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SCIENTIFIC ARGUMENTS IN SUPPORT OF THE AEROBIC GYMNASTICS AS A MEANS TO FIGHT STRESS

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Abstract
In a studio created at Arizona State University, it has been shown that aerobic exercise is the most appropriate to fight depression and anxiety. It seems that physical exercise acts in the same way as the antidepressant medication, increasing the levels of the neurotransmitters: serotonin, dopamine and nor-epinephrine. Moreover, these two states can negatively influence the quality of sleep, self confidence, interrelation, but also the mental health of the practicing individuals.
The purpose of the research is that of finding out the degree of stress of the female economics students, in the conditions in which their activity has an accentuated intellectual character, being well known that the accumulation of an increasingly bigger volume of theoretic knowledge is required in the educational process. We started from the premise that the degree of stress will decrease by practicing aerobic gymnastics during the physical education and sport class.
Keywords: *Aerobic gymnastics, stress, students;*

INTRODUCTION

Aerobic gymnastics (maintenance) is accessible to anyone, no matter the sex, age, physical condition because it contains exercises from all body activities, from exercises and various steps from classic ballet, medical exercises, stretching exercises, yoga exercises to combination of influences from street dance, hip-hop, jazz, afro dance, lation, etc. That is why it is a discipline that attracts a large number of female students, and even male students, in practicing this type of movement.
While female students' has a proficient intellectual character, being known that in the process of education it is required an increasingly volume of theoretical knowledge, aerobic gymnatics is fit to remove the stress.
Our duty, the teachers', is to explain why, what for and how to practice these forms of actioning, starting with understanding the immediate benefits and late ones.
Systematic practicing of aerobic gymnastics leads to:
- balancing nervous system, by inducing those "wellness" moods, amusemend and well being, necessary to relaxing students after having focused on lectures and even fighting depression moods, tense moods and stress in general.
- educating the artistic and aesthetic, by the fact that aerobic gymnatics is executed by musical accompaniment, by the fact that it utilizes steps from classic ballet school or dancesport, by aesthetics itself, grace and beauty of the movements.
- many benefits on psycho-social plan, adhering to a group, developing collaboration feelings, selflessness, fair-play and the wish of self-improvement.
It can be stated that aerobic gymnatics, through the benefits it is bringing, it directly contribuites to the process of transforming and modelling students' personality and their integration to the modern world.
The purpose of the research is that of finding out the degree of stress of the female economics students, in the conditions in which their activity has an accentuated intellectual character, being well known that the accumulation of an increasingly bigger volume of theoretic knowledge is required in the educational process. We started from the premise that the degree of stress will decrease by practicing aerobic gymnastics during the physical education and sport class.

RESEARCH METHODS

Bibliographic information study method; pedagogic observation method; investigation method; experimental method; statistic- mathematical method.

COHEN –WILLIAMSON questionnaireexplores the subjective feeling of stress felt by each student. The questionnaire is formed by 14 items and it is a self report instrument with 5 scales of answers. It is not a diagnosis instrument, but it is successfuly to comparing leves of stress perceived to the subjects from a given sample. The scoring can fluctuate from 0 to 70, where high scores represent a high level of stress.

The students were required to answer the following questions, following what happend on the previous month. They marked with an „X" their answer, answering as spontaneously as possible and choosing between the following answers:

A) never; B) hardly ever; C) sometimes; D) quite often; E) often;

In the previous month, how many times:

Table no.1 COHEN –WILLIAMSON questionnaire

Questions	**A**	**B**	**C**	**D**	**E**
1. Were you troubled by an unpreddicted event?					
2. It seemed difficult to control important things in your life?					
3. Felt nervous or stressed?					
4. Got angry due to small problems and daily inconvenience?					
5.Have you felt that you would deal efficiently with the important changes that should appear in your life?					
6. Have you felt confident in your capability to assume personal issues?					
7. Have you felt that things are going your way?					
8. Have you felt that you cannot assume the whole things you were supposed to do?					
9. Were you capable of controlling your anger?					
10. Have you felt that you were controlling the situation?					
11. Have you felt irritated by the for the events that got out of your control?					
12. Have you noticed questioning yourselves about the things you should have done well?					
13. Were you capable of controlling the way you spend your time?					
14. Have you felt that difficulties have gathered so much, going out of your control?					

-for items 1, 2, 3, 8, 11, 12, 14 A) 1 point; B) 2 points; C) 3 p; D) 4 points; E) 5 points.

-for items 4, 5, 6, 7, 9, 10, 13 - A) 5 points; B) 4 points; C) 3 p.; D) 2 points; E) 1 point.

