

MINISTRY OF EDUCATION, RESEARCH, YOUTH AND SPORT

ABSTRACT OF THE DOCTORAL THESIS BY MR. SMÎDU M. NELUȚA

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Thesis title: THE EFFECTS OF PSIHOTON TRAINING IN STUDENT'S COGNITIVE PROCESSES AND PERSONALITY STRUCTURE DEVELOPMENT

Keywords: psihoton training, cognitive processes, personality traits

Through this experimental research I have tried to emphasize the effects of a relaxation program (psihoton training) which simultaneously works both the body and the mind. Starting from here and using this type of training at the end of a physical education lesson (aerobics) in an institution of higher education but with a different profile, we have tried to improve the cognitive processes such as intelligence, memory, attention span, imagination and to strengthen certain personality traits such as activism, flexibility, self-confidence, etc.

The novelty of the topic stands in the fact that we are trying to originally implement within a physical education lesson a physical and mental relaxation program and objectify its effects.

This research relies on two very important aspects:

- Emphasize the positive effects of physical education in institutions of higher education, on both a physical and mental level, thus positively influencing the professional area.
- Class material for a relaxation training that the students will be able to use in the future to counterbalance the intellectual intense demands which they have to effectively cope with.

The thesis is divided into three parts with 13 chapters to which I have added the introduction and the conclusions.

For the theoretical side of the work I have used over 160 bibliographic sources, reference works of Romanian and foreign authors, which represent both landmarks and starting points in my scientific endeavor.

The first part is divided into five chapters which clears certain aspects such as:

- Current issues of physical education in institutions of higher education, the motivation and the importance of the present research;
- Physical education in institutions of higher education seen through the curriculum reform and elements of the curriculum on a higher education level;
- The role of aerobics in physical condition improvement, objectives, characteristics, content, structural landmarks and methodology used in aerobics lessons;
- The concept of personality from a multidisciplinary perspective and personality structure;
- Theoretical considerations of the concept of human psychic system.

The second part entitled “Exploratory steps to substantiate the present research” I have studied the following aspects:

- The role of psihotron training in physical education lessons in institutions of higher education with a different profile;
- I have conducted preliminary investigations to verify the validity of the independent variable (psihotron training), the optimal conditions for its application which will be used in the experimental research itself.

The purpose of this research is to build a preliminary picture of the effectiveness of psihotron training in order to improve the cognitive processes necessary for learning.

The third part of the thesis „Personal considerations to improve physical education lessons in institutions of higher education by applying the psihotron training – experimental research- is the main part of the present research”.

In experimental research we started from the following assumptions:

- Introduce the lesson of physical education and sport in higher education training psihoton transfer results in a positive personality traits and optimizing mental factors involved in the work of economist female students.
- Training psihoton systematically practiced as a method can lead to the development of biological and psychological potential of female students economist

Application training psihoton used throughout the physical education lesson after cessation efforts is **independent variable** the experiment.

Control parameters were the **dependent variable** research experiments were:
- California Psychological Inventory CPI 480 (Personality Inventory California); memory - assessed by visual and auditory memory tests; distributed and focused attention - measured by, the test Prague and the CIA test; imagination - creativity test figure; questionnaire Cohen-Williamson - exploring additional live stress test, focusing not on the event, but the individual response to the stressful context; the questionnaire SF-8 Health Survey - test for assessing global functioning (physical and mental);

Research the sample consisted of 80 students the first year of study. This sample was divided into two groups (control and experiment) each consisting of 40 students. Research was conducted in the sports complex of the Academy of Economic Studies.

The experiment it self started with initial testing, with responsibility for setting the initial level of cognitive mental processes and personality traits of female students. The control group performed a normal physical education lesson, and I applied for the experimental group postefort psihoton training in

order to improve cognitive mental processes and personality traits of subjects undergoing research. The experiment ended with final testing with the task to highlight changes in their cognitive mental processes and personality traits from the application psihoton training.

We developed an instructional project that I applied to subjects in the experimental group with a structure based on instructional objectives, which all operations, contents, methods and operators are subordinate objectives of teaching.

After evaluation of final summative testing cognitive mental processes and personality traits of female students attended economist storing data resulting from the application questionnaires, tests and personality inventory and then processing, analysis and interpretation of assessment results to determine initial and final psychological profile of the sample research subject and changes arising from the application of mental training psihoton higher cognitive processes.

Using the California Personality Inventory CPI 480, we made four modal profiles (specialized professional profiles), profiles that have helped to identify the personality traits of each group and the changes during experimental research.

Statistical indicators derived from statistical processing of data recorded in the final tests for parameters measured in the two groups and statistical hypothesis testing using ANOVA test, enables us to see that the results obtained from subjects differ significantly ($p < 0.05$) and reject the hypothesis neutral, accepting the research hypothesis (alternative) on 14 parameters of 18, representing 77% percentage value. Averages for the experimental group are higher than those of control group in all parameters, except sociability (Sy), Achievement via independence (AI) and femininity (Fe). We note that the results are distributed mostly homogeneous.

Following the application of tests of attention (focused and distribution), memory (visual and auditory), and creativity figure, the parameters recorded by the control and experiment groups in the two final tests differ statistically significant from 14 to 13 parameters , which means a proportion of 93% of tests. At these parameters, the following statistical hypothesis verification process performed using ANOVA test rejected the null hypothesis, the threshold of significance (p) calculated as less than 0.05.

Taking into account the values of statistical indicators of dispersion: standard deviation, range and coefficient of variation, control group 50% of the tests is uneven, 43% of the tests is relatively homogeneous and 7% homogeneous. The experimental group to 64% of the tests is relatively homogeneous, heterogeneous and 21% is 15% homogeneous. There is a much better grouping of results around the average that the experiment group.

CONCLUSIONS

Overall, calculate statistical indicators say that the performance of components of the experimental subjects are better than those achieved by the monitoring group on most tests. This confirms the research hypotheses.

- Since higher cognitive processes (intelligence, memory, imagination) and the regulatoriu (attention) are directly involved in the optimal behavior of female students in work, that they have improved following a special approach to physical education lessons and sports gives support to say that the lesson by introducing a relaxation program wisely conceived and enforced the lesson of physical education in higher education can provide a significant positive transfer to improve the professional activity of female students.
- It was also found from processing data obtained by applying the questionnaire COHEN - Williamson and test SF - 8 Health Survey that

stress levels of female students in the experimental group was lower (36.53) than those of control group (37.60) which shows that the application psihoton training has beneficial effects on biological and psychological potential of female students economist.