standard deviation	0,08	9,40	9,88	2,98	4,8% overweight
Variability coefficient	5,61	6,46	24,14	15,80	4,8% underweight
Somatic testing of 12-year-old boys					
Statistical index	Height	Arm span	Body mass	BMI	BMI INTERPRETATION
Average	1,52	148,69	47,12	21,04	86,21% normal weight
Standard deviation	0,07	7,62	10,20	2,79	13,79% overweight
Variability coefficient	4,62	5,12	21,66	13,27	0% underweight

Table 1. Results from somatic testing of 12-year-old students



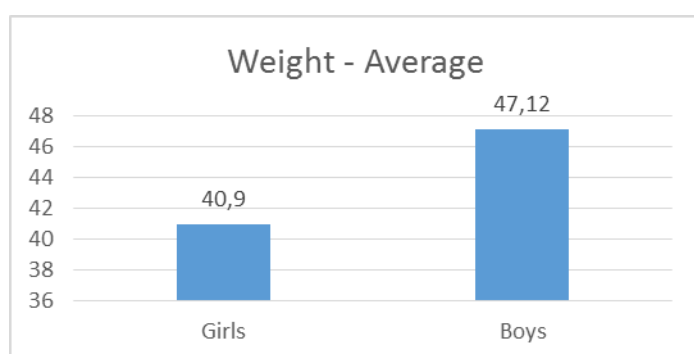
Graphic 1. The graphical representation of the "height" parameter

Graphic 1 shows the average values for the somatic parameter "height" for both girls and boys. Girls received an average of 146cm, and boys of 152cm.



Graphic 2. The graphical representation of the "arm span" parameter

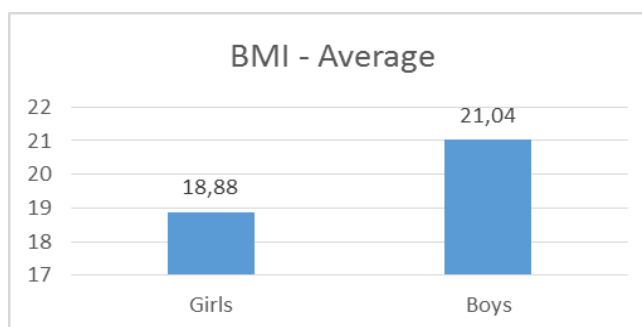
Graphic 2 shows the average values for the "arm span" somatic parameter, for both girls and boys. The girls got an average of 145.36cm and the boys of 148.69cm.



Graphic 3. The graphical representation of the "weight"

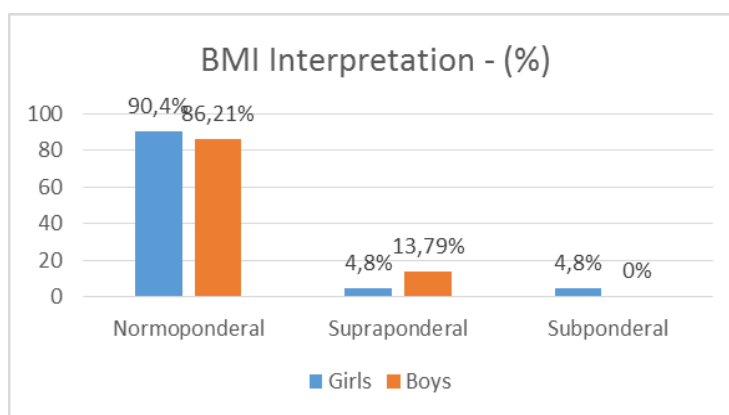
Graphic 3 shows the average values for "body mass" for both girls and boys. Girls received an average of 40.9kg and boys 47.12.

The weighting of each tested student was established by calculating the body mass index of each subject from the body mass and height values.



Graphic 4. Graphical representation of body mass index (BMI)

Graphic 4 shows the average values for the body mass index for both girls and boys. For girls, average of the index has a value of 18.88, and for boys, 21.04.



Graphic 5. Graphical representation of Body Mass Index Interpretation (BMI)

Graphic 5 represents the interpretation of the body mass value for the tested girls and boys. It can be seen that 90.4% of the tested girls are normal weight, 4.8% are overweight, and 4.8% are underweight. Regarding boys tested, 86.21% are normal weight and 13.79% are overweight.

### Conclusions:

In terms of somatic testing, we can conclude that most of the tested students have normal somatic development, age-specific.

Regarding body mass index, 90.4% of the tested girls are normoponderal, compared to 86.21% for the boys tested. 13.79% of boys tested and 4.8% of girls are overweight. Also, 4.8% of the tested girls are underweight.

It is advisable to adopt a healthy and correct diet for 12-year-olds, given that the age-specificity brings about major changes in their body, both somatically, motrically and functionally. We also recommend practicing regular physical exercise at both physical and leisure time and, last but not least, training and improving all basic motor skills, as well as application-utilitarian use of pupils during the classes physical and sports activities.

#### **References:**

- [1] Cârstea, Gh., 2000, - Teoria și metodică educației fizice și a sportului, Ed. AN-DA, București.
- [2] Dragnea A., Mate-Teodorescu S. Teoria Sportului. București: Fest, 2002, p. 280-281, 128
- [3] Epuran M. Metodologia cercetării activităților corporale. București: Editura FEST, Ediția a II-a, 2005, p. 50, p. 57, p. 205
- [4] Plopșoreanu Marin, Dezvoltare fizică armonioasă, Ediția a III – a, Editura Păzitorul Adevărului, Făgăraș - 2009
- [5] Caiet de evaluare la educație fizică în conformitate cu "Sistemul Național Școlar de Evaluare la disciplina Educație fizică și Sport" Nr. 37 218/ 9.08.1999

### **STUDIU CONSTATATIV PRIVIND DEZVOLTAREA SOMATICĂ A ELEVILOR DE 12 ANI DE LA SCOALA GIMNAZIALA MIRON COSTIN SUCEAVA**

*Petrariu Ileana<sup>1</sup>*

*Universitatea Stefan cel Mare din Suceava<sup>1</sup>*

**Cuvinte cheie:** adolescență, elevi, dezvoltare somatică, teste de evaluare

**Rezumat:** Această lucrare științifică a fost realizată cu scopul de a prezenta detalii cu privire la nivelul de dezvoltare somatică a elevilor de

12 ani de la Școala Gimnazială Miron Costin din Suceava. În cadrul acestui studiu au fost testați un număr de 100 de elevi: 42 de fete și 58 de băieți. Acestora li s-au aplicat o serie de teste pentru evaluarea nivelului de dezvoltare somatică (talie, masa corporală, anvergura).