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THE EVOLUTION OF SOME PARAMETERS OF MOTILITY IN STUDENTS IN PHYSICAL EDUCATION AND SPORTS

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Abstract: *Throughout the all known history of humanity, physical activities - regardless of type or organization - have occupied an important place in people's lives. Given these aspects, to which we can add its pedagogical, psychological, sociological valences, the body education is transformed into a higher category, which motivates the wide range of concerns related to the evolution of all the instruments designed to optimize it. On the other hand, given the special character and the particular place that the physical education and sports students occupies in relation to the mentioned category, we believe that the concern for monitoring the evolution of some components of human motility, highlighting the tendency that they register, is motivated.*

Key words: *motility, student, physical education, sports.*

1. Introduction

The formation of the modern man implies his multilateral development from the physical, intellectual, ethical, aesthetic etc., in relation to the demands of the contemporary society, according to the real aptitudes on which the coordinates of the human personality are outlined.

Perspective a few years ago, reality today, the European integration of the Romanian education at the academic level can be viewed optimistically and realistically, under the conditions of re-analysing the functions of higher education: formative, innovative, mobility and professional reform, cultural, political, perpetuating and social. An important feature of the educational phenomenon, at the present stage, is the character of permanence, its presence in the whole human existence. The object of the permanent education is the integration of the new social realities in the knowledge fund acquired during the school years. The considerable increase of the role of education in the multilateral development of young people requires the increase of the activities through which this can be achieved, physical education being one of them [3]. The initial training of the specialists in our field of activity cannot be

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left out of the general process of restructuring and adaptation of the Romanian higher education, being necessary to find the best didactic, methodological and technological solutions, to make our system compatible with the European one at higher standards [5].

The critical signals regarding the performances of the Romanian higher education, mainly target the evolution towards excessive "theorizing", the contents not being connected to the real life requirements in which the fast social insertion is primary. The Romanian higher education can be blamed today for a tendency of resistance to change and of sometimes unjustified acceptance of quantitative increases, despite the increase of quality, performance and competitiveness. "More and more opinions are being recorded that in these conditions, the faculty graduate in contact with the labour market, sometimes registers blockages due to the deficiencies of the current system of training of specialists: lack of creative, constructive and entrepreneurial education (to know how to do), lack of concern for forming interpersonal correlation skills (to know how to live with others), neglect to develop initiative, search for new and take responsibility (to know how to be)" [6].

Although in recent years, more and more often we find qualified opinions regarding the need for regular exercise of physical exercises (in any form of organization, but especially independent), as a tool to compensate for the effects of modern life expressed in terms such as robotization, technology, computerisation, modernization of transport etc. [4], in Romania, inconsistent policies and strategies regarding the promotion of physical exercise as one of the conditions for a healthy lifestyle, places us in a shameful 1st place in Europe in childhood obesity, evaluations regarding on the motor skills of the students being also worrying [2]. Equally worrying is the tendency to decrease the weight of physical exercises in the range of concerns of young people, as they get older.

All this, determined us to try to capture the tendency of the evolution of some components of human motility, to a category of population that becomes with each generation, an image vector [1].

2. Objectives

The area that is the subject of our concerns, with all its components, can be perceived specifically only in direct, biunivocal relationship, with the physical effort and with the whole complex of consecutive effects of the adaptive reactions of the organism, both at the biological and the psychic level. The physical effort involves the organism as an open and dynamic system throughout the life, determining a chain of processes: growth, development, optimization and maximization of the biological or performance potential, of recovery, regeneration etc.

The necessary condition for the development of adaptive capacity is the presence of environmental stimuli, natural or artificial, spontaneous or programmed, capable of demanding the responsiveness of the organism. Thus, by repetition of the stimuli, the aim is to adapt the organism to the specific effort, which implies a morpho-functional improvement, an increase of the vital potential of the organism, as well as of its non-specific capacity to resist external stimuli [7].

In the context that we tried to outline previously, connecting the problem of psycho-motility seen as a result of integrating motor functions with psychic ones as an effect of education against the background of nervous system development [9], we can define the objectives of this approach.

Although we use objective data, the aim is not to compare individual performances in a horizontal study (between females and males) or vertically (between different generations), but to highlight a possible tendency during the investigated period and also, possible causes and solutions to remedy the deficiencies found [8].

3. Material and Methods

The study was conducted between 2010-2019 and involved 335 students (98 females and 237 males) of the study program Physical education and sports, 1st year (Table 1).

