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## **Impact Of Motor Activities On Student Motivation For Sport**

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### **Abstract**

*In the present research, we tried to discover the motivations considered by the students as decisive for the active participation in the motor activities proposed during the sports lessons. The study had as a main method of research the opinion questionnaire and the sample of the research included a number of 100 students from the "Lucian Blaga" University of Sibiu. The conclusions of the research showed that the main motivations of the students for practicing in the motor activities were: maintaining an optimal state of health, the need for relaxation or relief of psychological stress, ensuring a physical condition, psychological, emotional and social balance, the attractiveness of the motor activities, from the sphere of socialization, the discovery of new friends, communication, socialization.*

*Gender differences have shown that opinions are shared, male students consider physical and social motivations to be the most important, while female students consider important in the motor activities the psychological and sanogenic effects.*

**Keywords:** *the motivation for sports, socializing, motor activities.*

### **1. Introduction**

During the period of university studies, physical education and sports activities aim to continue training and self-training of future specialists. Therefore, in the physical education and sports lessons, through the practical activities of different sport disciplines, students can take advantage of their talents and skills, as well as provide a framework for enhancing their mobility skills, develop motor skills at a higher level, improving the body's great functions, developing moral values such as respect for self and adversary, fair play, helping in need, perseverance, attention, memory (Tufan, 2015).

In the literature, the notion of sport has a general meaning, representing "all forms of physical exercises and dynamic games of a more or less spontaneous and competitive nature, originating in the traditional games and the founding myths of modern civilization, and its diversification is related to the fact that it carries values that come from contemporary ways of life" (Dragnea & Mate-Teodorescu, 2002).

Motor activities are a component of active life, an "important link to lifestyle, which involves making moves, according to your own choices, a few times a week, a pleasure movement, to consume energy and to produce satisfaction (Grigore, 2007).

Physical education can also improve the cohesion of groups, with a good cohesion of the group is considered important and can lead to better performance of the group. The relationship between cohesion and performance has been studied by many researchers, and most have come to the conclusion that "the connection between performance and cohesion is reciprocal (Sopa & Pomohaci, 2014, b). Also, successful groups are built around strong leaders and the importance of this role is increasing in today's sports in all categories (Sopa & Pomohaci, 2015 a).

A lot of skills are taught by young people through team sports, one of which is competition. Today we meet the competition every day and in every field. As adults we meet the competition when looking for a job or trying to find better jobs, children meet the competition at school for the best grades (Sopa & Pomohaci, 2015 b).

The benefits of practicing motor activity on the body have been highlighted in many specialized works, we want to present some of the formative valences of practicing the motor activities that aim at the sanogenic, attitude and behavioral plan (Uță, 2012):

Table 01. The formative valency of motor activities

Formative valency		
<i>Sanogenic plan</i>	<i>Atitudinal plan</i>	<i>Social plan</i>
<ul style="list-style-type: none"> <li>- stress removal;</li> <li>- restoration;</li> <li>- relaxation;</li> <li>- strain relief;</li> <li>- disease prevention;</li> <li>- increasing work capacity;</li> <li>- good physical condition;</li> <li>- maintaining a pleasant physical appearance for as long as possible</li> </ul>	<ul style="list-style-type: none"> <li>- self-respect;</li> <li>- emotion management;</li> <li>- tolerance for failure and frustration;</li> <li>- conflict management and violence control;</li> <li>- risk management;</li> <li>- positive mental attitude (eliminating the loser complex, better self-knowledge).</li> </ul>	<ul style="list-style-type: none"> <li>- respect for the community;</li> <li>- fair play and team spirit;</li> <li>- the ability to integrate through sports into different groups;</li> <li>- the ability to know and recognize the stable values of society;</li> <li>- developing the communication capacity (knowing that physical activities are a stimulant for communication);</li> <li>- the ability to work in a team;</li> <li>- cooperation, collaboration skills, etc.</li> </ul>

One of the main motivations for sport, analyzed and discovered by specialists, is the formation of a healthy lifestyle by practicing physical exercise. In the opinion of specialists, healthy lifestyles are an active process that takes place during ontogenesis, especially during maturation, as well as the genetic heritage and norms and values of the environment in which individuals live.

Sports activities also develop communication, intergroup relationships, and group cohesion. We can demonstrate that motor activities can develop group cohesion, develop positive intergroup relationships, discover the group leader and most importantly integrate and reintegrate children into the social group. The cohesion of the school group is very important in the evolution of performance as a group, so in collectives where we have positive relationships like sympathies, friendships, and cooperation, the efficiency of work is high (Sopa & Pomohaci, 2014).

