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PHYSICAL EDUCATION IN THE DEVELOPMENT OF THE CREATIVE-EMPATHETIC POTENTIAL IN STUDENTS

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Creative imagination is inextricably connected and influenced, as we believe, by the empathetic side. As a consequence, empathy would be an interesting form of intuiting reality through the affective-emotional identification. Through the study of the influence of Physical Education in the development of the creative-empathetic potential on students, the researcher intends to emphasize that, between creativity and empathy, there are unseen connections that influence a human being, for both the cognitive and the emotional levels, within the development of the entire creative-empathetic spectrum. This research was conducted during Physical Education classes, on a group of 75 students, randomly chosen from the Science and Letters Faculty of the researcher's university. A 30-item questionnaire on "The evaluation of the creative-empathetic potential", was distributed to the sample. The data obtained from the questionnaire was aimed at answering the question "Are there significant differences within the recorded results so to prove that Physical Education is a motor of changes in the students' creative-empathetic development?" The aim of this research was to emphasize that Physical Education plays a decisive role in the academic program for the students' creative-empathetic development and the creative-empathetic potential is adversely affected when the number of Physical Education classes decreases or when students are absent from classes for various reasons (absent, any exemptions etc.). The emotional component is considered to be the heart of empathy. Hence, it is contended that in the absence of certain emotions, the creativity field (anxiety) is impeded, and it can be concluded that neither empathy nor creativity can be designed to manifest outside emotiveness and intelligence, both with the chance of being developed through common instruments, namely through Physical Education and Sport.

Keywords: Creativity, empathy, physical education, students.

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1. Introduction

"Creative imagination is the most valuable and complex form of the active and voluntary imagination" (Popescu-Neveanu, et al., 1990) inextricably connected and influenced, by the empathetic side. "In everyday life, we usually encounter numerous types of problems related directly to our personal issues, such as emotional and social relationships together with our professional careers" (Serra, & Ermiş, 2017). Through the study of the influence of Physical Education in the development of the creative-empathetic potential on students, this study aims to emphasize that there are unseen connections between creativity and empathy that influence a human being, at both the cognitive and the emotional levels, within the development of the entire spectrum of creative-empathetic potential. This is because creativity, being a high form of imagination, cannot be simply reduced to the manner of transforming and combining certain sequences. If empathy were added to all of the aforementioned, which is nothing more than an interesting form of intuiting reality through affective-emotional identification, then it is possible to have a complete image regarding the phase of changes in the life of young people through the impact of Physical Education, both on the emotional and on the psychological-motor levels.

2. Hypothesis

This research originated from the hypothesis that Physical Education with all its practical and theoretical-applied content can be the motor of the creative empathetic-development. It is believed that decreasing the number of classes (as it happened in the previous years) or the exemption from classes of some students for various reasons (medical exemptions, etc.) would cause serious negative repercussions on both the creative and empathetic levels.

3. Methods

3.1. Subjects

This research was conducted during Physical Education classes on a group of 75 students randomly chosen from the Science and Letters Faculty of the researcher's university, who, at least theoretically, have the same social concerns.

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3.2. Research methods

Several methods were employed for this study which was based on a mixed method design, comprising the bibliographic study method (the reasons taken into consideration for the determination of the research hypothesis came from the reference literature and from the experience gained in the didactic process); the observation method (comprising the systematic observation of motric actions, and practical-theoretical-applied actions of the subjects), and the survey method (for which the conversation and the questionnaire was used). At the pre-investigation stage, the theme, selection of study subjects, and questionnaire were determined. The questionnaire selected for this study has already been standardized, which allowed the phenomenon to be rendered more accurately. The selected questionnaire was proposed by Cristina Pavelea & collaborators (2005, p.88-90) and the original title of this 30-item questionnaire was: "The creative-empathetic potential". This questionnaire had been distributed to parents, educators, and primary school teachers by the original authors. In the context of this study, the only difference in application concerned the group on which the questionnaire was implemented, which in this case, referred directly to the target group - the group of 75 students, randomly chosen from the Science and Letters Faculty of the researcher's university, who, at least theoretically, have the same social concerns. In this study, no observations was done through intermediaries (parents, teachers, etc.). In other words, efforts were made to render reality as accurately as possible. The statistical-mathematical method allowed the description and characterization on digital objective bases, of the different data that represented the measured indicators and favored the extraction of the essence regarding the theme/s from a data set. The graphical method referred to a system of rules which were followed for the purpose of visualizing and suggestively presenting calculated figures, data and indicators.