Samples of the study Table 1

Year	Female	Male
2010	9	16
2011	11	20
2012	7	21
2013	6	25
2014	4	19
2015	19	28
2016	8	28
2017	7	23
2018	15	25
2019	13	24
TOTAL	98	237

We need to mention that only students who had a frequency of more than 80% and who supported the practical evaluation at the end of the 2nd semester were included in the study.

To carry out the research, we used the field test method, consisting of 3 evaluation tests. Starting from the fact that one of the essential components of psychomotricity is the motor qualities, we aimed to evaluate the speed (100m), the explosive force of the lower limbs (long jump) and the explosive force of the upper limbs (shot put).

The evaluation was carried out at the University of Oradea stadium, as follows:

- 100m: 2 runners in each series with timing and individual recording of times, in a single round; the girls run first, then the boys;
- Long jump: free take off, measurement from the first sign to the last sign left in the sand; 2 attempts, from which the best one is chosen; girls jump first, then boys;
- Shot put: throws are performed in the throwing circle, with 3 kg material for girls and 5 kg for boys; 2 attempts, from which the best one is chosen; girls throw first, then boys.

The collected data were processed using the statistical tools (AV, STDEV and COVAR) of Microsoft Office 2010, the last two to highlight the evolution of the level of homogeneity of the samples. The graphics were realized using the EXCEL program, which is efficient and easy to use.

4. Results and Discussions

The results of the evaluations were drawn up, based on them the averages were calculated on test and year, which in turn were transformed into evolution graphs. We find that:

- Regarding the test for speed (100m), both for girls and boys, the average of the results is fluctuating, but with a clear tendency of negative evolution (Figure 1),

the loss being of 1,62 sec for girls and 1,1 sec for boys.

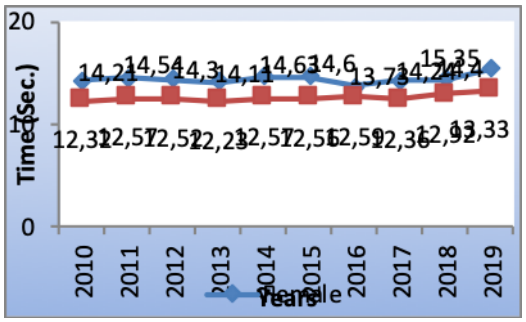

Fig.1. *The evolution of average in the 100m test*

Similarly, the COVAR index expresses a fluctuating evolution, with a tendency to increase the homogeneity as the results decrease (Fig. 2), against the general background of a good homogeneity.

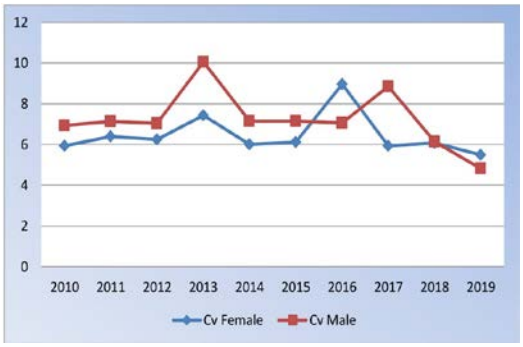

Fig. 2. *The evolution of COVAR in the 100m test*

We can also see that the values that denote the lowest level of homogeneity are recorded in the years with the highest averages, which makes us believe that they are due to a small number of students with special results.

- In relation to the test for explosive force of the lower limbs (Long jump), the average is also fluctuating, more in female than male, but the tendency of negative evolution is obvious (Figure 3). The loss is 0,51 m for girls and 0,73 m for boys.

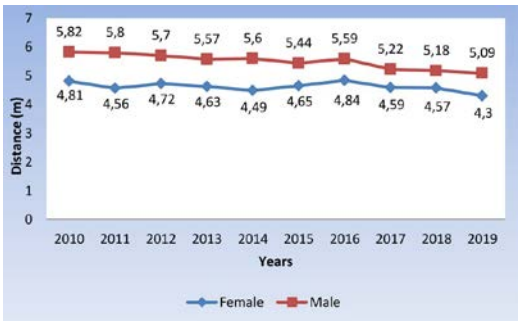

Fig. 3. *The evolution of average in the Long jump test*

As in the previous test, the COVAR evolution shows an oscillating evolution, indicating an increase of homogeneity as the results decrease and a decrease of the homogeneity in the years with the best results (Figure 4).