Other important contributions to motor activities are their socializing role, demonstrated by many scholars in different fields, most of whom state that these activities represent the perfect framework for the social development of young people (Sopa & Pomohaci, 2014 e).

Table 02 – Factors that influence the formation of a healthy lifestyle (after Grigore, V., 2007):

Factors that influence the formation of a healthy lifestyle		
Factors relating to the individual himself	Group belonging to other people	Institutions, organizations, associations of other structures
Regulatory factors	Cultural level	Socio-political factors

Socialization through sport is a process of social integration through communication, understanding, and cooperation, with an interactive role for conflict resolution. Therefore, it is structured on cognitive, emotional and motivational constructions, as well as the performances, behaviors, and performances of sports groups (Sopa & Pomohaci 2014 c). Also, the important situational factors for group cohesion are living close to each other, sharing the same hobbies and activities, the same uniforms or clothing, group rituals, etc. (Sopa & Szabo, 2014).

Seen as a social institution, the sport has its own basis in society, it has a regulation, specific laws, sanctioning ways, links, friendship (both social and cultural) and communication systems, principles and ideologies (Sopa & Pomohaci, 2014).

Besides family, the first and most important socializing group, other groups contribute to the socialization of individuals: school colleagues, friends and later professional groups. One of the ways in which socialization within the group of friends or colleagues is achieved is the practice of sport. Individuals learn through sport to work together, to assume certain roles within the group and to define themselves within the group (Sopa, 2014).

Socializing through sport is a complex process through which individuals learn skills, attitudes, values, and modes of behavior that enable them to function in a particular culture. These modes of behavior are taught in institutions such as school or family (Sopa & Pomohaci, 2014 d).

## 2. The aim of the research

Through this research, we intend to know the opinions of the students in the higher education of the "Lucian Blaga" University of Sibiu regarding the motivational factors that lead the students to participate in the

motor activities proposed by the university. The objective of the research among the objectives of the research we can list: identifying the opinions of the students about the motivational factors that lead them to participate in the motor activities.

### 3. The research hypothesis

The knowledge of the students' motivation regarding the active participation in the proposed motor activities can give us, as leaders of the didactic act, indicative data for the formation of the practical-methodical and didactical approaches within the student sports disciplines.

### 4. The research methods

In the research, we used the following research methods: the method of investigation and data collection (theoretical documentation), statistical methods of processing and interpretation of the obtained data, the survey method - the questionnaire.

### 5. Results

The sample of the questionnaire included 100 students from different specializations from the we've used them to have a clearer picture of the group of subjects, both in age and gender. Subsequently, gender analysis will show whether there are differences between female and male gender views. Age - most of the interviewed students are aged between 19 and 20 years (67.4%), "Lucian Blaga" University of Sibiu. Demographics - according to Fig. 1 and Table no. 3.

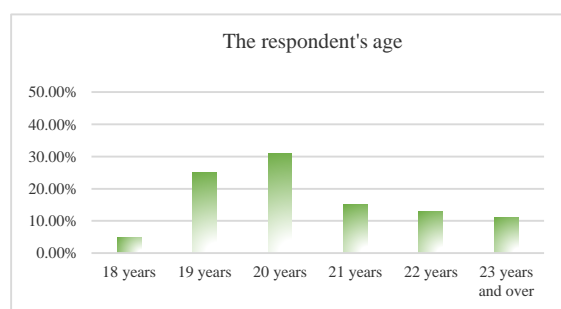


Figure 01. Graphic representation of the questionnaire respondents' age

Table 03. Age of respondents statistical calculation

Age of respondents	Cases	% N = 100
18 years	5	5%
19 years	25	25%
20 years	31	31%
21 years	15	15%
22 years	13	13%
23 years and over	11	11%
<b>Total</b>	<b>100</b>	<b>100%</b>
<i>The average</i>	20.91	
<i>The mediana</i>	20	
<i>Standard deviation</i>	2.92	
<i>Skewness</i>	2.72	
<i>Kurtosis</i>	8.20	

The gender distribution of respondents to the questionnaire was as follows:

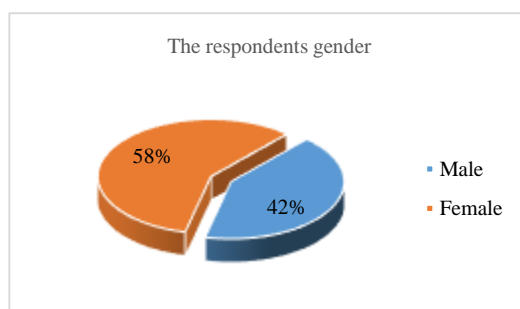


Figure 02. Gender distribution of the questionnaire respondents

Appreciate how the following motivational factors influence you in participating in physical education curricula. Evaluate each motivational factor.