3.3. Research purpose

The purpose of the present research was to present empirical evidence that Physical Education plays a decisive role in academic programs for students' creative-empathetic development and that creative-empathetic potential is adversely affected when the number of Physical Education classes decreases or when students do not participate in these classes for various reasons (absent, exemptions etc.).

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4. Research content

In order to demonstrate that Physical Education can be the engine of creative-empathetic development in young people and that the absence of this subject in school life or from the university programs would cause negative repercussions at both creative and empathetic levels, a questionnaire entitled: "The creative-empathetic potential" was distributed to the study group. This questionnaire was adapted from "The evaluation of the creative and empathetic potential of the preschool and primary school pupils" (Pavelea et al., 2005). In the case of this study, the questionnaire was distributed only to the target group comprising the students and no observations was done through intermediaries such as parents, teachers, etc. as was the case with the original questionnaire. All efforts were made to render reality as accurately as possible as the researcher believed that a direct implementation on the subjects involved in the research was sufficient and "third parties" opinions' were unnecessary in the context of this study.

In order to obtain the correct information concerning the motor of the creative-empathetic development, regarding the targeted group, a rethinking of the questionnaire was deemed necessary as the questionnaire was applied directly to the study subjects to respond to the questions in the questionnaire, in order to correspond to the research undertaken, and the education and age of the group of subjects involved in our research. For the implementation of the questionnaire, all the conditions imposed by the research methodology regarding the implementation of the questionnaire were adhered to and the subjects' attention was directed to need to render faithfully the events by "deeply searching in time", to recall how they reacted when they were children.

The study subjects' were reminded that honesty was crucial in responding to the questionnaire, as there were no good or bad results, "but the confirmation or information of ways" (Pavelea et al., 2005) of acting in certain situations in their childhood. The honest answers were necessary only from an objective point of view, as "for determining the creative-empathetic potential we needed answers as close to reality as possible" (Pavelea et al., 2005), according to Table 01 below.

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Table 01. Registering items from the questionnaire "Evaluation of the creative-empathetic potential" on 75 students

Crt. No.	Representative items for the creative-empathetic potential – questionnaire applied on the 75 students	Results in percentage for the 75 students that answered with				
		YES No. Stud.	%	?-I restrain/ No. students	NO No. Stud.	%
1.*C S.M.	Do you easily get bored in your childhood even if you had toys?	22	29.33 %		53	70.67%
2.	Is it in your habit to narrate what you dreamed about when you wake up?	44	58.67 %		31	41.33 %
3.*E	Does a wounded animal impress you?	68	90.67 %		7	9.33 %
4.*C	Do you sometimes tell small lies?	50	66.67 %	5 – 6.67 %	20	26.66 %
5.	Did you use to act like different characters from stories when you were a child?	16	21.33 %		59	78.67 %
6.*E S.M.	Did you use to compose stories to narrate to toys or other younger children?	53	70.67 %		22	29.33%
7.	When you were little, did you use to ask questions until you became annoying?	35	46.66 %		40	53.34 %
8.	When you are asked to narrate a random story, do you tell it just like it is, without adding something?	49	65.33 %	6 -8%	20	26.67 %
9.	Sometimes, in your childhood, did you use to talk with animals, plants or toys?	47	62.67 %		28	37.33 %
10.	Did you play mime?	62	82.67 %		13	17.33 %
11.*C	Did you use to decompose toys and other objects to see what they contain?	60	80 %		15	20 %
12.*E	If you saw another child crying for a reason, would it impress you as a child, would you cry too?	24	32 %		51	68 %
13.*C S.M.	Did you have some favourite toys that you always played with?	53	70.67 %		22	29.33 %
14.*C	Did you try to improve your toys?	65	86.67 %		10	13.33 %
15.*E	When you are watching a movie or reading a book do you feel the emotions of the characters, heroes?	50	66.67 %		25	33.33 %
16	Do you use to invent words and then name objects or animals using those words?	35	46.66 %		40	53.34%
17.	Do you like to nickname people around you?	40	53.34%	4- 5.33%	31	41.33 %
18.*E S.M.	Did you use to share your food with others?	53	70.67 %		22	29.33 %
19.	If someone in your family is upset, do you sympathize with him/her?	37	49.34 %		38	50.66 %
20.	Does it ever happen that by your behaviour you leave the impression that you don't care about anything?	71	94.67 %		4	5.33 %
21	Did you use to torment animals while playing with them?	12	16 %		63	84 %
22.	Do you believe anything that your parents tell you, or do you ask "why"?	35	46.66 %		40	53.34 %
23	Do you get bored in an unknown place?	28	37.33 %		47	62.67 %

