

**MINISTRY OF EDUCATION AND SCIENTIFIC RESEARCH  
NATIONAL UNIVERSITY OF PHYSICAL EDUCATION AND SPORTS  
BUCHAREST**

**ABSTRACT OF THE  
DOCTORAL THESIS**

**SOMATOPSYCHIC EFFECTS OF PSYCHICAL ACTIVITIES FROM  
THE FEMALE STUDENTS IN THE FRAMEWORK OF NON-PROFILE  
COLLEGES CONSISTENT WITH NATIONAL REQUIREMENTS**

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## **Introduction**

The relevance of this research subject consists in the attempt to "counter" through a pluralist and intensive program, the measures, norms and laws in force, which harm the physical education syllabus in non-profile universities, through the small number of hours allocated to this discipline.

These problems have determined us in searching measures, methods, activities with the help of which we could compensate the lack of coherent laws and regulations, and meet the objective of the multi-factorial development and instruction of the youth for the best social integration.

The period of College is considered the most complex stage of development of the human being, the stage in which the individuality is shaping up and start the begin stabilizing and personality shaping and marks the transition to the kickdown, therefore the adult age.

This generation is represented to a large extent by the student populations and the quality of their training and instruction conditions in its turn the development of our society.

The subject study deals with the segment represented by female students, the very ones who begin, at this age, defining their identity as future business women, wives, mothers, and who would have to integrate rapidly in the modern society.

This works is structured in three parts, each of them contributing, through the themes they approach, to the multi-faceted characteristics of this research. The first part of this works, dedicated to the theoretical, methodological and conceptual fundament, consists of six chapters, as follows:

**The first** part includes the theoretical fundament, the one of the scientific research methodology, and consists of six chapters approaching the following aspects:

- ✓ The reasons for the selection of this subject and its relevance;
- ✓ The science of physical activities in our times;
- ✓ The Romanian education system and the integration into the European Union;
- ✓ The human psychic system – organization, functioning, components;
- ✓ The concept of somatopsychic development;
- ✓ Importance of the psychomotricity in the somatopsychic development.

**Part two** refers to the preliminary research having the purpose of verifying the veracity of the objectives proposed, as well as of the tests and trials initiated, to trace the correct and concrete directions during the research proper.

This part of the works also includes the conclusions resulting from the research.

We are summarizing in brief the three chapters constituting this part:

- ✓ Premises, objectives, goal and hypotheses of the preliminary research;
- ✓ Experimental frame of the preliminary research, comprising the human subjects, the place and the stages of the research; research methods and techniques employed; tests, questionnaires and trials employed; contents of the action systems;
- ✓ Data presentation, processing, analysis and interpretation and, not least, conclusions resulting from the result analysis.

The preliminary research involved 30 voluntaries divided into 2 groups, the control group and the experimental group.

The female students participating in the experiment were allotted randomly to the two research groups, the subjects being in the 1<sup>st</sup> and 2<sup>nd</sup> year of the various faculties within the UNIVERSITY OF BUCHAREST, aged between 18-20 years, and the research took place in the gym rooms of the Law Faculty of the same University.

The period when this research took place was between January 18 - May 23. 2010, and October 18. 2010 - May 21. 2011.

In the preliminary research we will use several types of measurements, tasks and tests: anthropometry measurements and measurements of the proportionality indexes, general motricity tests, specific tests and trials for the psychomotricity testing, psychological self-awareness tests, personality tests.

In this first research stage, **the hypotheses** are formulated around the modification of the morphology (somatic) indexes, as well as of the proportionality indexes and implicitly around the influence these changes have on the psychological aspect.

1. If somatic indexes could be modified and improved through the actions of gymnastic body activities.
2. If somatic modifications may draw upon them modifications of self-awareness and even of the selfesteem.

### **Contents of the action systems for the experimental group:**

- ❖ **The independent variable** has been evidenced through a complex program comprising:
  - Specific exercises for artistic training;
  - Specific exercises aimed at developing the lateral ability, space orientation with rapid direction changes;

- Specific exercises for the development of static and dynamic balance, with work in different planes, on various height levels;
- Exercises with portable objects to develop ambidextrous qualities, coordination;
- Exercises with music background, with the creation of complex structures.
- ❖ ***The dependent variable*** has been evidenced, in this stage of the research, through the following control parameters:
  - ***Somatic indices***: height, weight, abdominal perimeter, hip perimeter, thigh perimeter.
  - ***Proportionality indices***: body fat index – the ratio between the abdominal perimeter/hip perimeter, the Franks and Hawley graph, the body weight index IMC – ratio between weight/height squared, the body fat index IAC – ratio between the hip perimeter/height.
  - ***Components of the psychomotricity***: general coordination, static and dynamic balance, motion combination and coupling ability, rhythmic ability.
- ***Psycho-behavioral components***: self-esteem.