Table 04. Students' answers to the questionnaire

Motivational factors, students' opinions	5	4	3	2	1
1. Maintaining the optimum body condition	60	23	10	2	5
2. Improving the functions and body systems	52	15	18	5	10
3. Keeping high indexes of some certain activities ability	58	21	11	4	6
4. The knowledge of acts and motor activities	55	25	10	5	5
5. Developing social values (communication, collaboration, socializing, relationships)	44	20	10	16	10
6. The development of cognitive capacities (thinking speed, memory, attention, boldness, ambition)	50	14	16	10	10
7. Developing creativity (imagination, rapid adaptation to new systems, initiative)	53	8	14	18	7
8. Promoting moral values (fair play, mutual aid, honesty, modesty, dignity)	62	20	11	4	3
9. Networking with peers involved in activities	58	12	10	11	9
10. Staying healthy	30	15	5	10	40
11. Developing group cohesion	52	28	4	6	10
12. Reducing the level of violence	33	10	12	5	40
13. Forming a positive self-image	55	15	12	8	10
14. Training constant habit of practicing motor activities during your leisure time	61	18	5	14	2

Table 05. Calculation of statistical indices in the items of the questionnaire

Questionnaire item	Arithmetic mean	Median	Standard deviation	Skewness	Kurtosis	T-test on gender
Item 1	4.31	5	1.07	-1.76	2.64	2.332
Item 2	3.94	5	1.35	-1.03	-0.17	1.150
Item 3	4.21	5	1.17	-1.51	1.43	2.120
Item 4	4.20	5	1.13	-1.48	1.44	1.740
Item 5	3.72	4	1.42	-0.69	-0.97	-0.322
Item 6	3.84	4.5	1.40	-0.84	-0.67	2.136
Item 7	3.82	5	1.42	-0.67	-1.10	0.220
Item 8	4.34	5	1.03	-1.64	2.12	1.180
Item 9	3.99	5	1.40	-1.05	-0.38	2.454
Item 10	2.85	2.5	1.75	0.12	-1.78	2.224
Item 11	4.06	5	1.31	-1.38	0.67	1.202
Item 12	2.91	3	1.76	0.06	-1.77	-0.200
Item 13	3.97	5	1.38	-1.07	-0.23	-0.420
Item 14	4.22	5	1.17	-1.29	0.30	2.450

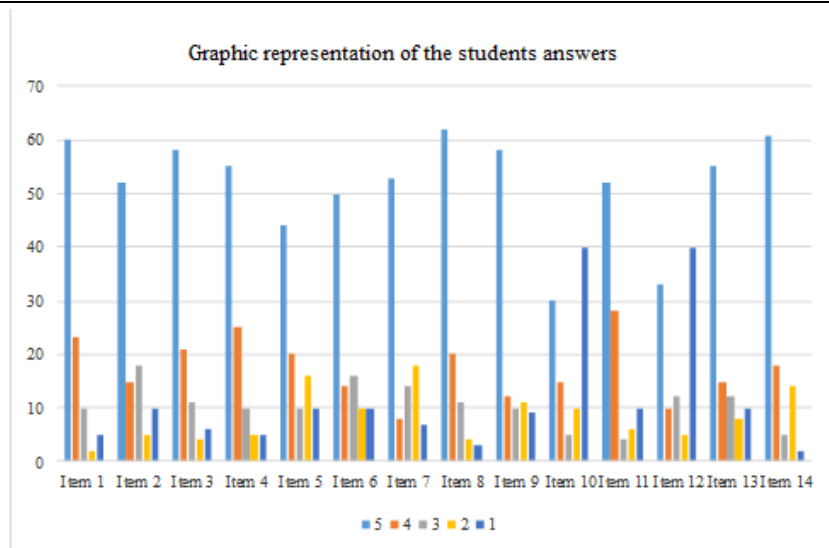


Figure 03. Graphic representation of the students answers

## 6. Conclusions

Analyzing Figure 1 we can see that many students are aged between 19 and 20 years (56% of total). And regarding gender composition we can see that most of the students (58% of total) are female and 42% of respondents were male.

