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The Influence of Motor Activities on the Development of Emotional Intelligence

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Abstract

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Specialists in education are becoming more and more aware of the importance of providing educational opportunities that enhance the development of emotional and social competence of teenagers. Practicing motor activities can be a significant factor in the development of emotional intelligence of young people. We believe that through the formative function of physical education and sport, being aware of the motor act specific to sport disciplines, students will be able to develop areas of emotional intelligence (recognition of their own emotions, intelligent handling of them, empathy, interpersonal relationships) in order to preserve the required psycho-physical on a rhythm and volume of work increasingly higher, specific to contemporary society. This work aims, by applying motor programs, to identify the role of corporal activities in structuring the emotional-affective system of young people, getting positive effects on psycho-motor development and personality. The experimental sample consists of students from the Academy of Economic Studies, Bucharest. The research methods used are: bibliographic documentation, pedagogical observation, investigation procedure, psychological tests, experimental method, statistical and mathematical method, graphical representation method. As a result of applying the motor programs and processing the data obtained, we can say that there is a significant correlation between the interest in motor activities and the level of emotional intelligence ($p = 0.017$). Experimental groups proved a higher level of emotional intelligence compared to the control group. We believe that the formative function of physical education and sport is important for the development of emotional and social competence of young people.

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Keywords: Motor activities; emotional intelligence; teenagers.

1. Introduction

As an important component of the educational curriculum developed in schools, physical education and sport, although holding an important place in the formation of the young generation, does not exhaust the sphere of formative influences exerted on young people.



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With our approach, we intend to give a new interpretation, to shape a modern vision of the role and place of motor activities in developing emotional intelligence of the young generation.

Developing emotional intelligence through motor activities involves constructive relationships between educator-educated, educated-educated, educated-parent, educated-community (Neacșu, 1987). The identity and future of young people are well defined not only by academic results and intellectual performance, but also by their emotional and spiritual well-being (Goleman, 2007). Everyday emotions have a considerable impact on subsequent social adaptation, and therefore they cannot be neglected in education. Emotions produce physical changes that have an important role in emotional experience (Șchiopu & Verza, 1995). Emotions also have a motivational function, mobilizing practitioners to focus their mental and physical resources on the physical education activity. In addition, emotional states can influence the level of trust and also can modify the attentional processes during the activity.

Analysis of the age peculiarities shows that young people want to be connected to action, but at the same time they are emotionally and mentally fragile.

2. Materials and methods

The *purpose* of this experimental research is to identify some issues and ways to design motor programs using means of sports branches like basketball, volleyball, aerobics, and to develop areas of emotional intelligence (recognition of emotions, intelligent handling of them, empathy, interpersonal relationships).

Hypothesis. Acting through specific means of sports branches (basketball, volleyball, aerobics) leads to beneficial effects on the emotional-affective system.

Tasks:

1. Developing and implementing the operational system (experimental variables)
2. Complex assessment of the emotional-affective system of youth, after applying the experimental variables
3. Assessment of the physical activity level of young people
4. Knowledge of the differences with respect to the rate of progress in the three groups, as well as its statistical significance
5. Identifying the correlations between physical activity levels - emotional intelligence

2.1. Research methods

Bibliographic documentation - as a methodical form of knowledge, it involved deliberate and thorough information.

Pedagogical observation - in the experimental research, we used observation on the behaviour of students during the physical education lesson in the academic years 2012-2013, 2013-2014, 2014-2015.

Investigation procedure - two questionnaires were used, through which we obtained information related to the researched topic.

Experimental method - allowed us knowledge of reality through the “experimental reasoning”, which processes facts from both the observation and experiment.

Statistical and mathematical method - for drawing up tables, graphs, and for interpreting the emotional-affective factors, there were used the following statistical indicators: arithmetic mean, t-test (Student), non-parametric test χ^2 .

Graphical representation method is used for observation and a suggestive presentation of the collected data.

2.2. Duration, location and subjects of the research

The research was carried out in the academic year 2014-2015, throughout 22 weeks and 22 lessons of physical education and sport. It was conducted in the sports halls of the Academy of Economic Studies, Bucharest.