Processing, data analysis and interpretation was conducted in two directions, because we were interested in verifying the effectiveness of the program applied to the experimental group and highlighting abnormalities, and by comparing the two groups. Thus, it has been carried out:

1. Analysis and interpretation data, of each group, the control and the experimental, at pretest and posttest.
2. Analysis, interpretation and comparison of results of the two groups, the control and experimental, to the final testing of each group.

### **Preliminary research conclusions**

**We would like to point out that prior to the commencement of the research, they were asked to put forward, as throughout the experiment to practical not any sort of physical activity outside of school.**

**At the same time they were asked specifically not to turn to the various slimming cures, because all of these activities may affect the accuracy of the data and the results of research.**

- It is noted that all **somatic indices** produced a noticeable improvement as follows:

- **The experimental group** at each of the seven tests was validated hypothesis research, evidenced by **t – Test dependent**, which is highly significant in all statistical analyzes indices somatic, by **p-value calculated, which is much lower than originally proposed 0.05 p, values of p can be found in a probabilistic 0.01.**

- By comparing the results between the two groups, statistical hypothesis verification carried out by independent **t-test for unequal distributions**, shows a statistically significant difference, between final grades of the two groups at six of the seven tests, by **p-value calculated, which is much lower than originally proposed 0.05 p, values of p can be found in a probabilistic 0.01.**

- **Psychomotor tests**

Through the data contained, in the case of d (Cohen) between 0.60 and 1.00, and on each index in part, improvements have presented values between 10% and 50%, major improvements and value in terms of initial and final testing and compared to the control group. **The biggest improvements have been highlighted in the Flamingo and two samples of rhythmic ability and the ability to combine and coupling of movements.**

- Test self-image " **How do you feel your skin** ", making a general analysis, it appears that these two groups, the control and experimental were quite balanced in its initial testing, students giving emerged answers.

- At the final testing experimental group is one where there is a change in thinking and attitude, their answers were different to the control group, but also from the first test they were subjected. There is a noticeable change in terms of self-image, influenced by somatic transformation.

- Even in the control group appear to some students, changes in the perception of positive self-image, by the fact that although this group were applied regular exercise, however somatic positive transformation occurred here.

- The research conducted, want to demonstrate that by implementing programs, other than the usual ones, more efficient, more dynamic and attractive, can obtain beneficial results in the somato-psychic development of adolescents.

- The results obtained after testing with somatic indices demonstrate that the program applied to the experimental group was effectively, weight loss is visible from some of the participants, even spectacular.

- Study results of tests applied revealed that in general, have made progress in terms of improving psychomotricity, important aspect of human psychic system and its components: general coordination, static and dynamic equilibrium, ability coupling and combined movements, rhythmic capacity.
- Application program that was more diverse, more complex, with increased volume of new elements, but at the same time attractive, yielded the desired results faster, without the students to feel fatigue, more, competitive spirit helped them to overcome all difficulties.
- By participating together in various competitions, was developed both team spirit and that is very important, many of them managed to overcome the feeling of "embarrassment", distrust, they will not be able to complete the program, moreover, they were enrolled in the university team.
- By changing the parameters of the somatic, was observed after some personality tests and questionnaires, that students have improved self image visible and became more confident and more interested in the practice of bodily activities, managing to see benefit in the short term and long term brought them.

**In the third part** shall be provided to the research itself, the actuality of research and contributions concerning the validation of the project training programme, and finally, the effects of bodily activities, analysis of the effects somatopsychic of physical activities, the elements of originality brings research and conclusions drawn from this research, everything over the course of five chapters.

**The purpose** of this research is to determine whether, the application of an exercise program designed as a more attractive, more efficient, through which students become co-participants in these courses, can lead to faster and deeper of somatopsychic transformations of students from the non-profile faculties, transformation which will result in an increased interest in relation to these activities and gain in terms of self-image through self knowledge. It is known that a low level of consciousness of self, usually leads to a loss of self-confidence and induce a state of stress.

- On the one hand, this move was made because, based on the real needs of the subjects included in the research, that we can adapt the operating system and the assessment tools you want to use them.
- At the same time, depending on the results of the research and whether it will be positive, it will be able to compile the programs and operating systems more efficient, to faster integration of adult students, future, Romanian social life as well as the European Union.

***The most important objective*** is to create a curriculum with which to be able to obtain faster results in influencing the development somatopsychic students from the non-profile faculties, trying to compensate for insufficient existence of hours sports activities, to make student co-participant in these courses, through his involvement in producing these programs to fold and on his requirements, and last but not least, understanding and awareness of the need for practicing these activities with long-term benefit.

In this research, ***hypotheses*** are formulated around somatic indices changes and these changes influence on the psyche, including features of personality , the ego and psyche of the body.