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24.*E	Did you use to upset other children until they cried (did you hide their favourite toys, pull girls' hair, ruin the games of your friends)?	20	26.66%	**55**	73.34%
25.*C S.M.	Did you have a leader's attitude in your childhood games and use to impose your own rules and behaviour?	**53**	70.67 %	**22**	29.33 %
26.*C S.M.	From the list of things you like does it count the pleasure of observing plants, animals, insects?	**53**	70.67 %	**22**	29.33 %
27.	Do you like to assist when someone is wrapping gifts?	60	80 %	15	20 %
28.	Where there any situations in which the games you invented converted in troubles or unpleasant situations?	70	93.34 %	5	6.66 %
29.*E	Did you feel anxiety and tears as a result of the disputes in your family or of the people around you?	**38**	50.66 %	37	49.34 %
30.*E	Do you pass indifferently if you see someone torturing animals or ripping flowers?	35	46.66 %	**40**	53.34 %

Caption for table 01:

***C = creativity;**
***E = empathy;**
S.M. = with medical exemption for physical effort but present in the class

The research was based on a 30-item questionnaire with the theme "Creative-empathetic potential" (Table 01). By adding the number of students who answered "YES" to the ones who answered "NO" to each one of the items in Table 01, the total number of students (75) and the manner in which they ticked the answers for each question in percentage were generated. The questionnaire aimed to measure the creative-empathetic potential in percentage for each student. Responses were ticked by choosing *"Yes", "I don't know", "No",* (as in Table 01 above). The questionnaire contained relevant items for the research, marked with a star *, a symbol and a color according to the table caption. These items 1, 4, 11, 13, 14, 25, 26 tested for Creativity; 3, 6, 12, 15, 18, 24, 29, 30 tested for Empathy; while for those who have a medical exemption, Creativity was tested through their answers to items 1, 13, 25, 26 and Empathy was tested through their response to items 6 and 18. For the recognition indicators, students were asked to specify: age, gender, if they are fit or have a medical exemption, if they have been participating in any sports, and if so, starting at what age, etc. This aided in grouping them and discovering the type of potential and the conditions that determine it. All these aspects aided in identifying divisions and analyzing the typology.

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Table 02. Standard distribution of the items on sets of questions of the statistical indicators for the creative-empathetic potential

Questions set A.	Significant answer % for the 75 subjects		Questions set B.	Significant answer % for the 75 subjects		Questions set C.	Significant answer % for the 75 subjects	
	Creative Potential	Empathetic Potential		Creative Potential	Empathetic Potential		Creative Potential	Empathetic Potential
1.	NO		11	YES		21		NO
2.	YES		12		YES	22	NO	
3.		YES	13	YES		23	NO	
4.	YES		14	YES		24		NO
5.	YES		15		YES	25	YES	
6.		YES	16	YES		26	YES	
7.	YES		17	YES		27		YES
8.	NO		18		YES	20	YES	
9.		YES	19		YES	29		YES
10	YES		20	NO		30		NO

Responses to the questionnaire listing the Table 01 was carried out according to the data in Table 02. This table was divided into 10 sets of questions, as it can be seen in Table 02 (set A; set B; set C) summing up the 30 items of the questionnaire.