Asked to answer which of the following values of effects they consider essential for developing a positive attitude for practicing motor activities, the students answered:

- at the answer variant "maintaining the optimum body condition", students majority response was 5 (60% of total respondents), the average mean was 4.41 and the differences by gender, calculated with the significance t-test (0.522), being insignificant.
- in the case, of the answer "improving the functions and body systems," the most common response was 5 (49% of total) average 4.18 and a significant gender difference (2.050).
- at the item "keeping high indexes of some certain activities ability", the most frequent response was 5 (45% of total), the average was 4.01, a significant difference in terms of gender (0.340).
- at the answer variant "the knowledge of acts and motor activities" the students replied in 33% with alternative 5, averaging 3.53 and significant gender difference (2.542).
- at the item 5 "developing social values", 62% of students responded with 5, the average grade is 4.38 and gender difference is significant (2.392).
- at the item 6 "the development of the cognitive capacities", 41% of students chose the 5 grade, the average grade was 3.55, gender difference was not significant (0.102).
- regarding item 7 "developing creativity", about 45% of students rated 5, the average grade was 3.74, and gender difference was significant (2.380).
- at the item 8 concerning "promoting moral values", about 55% of students chose the 5 grade, the average grade was 4.12, and gender difference was significant (3.060).
- at the item 9 "networking with peers involved in activities", 58% of respondents chose the grade 5, the average grade was 4.24, and gender difference was significant (2.600).
- regarding the item 10, "staying healthy", most students (57% of the total) rated 5, the average grade was 4.17, and gender difference was insignificant (1.424).
- at the item 11 "developing group cohesion", 50% of students have chosen the 5 grade, the average grade was 3.95, and gender difference was significant (1.232).
- in the case of the item 12 "reducing the level of violence", 40% of students chose the 5 grade, the average grade was 3.96, gender difference was not significant (-0.843).
- at the item 13 "forming a positive self-image", 38% of students have ticked note 5, the average grade was 3.71, gender difference was not significant (1.453).
- regarding item 14 "training constant habit of practicing motor activities during your leisure time", 45% of respondents chose the 5 grade, the average grade was 3.86, gender difference was significant (2.380).
- at the item 15 "positively influencing psychological characteristics", 48% of the total number of students have chosen the 5 grade, the average grade was 4.12, gender difference was not significant (-0.876).

## References

- Cârstea G. (2000), The theory and methods of physical education and sports Publishing NA-DA, Bucharest, p. 42-43.
- Dragnea A., S. Teodorescu-Mate (2002), Theory of sport, Ed Fest, Bucharest, p. 12.
- Ionescu C., (2010), Physical education and sport. Highlights for developing pro motion, Conspress Publishing, Bucharest, p. 17.
- Macovei S., (2012), Stretching, AFIR Publishing, Bucharest, p. 6-7.
- Sopa, I. S., (2014), The socializing rolls of motor activities at primary school level. Bulletin of the Transylvania Brasov, Vol. 7 (56) No. 2.
- Sopa I. S., Pomohaci, M., (2014), Developing sports group cohesion in socializing through means of motor activities. Published in: Medimond by Editografica, Bologna, Page 135.
- Sopa, I. S., Pomohaci, M., (2014 b), Group cohesion important factor in sports performance. Published in ESJ, Volume 10, No 26.
- Sopa, I. S., Pomohaci, M., (2014 c) Study regarding the impact of sports competitions on student's socialization. Published in European Scientific Journal, Volume 10, No 26.
- Sopa, I. S., Pomohaci, M., (2014 d) Socialization through sport, effects of team sports on students at primary school level. Published in: Medimond by Editografica, Bologna, Page 351.
- Sopa, I. S., Pomohaci, M., (2014's) Contribution of sports game in children socialization process. Scientific Conference "Physical education and sports in the benefit of health", Oradea.
- Sopa, I. S., Pomohaci, M., (2014 f) Study regarding group cohesion of students. The International Conference "Physical education and sports in the benefit of health", Oradea.
- Sopa, I. S., Pomohaci, M., (2015), Finding the leader of a volleyball team using the socio metric survey method. Published at the International Congress of Physical Education, Sports and Kinetotherapy 5th Edition "Education and Sports Science in the 21st Century" 10-13 June 2015 UNEFS Bucharest.
- Sopa, I. S., Pomohaci, M., (2015 b) Improving socialization through sports games. How does team sports affect children at primary school level. International Scientific Conference "Sport, Education, Culture - Interdisciplinary Approaches in scientific research," Galati.
- Sopa, I. S. Szabo, D. A., (2014), Study regarding the importance of developing group cohesion in a volleyball team. Published in: Procedia Social and Behavioral Sciences, Volume 180C, 5 May 2015, Page 1343.
- Stoica A., (2004), Teaching peculiarities of physical education in higher education level, Arvin Press Publishing, Bucharest P. 62-63.
- Tufan A. (2015) The impact of the motor activities on the education of a healthy lifestyle at students, UNEFS Bucharest.
- Uta F., (2012), Non-formal motor activities at students - values, perceptions, motivations, TIPARG Publishing, Pitesti, p. 129-134.