The total points of the boxes is calculated. If the score is below 25, the level of stress is low. Meanwhile, a score higher that 50 is proof of high level of stress.

Quotation of the answers:

- a score lower than 25 - low level of stress
- between 25- 50 - medium level of stress
- a score higher than 50 - high level of stress

COHEN- WILLIAMSON QUESTIONNAIRE
Initial – Final
test

Initial-final testi

STATISTICAL INDICATORS	Results (Points)	
	Initial t.	Final t.
Arithmetic mean	37.60	36.53
Median	37.00	36.00
Standard deviation	6.06	6.12
Maximal value	53.00	53.00
Minimal value	29.00	25.00
Amplitude	24.00	28.00
Variation coefficient (%)	16.1%	16.8%
Mean difference		-1.08
Effect size (Cohen)		0.09

ANOVA TEST

Fixed confidence threshold α -		**α = 0,05**
Null hypothesis **H_0**		**$m_1 - m_2 = 0$**
Alternative hypothesis **H_1**		**$m_1 - m_2 \neq 0$**
F critical (value from tables)		**3.96**
Freedom degree between groups **df_1**		**1**
Freedom degree between groups **df_2**		**78**
Number of subjects		**80**
ANOVA TEST RESULTS	Calculated F	P
	0.62	**> 0.05**

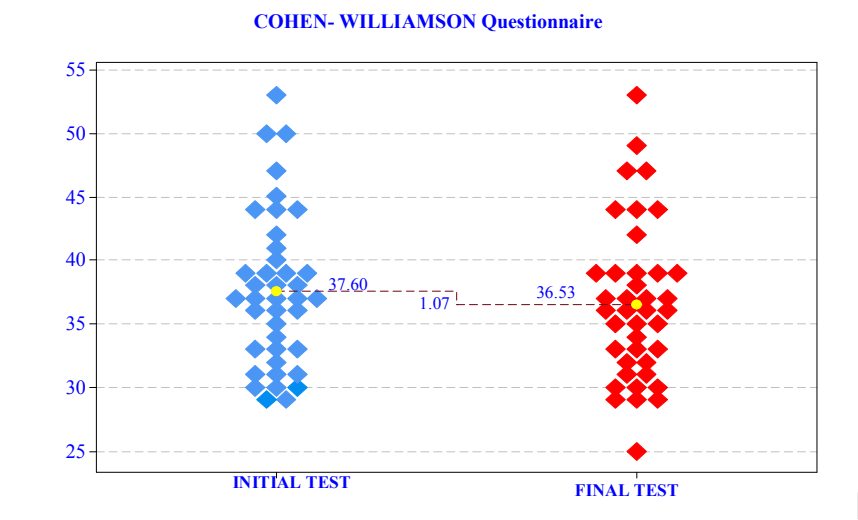
Table no.2 Initial- Final TestCOHEN- WILLIAMSON

INTERPRETATION OF RESULTS

The measurements for characteristics of Cohen-Williamson questionnaire were done on the subjects of the two groups. The arithmetic mean was 37.60 and 36.53 points, representing a medium level of stress for both groups. It is noticeable that the mean of the group at the final testing is lower by 1.08 points, at the initial testing the group is relatively homogenous and relatively homogenous is the group after the final testing. Cohen's effect

size indicators shows that the differences between the two means are very low. The statistical hypotesis check was made by ANOVA test, embossing a unsignificant difference between the means, P > 0.05. **Nule hypotesis is being accepted and the research hypotesis (alternative) is rejected.**

Grafic no.1



CONCLUSIONS

After data gathering it can be appreciated that, as a whole, the level of stress gathered is lower at the final testing (36.53 points) rather than the initial testing (37.30 points), representing a medium level of stress for both of the groups.

Taking into consideration that the Physical Education class from superior education is taken once a week, I consider the result satisfying. For satisfying results, practicing physical exercises, a few times a week, for a long period of time, is recommended.

Our duty, the teachers', is to explain why, what for and how to practice these forms of actioning, starting with understanding the immediate benefits and late ones.

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DEVELOPMENT EFFECTIVENESS SPECIFIC RESISTANCE EXERCISES ON THE OPTIMIZATION OF TECHNICAL FACTORS FROM JUNIOR FOOTBALLERS 17-18 YEARS

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Abstract

In his research the author started from the premise that the development of specific resistance will lead to optimize the competitive players. The material presented deals with the influence of applying the proposed training program for the development of specific resistance in the experimental group on indices of technical training.