Every relevant answer represents a point; if the answer corresponded to the standard Table 02 (for answers, also see Table 03 below, with a total score), if the answer did not correspond to the answer for the question in the standard Table 02, then students received 0 points.

After that, the number of points was calculated for creativity and empathy after a standard table taken from Pavelea et al.'s work (2005, p. 89). An important point to note is that points were validated only if answers matched the standard Table 02.

A. Set - contains items from 1 to 10 (in this set, items 1, 2, 4, 5, 7, 8, 10 were considered significant answers for creativity and answers to items 3, 6, 9 were considered significant answers for empathy).

- ***For Empathy***

• students who responded with "Yes" to items **2, 4, 5, 7, 10** received one point for each correct answer.

• students who responded with "No" to items 1, 8 received one point for each correct answer.

• In situations where the students' answers were different from the standard response in Table 02, 0 points were recorded for each different answer.

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➢ ***For Creativity***

• students who responded "Yes" to items 3, 6, 9 received one point for each correct answer.

B. Set - contains items from 11 to 20 (in this set items 11, 13, 14, 16, 17, 20 were considered significant answers for creativity and items 12, 15, 18, 19 were considered significant answers for empathy).

➢ ***For Empathy***

• students who responded with "Yes" to items 11, 13, 14, 17 received one point for each correct answer.

• those who responded " No" to item 20 received one point for the correct answer.

➢ ***For Creativity***

• those who responded "Yes" to items 12, 15, 18, 19 received one point for each correct answer.

C. Set - contains items from 21 to 30 (in this set, items 22, 23, 25, 26, 28 were significant answers for creativity and items 21, 24, 27, 29, 30 were significant answers for empathy)

➢ ***For Empathy***

• those who responded "Yes" to items 25, 26, 28 received one point for each correct answer.

• those who responded "No" to items 22, 23 received one point for each correct answer.

➢ ***For Creativity***

• those who responded "Yes" to items 27, 29 received one point for each correct answer.

• those who responded "No" to the item 21, 24, 30 received one point for each correct answer.

Table 03. Standard table on the interpretation of the creative-empathetic potential (from Cristina Pavelea et al., 2005 p.89-90)

Standard table regarding the Creative potential		**Standard table regarding the Empathetic potential** (after Caluschi Mariana,1995, p.90, cited by Cristina Pavelea)	
Score	**Appreciation**	**Score**	**Appreciation**
0-6	Very low Creative Potential	0-4	Very low Empathetic Potential
7-12	Low Creative Potential	5-8	Low Empathetic Potential
13-18	Medium Creative Potential	9-14	Medium Empathetic Potential
19-26	Good Creative Potential	15-20	Good Empathetic Potential
27-30	Very good Creative Potential	21-24	Very good Empathetic Potential

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If students' recorded answers were different than the standard answers from the Table 02, then they scored 0 points for each answer.

In the end, a total was calculated on the creative – empathetic potential, for points recorded separately for each component (creative or empathetic).

The recorded score was compared with the one from standard Table 0 and a grade was given, and depending on the obtained score, the creative-empathetic potential was validated.

The interpretation of the creative potential level, taking into account the above mentioned, was estimated according to the score obtained using the standard Table 03 above.

5. Findings and Discussion

In the questionnaire (see Table 01), items were logically organized in such way as to uncover the reality regarding the main factor – The Creative-Empathetic potential.