## Truth And Challenge - Romania At The Rio De Janeiro Olympic Games (2016)

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### Abstract

*The Olympic Games, born out of the aspiration of man to harmony and beauty, have always been that bright celebration of sports, which is expected to be happy every four years. The history of Romanian participation in the Olympic Games begins at the end of the 19th century, namely 1900. Since then, Romania has gathered 307 medals, out of which 123 gold, 95 silver, and 89 bronze. But since we are no longer a people of swimmers, athletes, handballs, gymnasts, to give just a few examples of top sports, and since sport is no longer a national priority for post-decade governments, the Olympic medals can be counted on the fingers, as is the case with the last edition, namely those held in Rio de Janeiro. Without coaches, without athletes, without material bases and last but not least, the sport in Romania has no hope. Total disinterest, generalized apathy and lack of involvement of decision-makers made many centers of excellence in major cities disappear from the circuit. Under these circumstances, the National Sport Strategy may be an oxygen bottle for participation, practice and great performance.*

**Keywords:** sporting events, sports performances, sports policies

### 1. Introduction

From the twentieth century, that strange century of the sport we parted right after the Sydney Olympics to find out now in the sixteenth year of the fourth edition of the new century and millennium in which sport will continue to play a leading role in contemporary society.

We have crossed a century of unprecedented development in the fields of science, economics, technology, but also in sport and culture, and history teaches us that we will not stay there. When Pierre de Coubertin took the initiative to restore the Olympics, following the model of antiquity, he clearly showed that these competitions must be universal (Radu, 2010). At the outset, this universal manifestation was regarded with skepticism, and now, after more than 120 years of existence, a worldwide socio-cultural phenomenon of an incomparable dimension. Running under the slogan of Citius, Altius, Fortius encourages athletes to self-indulge in Olympic arenas.

The crystallization of ideas about the role of sport in society emerged before 1900, in the midst of the great changes at the crossroads of the nineteenth century and the beginning of the twentieth century, anticipating substantial changes in the structure of contemporary society. Ideas first launched on 25 November 1892 by Baron Pierre de Coubertin in the amphitheater of the famous University of the Sorbonne launched the idea that together we would be able to continue and realize, on a basis consistent with the conditions of modern life, this grandiose and benevolent work - Olympic (Parry, 2010).

The Olympic Games, born out of man's aspiration towards harmony and beauty, have always been that bright celebration of sports, happily anticipated every four years, a manifestation of concord and peace that created around the stadiums an ambiance of greatness, adventure, and heroism (Olympic Games, 2004). Romania has been and is a consistent follower of the Olympic principles, with 1633 athletes taking part in the summer Olympic Games, and in the showcase with trophies since 1924 to date, 307 medals have been placed, of which 123 gold, 95 silver and 89 bronze ([www.cosr.ro](http://www.cosr.ro)).

Athletics, badminton, basketball, boxing, horse riding, canoeing, cycling, football, gymnastics, weightlifting, handball, judo, kayak, canoeing, wrestling, polo, pentathlon, rugby, fencing, tennis, table tennis, archery, volleyball, yachting, are the disciplines that allowed the Romanian athletes to assert, some of them setting not only exceptional results but also real recordings of participation (Vrabie, 2004).

Each time the Olympics made us live with the gods of the stadium, the emotion of victory, in the heart of the memory for a moment, a name, a gesture that seemed to us to have defined, in intensity, value or drama, a certain age. Each edition remained linked to an eponym, a protagonist, to that "primus inter pares", who conquered the heart of the tribune, finally entering the public consciousness.



**Romania's evolution in the Olympic Games over time**

Romania had no representatives in the 1896 (Athens), 1904 (St. Louis), 1908 (London), 1912 (Stockholm), 1920 (Antwerp), 1932 (Los Angeles) and 1948 (London) editions of the Olympic Games. In Antwerp, 40 Romanian athletes had to participate in seven sports, but the funds raised were insufficient to ensure the travel to Belgium.

In 1908, an athlete of Romanian origin obtained an Olympic medal, but not for Romania. Athletic Stefan Somodi from Cluj was awarded a silver medal at the high jump but competed under the Hungarian flag because Transylvania was at that moment part of the Austro-Hungarian Empire.