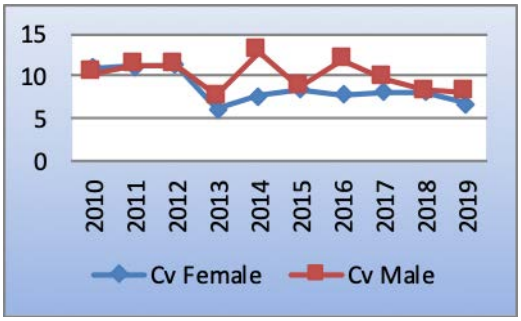

Fig. 4. *The evolution of COVAR in the Long jump test*

Also, we believe that the values that show a reduced homogeneity, coincide with obtaining high results based on exceptional individual evolutions, which have determined the growth of the averages.

- Regarding the last test (Shot put), the evaluation of explosive force of the upper

limbs, highlighted the same trend of decline in the performance (Fig. 5). In absolute value, the decrease is 1,45 m for girls and 1,07 m for boys. The same oscillating evolution is observed, but with a very clear tendency.

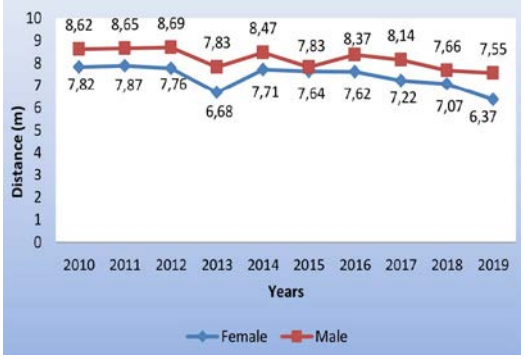

Fig. 5. *The evolution of average in the Shot put test*

In the same register, COVAR illustrates a similar situation (Fig. 6), with an evolution almost identical to that observed in 2nd test.

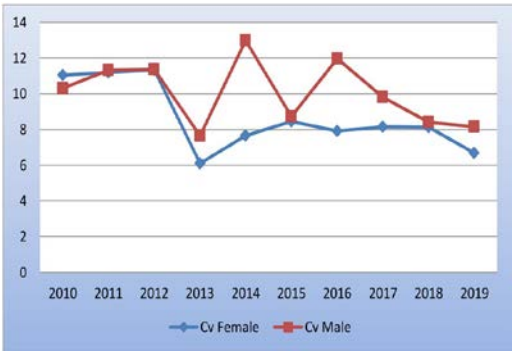

Fig. 6. *The evolution of COVAR in the Shot put test*

As we have observed in the previous situations, the homogeneity of the group's increases as the performance declines and decreases in the years in which the best results were obtained.

5. Conclusions

By signing the Bologna declaration in 1999, Romania became a member of the Process of the same name, thus committing itself to include the objectives set among the priorities of the Romanian higher education.

This fact has materialized in the course of several steps which consisted, among others, in the modification of the specific legislation, of the structure through the passage to the 3-year license education, of the curriculum, etc. All these have generated effects, including the reduction of the time dedicated to the exercise (practical activity), with approx. 50%, a reduction which in turn generated effects in terms of efficiency of the didactic activity, aspect previously proven.

On the other hand, the decrease of the homogeneity of the groups can be explained by the decrease of the motivational role of the admission, which is no longer addressed to well-trained individuals and possibly convinced of the presence or absence of vocation for the future profession. Of course, it may be necessary to discuss the impact of modifying the financing system of academic education in general and of vocational education in particular, but probably on another occasion.

In recent years, it has been extremely frequently commented, the subject of the need to identify solutions to offset the effects of new technological developments on all people but especially on young people. We refer to the increasing absence of activities that involve consistent physical effort and, of course, the effects that this reality generates.

A World Health Organization statistics from 2014 show that worldwide, over 38% of individuals over the age of 18 were overweight and that the prevalence

of insufficient physical activity in young people over the age of 15 in Europe is between 20 and 60%, depending on the country. [10]. In another statistic of the same institution [11] regarding the proportion of the overweight population, Romania occupies an honourable place 6 in Europe, with a percentage of 55.8% of the population over 18 years.

Despite these evidences, the paradigm promoted by education policies in Romania over the last 30 years does not seem to have had a positive evolution.

We do not want to promote a protest, but only to draw a new alarm signal, because the students of yesterday, today and tomorrow are among those who need to become not only vectors of image but also promoters of physical exercise, within an appropriate social framework.

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