Table 04. Statistical indicators for creative – empathetic potential and the recorded percentage % of the 75 subjects

A. Questions set	Significant answer % from the total of 75 subjects that answered according to standard Table no.2		B. Questions set	Significant answer % from the total of 75 subjects that answered according to standard Table no.2		C. Questions set	Significant answer % from the total of 75 subjects that answered according to standard Table no.2	
	Creative Potential	Empathetic Potential		Creative Potential	Empathetic Potential		Creative Potential	Empathetic Potential
1.	NO-53 st Meaning 70,67 %		11.	YES-60st Meaning 80 %		21.		NO-63 st Meaning 84 %
2	YES- 44 Meaning 58.67 %		1		YES-24 s Meaning 32 %	22	NO -40st Meaning 53.34%	
3.		YES- 68 st Meaning 90.67 %	13.	YES-53st Meaning 70.67 %		23.	NO-57 st Meaning 62.67%	
4.	YES-50 st Meaning 66.67 %		14.	YES-65 st Meaning 86.67 %		24.		NO-55 st Meaning 73.34%
5.	YES- 16 st Meaning 21.33 %		15.		YES-50 st Meaning 66.67%	25.	YES-53 st Meaning 70.67 %	
6.		YES 50 st Meaning 66.67 %%	16.	YES-35st Meaning 46.66%		26.	YES-53 st Meaning 70.67 %	

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7.	YES- 35 st Meaning 46.67 %		17.	YES-40 st Meaning 53.34 %		27.		YES-60st Meaning 80 %
8.	NO- 20 st Meaning 26.67 %		18.		YES-53 st Meaning 70.67%	28.	YES -70st Meaning 93.34%	
9.		YES - 47st Meaning 62.67 %	19.		YES-37st Meaning 49.34%	29.		YES- 38st Meaning 50.66%
10.	YES- 62 st Meaning 82.67 %		20.	NO -4st Meaning 5.33 %		30		NO-40 st Meaning 53.34 %

Three sets were made, each containing 10 items as described above. Some of the items were marked with stars as they represented relevant questions for this research. Table 04 renders, according to standard requests, statistical indicators for the creative-empathetic potential in percentage (%) for all the 75 subjects who participated in this experiment.

Not all subjects registered similar answers resulting in the appearance of significant differences. The reason is that the number of students who responded with, “Yes” or “No” differs from the number of subjects who took part in the research and helped to generate specific information about the creative- empathetic potential (see Table 04 which is relevant for this research).

It is important to note (in Table 04, students was abbrievated to st. due to space constraints). Following the recorded data in the two tables and the survey conducted for the 75 study subjects, a difference between the groups (Table 04) was observed as follows:

- A group of 53 students or 70.67% are fit for exercise;

- Another group of 22 students or 29.33% have medical exemption from physical exercise (S.M.).

Of the 53 students in the group who are fit for exercise, two other groups appear, which was quite interesting for this research, namely:

- 20 students or 29.33% of the total used to participate in sports in the age range of 5-14 years

- 33 students or 44% of the total regularly participated in Physical Education classes.

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Table 05. Subjects' typology involved in the research

No.	**Subjects' typology involved in the research**	Subjects no. and total recorded percentage %	Separation on groups in the same typology: no. and percentage %
1	Fit for physical effort	53 students – 70.67 %	20 students practiced sports at ages between 5 to 14 years old – meaning 29.33 % of the total
			33 students, meaning 44 % from the total, regularly participate in Physical education classes
2	Medical exempt	22 students – 29.33 %	-
Total		75 students – 100%	

If a parallel is drawn between Empathy and Creativity based on several theoretical and practical aspects which posit a link between these two concepts, their interrelation in the personality and behavioral plan can be deduced.

From Tables 01 and 02, questions about creativity and also empathy arise.

The items in the questionnaire that provided answers for this research in terms of creativity for people who are fit for physical effort, were items 1, 4, 11, 13, 14, 25 and 26, while empathy the relevant percentages and responses came from items 3, 6, 12, 15, 18, 24, 29, 30.