The first participation of a Romanian athlete was recorded in 1900 at the Paris edition. George A. Plagino enrolled in an individual competition in the shooting contest (plates test), where he ranked 13th in 51 athletes.

At JO Paris 1924, Romania had a delegation of 51 athletes competing in football, rugby, tennis, and shooting and won the first Olympic medal in the history of Romanian sports, the bronze at rugby.

In 1928, 26 Romanian athletes competed in Amsterdam, but they won no medals and no points.

In Berlin, in 1936, Henri Rang, cavalry officer and sportsman from Lugoj, won the first Olympic silver medal in the history of Romanian sport, with horse riding - individual obstacles. In Berlin, 71 Romanian athletes participated.

The first Olympic title was brought to Romania at the 1952 edition of the Olympic Games, held in Helsinki, where 128 Romanian athletes competed. Iosif Sirbu won the gold at the shooting - free weapon, low caliber, lying position, 40 shots. He then set a World and Olympic record. After the JO, the doctors advised him to quit because of a right eye affection. But he made a system by moving the right eye to the left eye, patented in 1955 by the Americans, which allowed him to return to the shooting competitions.

Also in Helsinki, Vasile Tiță won the silver medal in boxing, in the middle category (75kg), Gheorghe Fiat won the bronze in the boxing, in the semi-weight category (60kg) and Gheorghe Lichiardopol obtained the bronze at the shooting 25m gun speed.

At the Olympic Games in Melbourne in 1956, Romania (52 athletes) ranked 12th in the hierarchy of the nations with 13 medals won.

Four years later, in Rome, Iolanda Balaș Soter obtained gold in athletics, jumping high, and became the first female Olympic champion in the history of Romanian sports. Romania was represented by 109 athletes and ranked 10th overall with 10 medals.

In Tokyo, in 1964, 147 Romanian athletes competed and 12 medals were won (12th in the ranking of the nations).

In 1968, in Mexico City, Romania - represented by 87 athletes - ranked 11th among the nations with 15 medals won.

At the 1972 edition in Munich, 169 Romanian athletes competed, winning 16 medals, finishing 13th in the ranking of the nations.

The 1976 Olympics in Montreal, with the participation of 166 Romanian athletes, is associated with the perfection in the art gymnastics successful by Nadia Comăneci. Romanian received the first 10 in the history of gymnastics, a note that could not be displayed by the electronic table. Romania ranks fifth in the overall standings with 27 medals.

Nadia Comăneci has made her mark on the 1980 Olympics in Moscow, where she won two gold and two silver medals. Romania had 239 representatives and ranked six in the hierarchy of the nations, with a total of 25 medals.

The 1984 edition of the Olympic Games was the best in history for Romania, ranked second in the hierarchy of the nations with 53 medals (127 Romanian athletes participated). The star of the edition was Ecaterina Szabo, with most of the artistic gymnastics medals - four gold and one silver.

In Seoul, in 1988, 62 Romanian athletes competed, winning 24 medals, Romania finishing ninth in the ranking of the nations.

In 1992, Barcelona won fewer medals - 18. Romania's delegation consisted of 179 athletes. Romania finished 11th place.

At Atlanta in 1996, Romania's representatives (168) won 20 medals, ranking 13th among the nations.

Sydney 2000 is the JO edition where 156 Romanian athletes competed and won 26 medals, Romania finishing the competition in 11th place in the ranking of nations.

In Athens 2004, 108 Romanian athletes won 19 medals. In the medal ranking, Romania ranks 14th.

At the latest two Olympics, there was a decline in Romania's results.

In Beijing 2008, 102 Romanians competed, winning 8 medals and the 17th place on the nations.

In London 2012, Romania ranks 27th with 9 medals won. 105 Romanian athletes competed.

## Rio de Janeiro Olympic Games

The Summer Olympics, held between August 5-21, 2016, in Rio de Janeiro (Brazil), is the 31st edition, being the biggest sports event that takes place every four years. More than 11,400 athletes from 207 National Olympic Committees (CONs), including Kosovo and South Sudan as well as the Olympic Refugee Team, participated in the sports competitions. There were 28 sports including rugby in seven and golf, which were added by the International Olympic Committee in 2009.

The games were preceded by numerous controversy, such as the federal government of Brazil; concerns about the Zika virus; the pollution of Guanabara Bay and the doping scandal involving Russia's delegation.

Romania has concluded the 31st edition of the Summer Olympics held between 5-21 August 2016 in Rio de Janeiro, ranked 47th in medals, since it won only five medals: one gold, one gold medal silver and three bronze (Table 1).