The experiment groups consist of 1st year students from Marketing, as well as International Relations and Business Administration in Foreign Languages. The sample volume is 100 students (between the ages of 19 and 26 years). The sample is randomized using the random selection technique. The experimental plan is a factorial one (multiple variables).

In order to accomplish the experiment, the subjects were divided as follows:

- Group “CG” (25 subjects) constituted the control group, for whom the value of independent variable is “zero”;
- Group “EG1” (25 subjects) formed the experimental group who was applied an independent variable (V1) – an operating system using means from volleyball;
- Group “EG2” (25 subjects) was an experimental group who was applied an independent variable (V2) – an operating system using means from basketball.
- Group “EG3” (25 subjects) was an experimental group who was applied an independent variable (V3) – an operating system using means from aerobics.

The research involves the application of intervention programs based on means from basketball, volleyball and aerobics, as well as a relaxation program, “Jacobson”, to increase the level of emotional intelligence of young people.

The assessment was carried out by applying the following questionnaires:

- a) Alpha-Fit - PAQ (Sunni, Husu, & Rinne, 2009);
- b) Measuring emotional intelligence (Neacșu, 2010).

For example, we present a part of the program based on the specific means of basketball game:

A. Specific exercises used to raise the students’ awareness of internal statuses (awareness of their own emotions, understanding their feelings accurately, self-confidence): in pairs, tag – at the signal, they change roles (the wanted becomes the follower); “Reverse Command” movement game – all students run – they will jump; all athletes pass – they will dribble; all players dribble - they will jump.

B. Specific means used with the aim of making productive use of emotions (work focused on a task and showing perseverance in solving it, taking responsibility of the own acts): running while passing the ball around the pool, running with the ball in an 8-shape around the head and trunk; dribble with two balls simultaneously, with alternative and simultaneous pushing.

C. Technical and tactical means specific to basketball game - used to raise the awareness of others’ emotions (empathy, orientation towards services): passing contest, relays with dribbling, shooting

using more balls (2 players with 4 balls), game relationship 2x1, 2x2, 1x2.

D. Technical and tactical means specific to basketball game - used to raise the awareness of others' emotions and to improve interpersonal relationships (understanding others, collaboration, sensitivity and vibrancy to the feelings of others): "The ball to Captain" game (two-hand pass at chest level/ bounce pass and ball catching), bands of circles, semicircles, strings, "which team can keep the ball longer using bounce pass?", game relationship 5x5 - refereeing is performed by the students.

3. Results

3.1. Analysis and interpretation of Alpha-Fit questionnaire

Physical level in daily activities

Physical level in daily activities is assessed as being more difficult for the subjects in the group practicing aerobics (EG3). For 53.8% of them, the physical activity level is difficult, and even very difficult for 7.7% (Chart 1). But it seems easier for the volleyball group subjects (EG1), as only 26.9% of them consider it difficult and 3.8% very difficult. These differences are not statistically significant compared to the control group (Table 1).

Table 1. Summary results on the level of physical activity

	EG1		EG2		EG3		CG	
	Cases	%	Cases	%	Cases	%	Cases	%
Very easy	13	50.0%	5	19.2%	2	7.7%	8	32.0%
Easy	5	19.2%	9	34.6%	8	30.8%	6	24.0%
Difficult	7	26.9%	10	38.5%	14	53.8%	9	36.0%
Very difficult	1	3.8%	2	7.7%	2	7.7%	2	8.0%
Total	26	100%	26	100%	26	100%	25	100%
Average score*	1.85		2.35		2.62		2.20	
<i>t-calculated**</i>	-1.285		0.551		1.681			
<i>P**</i>	0.205		0.584		0.099			

*Scale 1-4: 1 - very easy, 2 - easy, 3 - difficult, 4 - very difficult

**Results after applying the Independent Student Test to each of the three experiment groups and also the control group
 Significant difference between the two groups if $p < 0.05$.

Interest in physical activity. Most subjects of the three experimental groups are mildly interested or even very interested in the regular practice of physical activity, especially volleyball groups (EG1) and basketball groups (EG3), they differing significantly from the control group (CG), where more than half of students (56%) do not have this interest (Table 2).