After analyzing the questionnaire responses for creativity, we observed the following:

• for items 1, 13, 25, 26, the same number of respondents, 53 or 70.67% of the total were recorded;

• for item 4, 50 subjects or 66.67% were recorded;

• for item 11, 60 subjects or 80% were recorded;

• for item 14 and last of the relevant items with an asterisk, 65 subjects or 66.67% of the total were recorded.

The analysis of Table 04, which refers to the typology of subjects in research, uncovered a surprising phenomenon, namely the number of subjects, who displayed creativity (53 students = 70.67%), is identical to the number of subjects that are fit for physical effort (all 53 students = 70.67%).

The number registered small variations for items 4, 11, 14.

As a result of this phenomenon, each item and discovered that indeed students who responsded according to the standard table are those who are fit for physical effort, and to this number of students a limited, almost insignificant number of students from the group containing subjects with medical exemption could be added. Events continued to be observed at this point.

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The responses that corresponded to the empathy potential were observed and a similar phenomenon to the one described above appeared, with few exceptions:

- for item 3, 68 subjects or 26.67% were recorded;
- for item 12 *"If you saw a child crying for a reason in your childhood, would he/she impress you, would it make you cry too?",* a surprising 20 subjects or 26.67% of the total were recorded. A more accurate verification revealed that 20 of the subjects were part of the group that used to practice sports in their childhood.

This aspect modified the researcher's perception of the group, and a new review of the questionnaire was conducted where it was discovered that the 20 students who mentioned that they used to practice sports as children, and who are a part of the group with subjects fit for effort, are present in all the standard responses, and perfectly fit into the standard typology created with the help of the questionnaire (empathetic and creative).

In this way, a conclusion was made that sports, especially a team sport practiced in childhood, changes the manner in which subjects feel and express themselves, and creates an increased level of empathy.

This is due to being part of a group and having a common purpose – victory for the team – that people learn that emotions are precious, and a helping hand makes one more human.

• a disheartening aspect was revealed in the responses to items 1, 6, 13, 18, 25, 26 (see Table 01) where the same number of subjects registered each time, meaning 22 students or 29.33%, hence verifying the subjects' answers in the questionnaire and recognition indicators.

In order to elevate the applicability of the research, an interpretation of the creative-empathetic potential level, taking into consideration the score obtained by each student. Table no.3 was used and the scores obtained in Table no. 6 were written within the section of appreciating the creative-empathetic potential through grades.

At a more detailed research of the table within the section of appreciating the creative-empathetic potential, subjects that participated at the research obtained the following grades:

A. CREATIVE POTENTIAL

• *Low Creative Potential* - 20 students or 26.66% of the total (of which 15 had medical exemptions M.E.) - 5 were fit for effort);

•*Medium Creative Potential* – 33 students or 44% of the total (of which 7 had medical exemptions (M.E.) – 26 were fit for effort);

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• *High Creative Potential* - 22 students or 29.33% of the total (of which 2 were fit for effort and 20 who practiced sports in their childhood);

B. EMPATETHIC POTENTIAL

• *Very Low Empathetic Potential* - 2 students or 2.67% of the total (of which 2 had medical exemptions (M.E.);

• *Low Empathetic Potential* - 20 students of 26.66% of the total (of which 20 had medical exemptions (M.E.);

•*Medium Empathetic Potential* - 33 students or 44% of the total (of which 33were fit for effort);

• *High Empathetic Potential* - 20 students or 26.66% of the total (of which 20 practiced sports in their childhood);

Table 06. Standard table regarding the interpretation of the creative-empathetic potential (according to Pavelea et al., 2005, p. 89, 90)