Romania participated in the Olympic Games in Rio with a delegation of 96 athletes competing in 16 disciplines. COSR President Alin Petrache announced on leaving Rio that the trio delegation has a 6-8 medal plan to conquer. But only five medals were won by the Romanians at the Rio (<http://www.recentnews.ro/>).

Tabel nr. 1 – Romania's Olympic Games at Rio

Edition	No. sportsman	Sports	Medals			Total medals
2016	96	16	Bronze 1	Silver 1	Gold 3	5

This has prompted Alin Petrache to resign, saying he is "in the face of the public's failure to meet the goal of this edition of the Olympic Games (Rio de Janeiro Summer Olympics at the start of the day, Agerpres, 2016).

It is the worst ranking of Romania in the medal ranking of the last 60 years of the Olympic Games.

The first place in the Rio medal standings was the US with 121 medals, of which 46 gold. The second place was occupied by the UK with a total of 67 medals, of which 27 gold. The third place was occupied by China with 70 medals, of which 26 were gold. Brazil, the host country ranked 13 with 19 medals, including 7 gold, 6 silver, and 6 bronze.

Japan, the next host country ranked six with 41 medals, including 12 gold. Greece, the country that gave birth to the Olympic Games, finished the 26th with six medals: three gold, one silver, and two bronze.

The Republic of Moldova ended the Rio Olympics in 78th place with a single bronze medal conquered by a male canoe sprint.

Only 87 countries present in Rio have gone home with at least one medal. While 120 countries went home empty-handed. Among the countries that went home without a medal are Latvia, Lebanon, Syria, Iraq, Montenegro, Malta, Luxembourg, Ecuador, Chile, Bolivia and Saudi Arabia.

## Solutions of institutions involved in the sports phenomenon

Great sports successes are always possible, starting from an integral and time-consuming process. It is, therefore, necessary to rigorously plan and execute steps aimed at assisting elite sport, taking into account social, educational and scientific aspects.

Romania, "as a member of the Council of Europe and the European Union, has adhered to the recommendations of these sports institutions and has adopted the European Charter on Sport and other documents, focusing on the European civilization of sport, which consists of the following:

- sport must become a good asset for all;
- sport as a factor of culture;
- sport as a means of human development;
- sport as a factor for strengthening health" (Rusu & Popovici, 2009).

The most important aspects are related to the obligation of governments in the signatory countries to provide funding, material development, human resources provision, support for high-level sport.

Still, we want to recognize the reality and the stage in which Romanian sport is today is the consequence of several factors:

- insufficient or misdirected funding (from 2008, less than 1% of GDP);
- evaluations and decisions inappropriate for reality;
- obsolete or insufficient infrastructure,
- decreasing the number of children heading for sport and the number of legitimate athletes;
- keeping old models of training that begin to prove out of use;
- the lack of a philosophy in the population regarding the practice of physical activity as a way of life (for example, about 60% of the Romanian population does not practice sports).

It is a difficult reality, which if we accept it without guilt and victimization, we will be able to find relevant solutions that will lead us to look with confidence in the future. We have to move from the stage of passivity and resignation to the action and collaboration for the good of the whole nation.

The current vision of the Ministry of Youth and Sports is summarized as follows: "In 2028, Romanian sport will align with international performance and social development standards by creating a quality sports infrastructure and a culture of sport through unity, solidarity, ethics, and excellence. Massive sports of all ages represent a foundation for a healthier population for effective educational and social integration and is also the basis for selection for performance sports" (Rusu & Popovici, 2009).

Thus, the Romanian state assumes the mission to support and develop the sport, with the following directions of action:

a) increasing the active participation of the population of all ages in permanent sports activities in the interest of raising and maintaining individual health, improving the degree of cohesion, integration and social trust;

b) increasing the practicing of sports activities especially among children and young people for the purpose of training and development of active, educated and responsible citizens;

c) increasing the level and quality of Romania's representation at the highest performance sports competitions.

Referring to the issues addressed in this paper, performance and high-performance sports, we can say that it is unanimously recognized that any strategy should be based on a broad base of mass sports practitioners and that two important aspects be taken into account :

- the need for a coherent policy of attracting and integrating talented young people into the sports performance system;

- identify and capitalize on effective means and programs for moving from sports potential.

Therefore, the Ministry of Youth and Sports aims at increasing the sports performance in Romania by improving the human resources involved, the infrastructure conditions and the theoretical-scientific basis. To accomplish this goal, several steps are required to address:

- developing the system of selection and talent identification;

- improving the human resources directly involved in performance sports;

- enhancing international collaboration relations and increasing the visibility of national sports organizations worldwide;

- support and development of scientific research with direct applicability in sport;

- developing voluntary practice in high-performance sports;

promoting fair-play in performance sports and measures to combat non-ethical conduct (<http://mts.ro>).