Another research theme has been influencing the development of some components Psychomotricity closely related to self-image and self-knowledge.

- 1. If by physical activity can positively influence the psyche , then this can lead to influence positively the self-consciousness.**
- 2. If by fostering active participation and awareness and by acting specifically and appropriately through physical activities, can achieve improvement psychomotricity components, given that it is deeply involved in psychic development and adaptation to the environment.**

**We emphasize that :**

- In this second part of the resumed tests research and evidence from the preliminary research to which have been added some new, collective subjects was doubled from 15 to 32 subjects per group and preliminary research results have led us to extend both qualitative and quantitative research.

- In this experiment, attended a preliminary investigation against a number of 64 students, double front of preliminary research, although in there case study, which would have been sufficient to confirm or rule out the hypothesis.

I wanted to act in both directions in order to have an accurate picture of the data obtained and of the research carried out.

Students participated in this experiment on a voluntary basis and were explained in advance all theme of the experiment.

There were two groups made up the control group and experimental group. The students were going to participate in the experiment were randomized in two groups of research subjects being in year I and II studies of the various faculties of the University of BUCHAREST, between the ages of 18-20 years. The research comprised several stages and took place between January 11.2012 and 24 may 2014.

➤ ***Tests and samples - psychomotricity***

We use the same tests and evidence that the preliminary investigation :

- Matorin, Flamingo, Bass, Capacity coupling and combining movement, rhythmic capacity, that was added sample " Positions " developed and adapted by us, and RCM 1 - complex motor reactivity.

➤ **PERSONALITY QUESTIONNAIRES APPLIED**

- Questionnaire personal autonomy;
- Test Berkeley ;
- Scale of self-consciousness.

➤ **OBJECTIVES AND OPERATIONAL FRAMEWORK OF THE PROJECT  
PROPOSED CURRICULUM**

In the proposed program can be found both general objectives which seek directions for implementation of project specific objectives and issues strictly conduct their lessons and themes.

- Physical development of students, who, through the improvement of somatic indices will bring default intake to a State of better health and improved self-image and self-esteem;The general objectives are intended to;
- Obtaining and maintaining a state of optimal health, which will follow an easier adaptation to disruptive factors of bio-psycho-social;
- As mentioned, and to the objectives of the research, one of the most important goals is to attract a large number of students in the pursuit psychical activities through collaboration. This habit once formed can help them continue this motion and outside, in the form of free time activities.
- The participation of a large number of students to competitions, festivals, sporting events organised, aimed at educating through and for motion, but the benefit of socialization, better knowledge to colleagues, developing competitive spirit of fair play.
- We realized a project of the analytical program has been developed after evaluation of the results obtained in the preliminary experiment.

These results and evaluations have shown that between the two groups there were significant differences, the experimental group having a positive trend in almost all programs and tests applied.

Through composition and execution of the programs he wanted to draw the attention that, although physical education within the no-profile faculties has only one hour per week, allocated to the pursuit of this activity, by optimizing the training, can be obtained maximizing psychomotor skills development, a harmonious somatic - functional development, and in building a positive image about themselves.



**The final conclusions** of this research shows that the analysis of statistical indicators and results , assumptions have been validated, with a **p-value calculated approached 0.01** in most test, which is much lower than originally proposed **0.05 p**, the results being downright encouraging the continuation of this study and of the effectiveness of the methods and means used.

- It was found that the experimental group, by harmonising the different body proportions it has produced a good influence in the perception of one's own self-image, students changing in positive perception of the majority, the body scheme.

- By applying questionnaires for self consciousness may find that, with these somatic transformation, taking place positive transformations in terms of female students think about themselves. They become more confident, less complex, begin to understand their own body image.

- Meanwhile, the workload awareness and their impact on self-image, the beneficial effects that physical activity has on somatopsychic structure of each of them, by comparison with the group that took part was found in both groups (although the experimental group more than in the control) , improved self-awareness of the perception of one's own self and by that of perception of their relationships with others.

- Motor functions and mental sides are two basic human , which is in constant interrelation and together with positive developments can improve their quality of life.

- Following assessments carried out show that physical activity can positively influence personality traits , especially in this period of adolescence , when young people start to adulthood and to social.

- As a result of the evaluations carried out has shown that physical activity can influence positive personality traits, especially during this period of adolescence, when young people start towards the adult stage and towards social integration.

- All of these endorsements supporting us in our scientific approach to apply within Office hours at university level, a core more attractive, more diverse, more complex, we will help to increase the level of training of the students of the non-profile universities, All of these endorsements supporting us in our scientific approach to apply within Office hours at university level, a core more attractive, more diverse, more complex, we will help to increase the level of training of the students of the non-profile universities and will increase the quality of these hours , attract a greater number of students participating and educating them to practice physical activities outside that framework and organized .