Standard table regarding the CREATIVE potential				**Standard table regarding the EMPATETHIC potential** (according to Caluschi Mariana, 1995, quoted by Cristina Pavelea)			
Scoring of the 75 st.	**Appreciation through grades for the Creative Potential**	St. No.	**%**	**Scoring of the 75 st.**	**Appreciation through grades for the Empathetic Potential**	St. No.	**%**
0-6	**Very low** Creative Potential	*	*	**0-4**	**Very low** Empathetic Potential	**2 st.** 2 M.E.	2.67 %
7-12	**Low** Creative Potential	**20 st.** 15 M.E. 5 Fit for effort	26.66%	**5-8**	**Low** Empathetic Potential	**20 st.** 20 M.E.	26.66%
13-18	**Medium** Creative Potential	**33 st** 7 M.E. 26 Fit for effort	44%	**9-14**	**Medium** Empathetic Potential	**33st** 33Fit for effort	44%
	High Creative Potential	**22** 2 Fit for	29.34%	**15-20**	**High** Empathetic Potential	**20**	26.66%

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19-26		effort 20 practiced sports in their childhood				20 practiced sports in their childhood	
27-30	**Very high** Creative Potential	*	*	**21-24**	**Very high** Empathetic Potential	*	*
Total		75 st.	100%		Total	75 st.	100%

The data in Fig 01 and Table 06 show that students with medical exemptions scored 7 – 12 points and 13 – 18 points for creativity and empathy respectively and grades such as "Low", "Medium" and even "Very Low" for empathy. On the other hand, students fit for effort and the ones who practiced sports in their childhood obtained superior grades. They scored 13-18: 19-26 points for creativity, points that correspond for "Medium" and "High" grades.

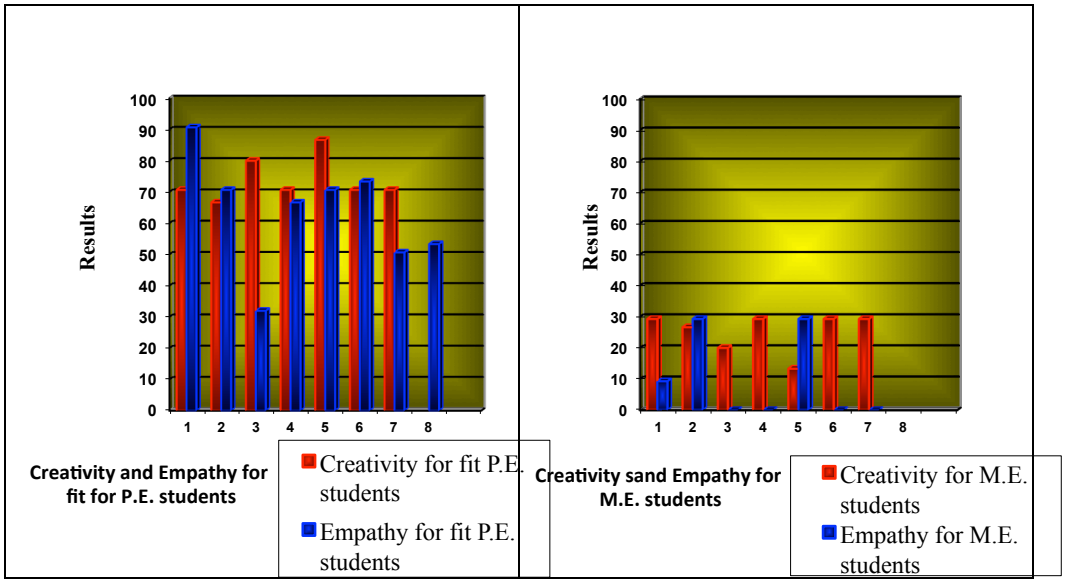

Fig 01. Graphic representation for results in table no.1 for Creativity ;Empathy -Fit for Physical Education (P.E.) students and medical exempt students (M.E.)

For **Empathy,** subjects obtained 9-14: 15-20 points, corresponding to "Medium" and "High" grades.

These results confirm the hypothesis research that, for students, Physical Education with all its practical and theoretical-applied content is the motor of the creative-empathetic development, and for this reason, it is felt that decreasing the number of classes (as in the

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case of recent years) or being absent from classes, for various reasons (absent or any exemptions, etc.) causes serious negative repercussions (see Table 06, Graph 01) for the creative and empathetic levels. It is the contention of the researcher based on the results obtained from the present research that physical exercise is a common form, without implying major costs, of activating both creativity and empathy.