Table 2. Statistics on the interest in physical activity

	EG1		EG2		EG3		CG	
	Cases	%	Cases	%	Cases	%	Cases	%
Very interested	11	42.3%	6	23.1%	1	3.8%	7	28.0%
Interested	13	50.0%	18	69.2%	17	65.4%	4	16.0%
Not interested	2	7.7%	2	7.7%	8	30.8%	14	56.0%
Total	26	100%	26	100%	26	100%	25	100%
Average score*	1.65		1.85		2.27		2.28	
<i>t-calculated**</i>	-2.890		-2.090		-0.052			
<i>P**</i>	0.006		0.043		0.959			

*Scale 1-3: 1 - very interested, 2 - somewhat interested, 3 - not interested

**Results after applying the Independent Student Test to each of the three experiment groups and also the control group
 Significant difference between the two groups if $p < 0.05$.

3.2. Analysis and interpretation of the questionnaire for measuring emotional intelligence (EI)

By centralizing and analysing responses to the questionnaire for measuring emotional intelligence, we have found that the three groups are significantly superior to the control group, in terms of emotional intelligence (Table 3). On average, the students belonging to the control group proved satisfactory emotional intelligence, while the students from the other 3 groups obtained good or medium to good scores.

Table 3. Statistics on emotional intelligence of experiment and control groups

Emotional Intelligence Score	EG1		EG2		EG3		CG	
	Cases	%	Cases	%	Cases	%	Cases	%
Score 1-20 pts.: <i>EI Very weak</i>	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Score 21-40 pts.: <i>EI weak</i>	0	0.0%	0	0.0%	2	7.7%	3	12.0%
Score 41-60 pts.: <i>EI medium, satisfactory</i>	12	46.2%	2	7.7%	10	38.5%	22	88.0%
Score 61-80 pts.: <i>EI good</i>	14	53.8%	20	76.9%	12	46.2%	0	0.0%
Score 81-100 pts.: <i>EI very good</i>	0	0.0%	4	15.4%	2	7.7%	0	0.0%
Total	26	100%	26	100%	26	100%	25	100%
Average score	62.0		73.3		60.9		46.8	
<i>t-calculated*</i>	8.484		13.650		5.553			
<i>p*</i>	0.000		0.000		0.000			

The basketball group (EG2) obtained a score significantly better than the other two groups (EG1, EG3). The factors of this difference are: recognition of their own emotions, empathy and productive use of emotions (Table 4).

Table 4. Independent Student test

Independent Student test	T-calculated	P
EG1 - EG2	-4.971	0.000
EG1 - EG3	0.381	0.705
EG2 - EG3	4.269	0.000

The difference between groups can be explained by the specific characteristics of each sport branch. By practicing basketball game, there are mainly developed positive and invigorating emotional states, which ensure good mood for performing efforts in the lesson or competition, good emotional balance, emotional stability and ability to hold in and to have control over the negative emotions. Neuropsychiatric qualities developed by volleyball are represented by: high capacity of concentration, volitional determination, stability and distribution of attention/ paying attention in aerobics has a positive influence on the spirit of observation, memory and imagination, and creates great emotional states in agreement with musical accompaniment.

4. Discussions and conclusions

The mission of developing emotional and social skills involves first of all the school, where young people spend more time than in the family. For them, the university becomes the space in which they develop emotionally. It is there that they discover themselves, develop self-confidence, learn to recognize, understand and control their emotions, express themselves, communicate with others, cooperate with colleagues to achieve mutual goals, and they also learn to be open-minded.

As an important component of the educational curriculum developed in schools, physical education and sport, although holding an important place in the formation of the young generation, does not exhaust the sphere of formative influences exerted on young people.

The development of emotional intelligence through motor activities involves constructive relationships between educator-educated, educated-educated, educated-parent, educated-community. The identity and future of young people are well defined not only by academic results and intellectual performance, but also by their emotional and spiritual well-being. Daily emotions have a considerable impact on the social adaptation of the person, and therefore cannot be neglected in education.

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