In both cases, the production mechanism of the two phenomena involved cognitive stimulation, communication, responsiveness, affective, direct feeling, and intuition. As a result of the observation in the case of empathy, subjective knowledge acquired during physical activities practiced in a group, following well-established rules that cannot be broken, and which can be tested and verified by the subjects' behavior, results in a level of accommodation of the individual to the social reality, known through respecting their leader, the rules of the game, and so on. In the case of creativity, the creative product is verified in practice - a game is invented, a nickname given, a character developed, other descriptions are added and so on. Practice through play and sports can offer a verdict which is useful and allows the subject to become famous, liked or even a leader. In both cases, it is the practice that allows the subject to evolve and verify his/her value. In the case of this study, practice is facilitated through physical activity, which allows each individual to stand face to face with himself/herself, to confront his/her fear of being laughed at, but also to gain popularity within the group.

It is wise to remember that empathy is, according to specialists, "the ability of being "with" the other person and not "like" the other person", and this, it is believed, enables individualization in a group as a whole. In other words, while one may have their own unique feelings, they are also the "group", by participating in the collective emotion (see Tables 04 and 05). As a result of the influence of physical activity through the mechanisms that trigger them at a cognitive-creativity and affective-empathy levels, the individual's ability to understand how he/she thinks, feels and acts with another person is positively modified. It is crucial to remember this aspect, that empathy should not be confused with pity or compassion for another person in difficulty. Empathy is nothing but an interesting form of intuiting reality made through an affective-emotional identification. Thus, it helps build an image of the changes that occur in different stages of youngsters on psychomotor, emotional and creative levels, all of them being influenced by Physical Education. We believe that there is no other learning activity such as Physical Education, in which the human body can be stimulated on cognitive, affective and physical levels, as it is during all sports, Physical Education classes or any other collective or individual sport. "All of these can become objective in an original behavior that has the print of the one that knows empathy". (Internet,

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www.rasfiesc.com/businees/management/Empatie-sicreativitate-paralela57.php, 2016, p. 3). As both processes are completed with a different product, different perceptions that may exist or may annihilate empathy, is perhaps the most interesting feature of the human being – the human side with excitement and the spark of geniality – creativity. In other words, it is the researcher's firm belief that the loss of empathy and creativity, would ultimately lead to the destruction of humanity.

6. Conclusions

Physical Education plays a decisive role in the academic program in the students' creative empathetic development. Between creativity and empathy there are invisible threads that influence a human being at both cognitive and affective levels in developing the empathetic-creative potential.

At a creative and empathetic level, the research reveals that exercise is a common form, without implying major cost which plays an important role in activating the individual's creativity and empathy. In both cases, the production mechanism of the two phenomena involves cognitive stimulation, communication, responsiveness, emotionality, direct feeling, and intuition but especially motion.

As a result of the observation in the case of empathy, subjective knowledge acquired during physical activities practiced in a group, following well established rules that cannot be broken, and can be tested and verified by the subjects' behavior, where a level of accommodation of the individual to the social reality is achieved.

The analysis of the questionnaire confirm the hypothesis which states that, for students, Physical Education with all its practical and theoretical-applied content can be the motor of the creative empathetic-development. Hence, it is the researcher's contention that decreasing the number of classes (as has occurred in the last few years) or the exemption from classes of some students for various reasons (distraction from classes, medical exemptions, etc.) would cause serious negative repercussions for both the creative and empathetic levels (see Table 05 and Graph 01).

The emotional component is considered to be the heart of empathy, and the absence of certain emotions results in a blockage in the creativity field (anxiety), where it can be concluded that neither empathy nor creativity can be designed to manifest outside emotiveness and intelligence. However, both may be developed through common instruments, namely through Physical Education and Sport. This study leaves the path open for other researchers to add new empirical evidence to this field.

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