These steps must be completed and mandatory. And the ultimate goal will be reached after many years of investment and collaboration of all the institutions involved: the Ministry of Youth and Sport, the National Federations on Sports Branch, the Romanian Olympic and Sports Committee.

## 2. Conclusions

Romania assumes a courageous mission through the directions of action it wishes to follow, delimiting in a synthetic manner three central pillars of the national strategy for sport: participation, practice, and performance. It is a long way from this truth of current sport, which has led to multiple challenges and solutions, to achieving a normality and efficiency in this area. A consistent policy of organizing and supporting mass and performance sports in Romania must be a priority for all authorities involved in the field.

## References

- Parry, J. (2010). *Sport and Olympism: Universals and Multiculturalism*, Journal of the Philosophy of Sport, 33:2, 188-204. <http://dx.doi.org/10.1080/00948705.2006.9714701>
- Radu, L (2010). *Olympic phenomenon from ancient to modern*, Publishing House Demiurg, Iași, 58-67;
- Rusu, O., Popovici, I. M. (2009). *Policies and strategies in performance sports*, Publisher PIM, Iași, 88-112;
- Vrabie, A. (2004). *Romania at the Olympic Games (1896-2004)*, Romanian Olympic Committee, Bucharest. <http://mts.ro/wp-content/uploads/2016/02/Strategia-nationala-pentru-SPORT-v2016-v2.pdf>
- <http://www.recentnews.ro/>
- XXX (2004). *Olympic Romania 90 (1914-2004)*, Romanian Olympic Committee, Bucharest;
- XXX (2016). "Summer Olympics in Rio de Janeiro at the time of the debut". Agerpres. 5 august 2016.

## **Study On The Development Of Coordination Motor Skills At The Level Of The 7th And 8th Grades**

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### **Abstract**

*The actuality of such a theme is evidenced by the rather modest results achieved by the students of the 7th and 8th grades on the line of psychomotricity. An orientation, a prospective thinking and a careful follow-up of the pupils and especially the judicious use of the most effective stimuli can lead to very good results in the direction of the psychomotricity of the school population.*

*Following the experiment and the stimuli used, we consider that the following means have great efficiency in the development of coordination: the deepening and amplification of the luggage by using free exercises with objects or devices, the use of acrobatic and artistic lines, the execution of the technical elements specific to the sports, bilateral sports games as well as motion games, preparatory games and application paths.*

*Coordination is a complex of qualities claimed in all man-made activities, physical education is the task of acting through all possible ways and means to develop it.*

**Keywords:** *gymnasium cycle students, coordination, physical education lesson;*

### **1. Introduction**

The study of the body actions of man, of motor behavior, has expanded more and more in recent years due to the concurrent action of many factors. Thus, the unprecedented development of the technique requires man's increased reactivity, greater precision, and fineness of the movement, a rationality of behavior." Man's ability to execute coordinated and precise movements in time and space, according to the proposed task, in the most varied environmental conditions"(Dragnea, 1999).

The activity of sport requires high values, both in terms of efficiency and quality - efficiency depends on the quality, the harmony of the gesture, because here the motric gesture is viewed in two aspects: actional and expressive (Zapletal, 1980). Thus, the contribution becomes by its own characteristics an area of experimentation and the athlete a model of the physical and psychic possibilities of the human being (Cârstea, 1993).

Finding the optimal solutions for increasing the efficiency of physical education and sports activities is a current requirement in our country where the emphasis is on the formation of vigorous people with good physical and mental health capable of being the promoters of progress.

Physical education in schools undergoes a continuous process of modernization (Scarlat, 2006), finding the paths and means capable of successfully fulfilling this imperative desideratum, capable of successfully meeting the new fields of activity in which they will active" (Marolicaru, 2008). Skill is a form of complex expression of performance through the rapid learning of new movements and rapid adaptation to varied situations according to the specificity of each branch of sport or other basic and applicative basic skills "(Mitrea & Mogos, 1977).

In other point o view, physical education is the only object in the school curriculum that prepares the school youth from a physical point of view (Ionescu, 2005). Through the content of the paper, we will try to help solve one of the most important and at the same time little-studied problems, that of the psychomotricity of the students aged between 13-14 years.

The activity of such a theme is evidenced by the rather modest results obtained by the students of the 7th and 8th grades on the line of psychomotricity (Coborzan & Prodea, 1999).

By the present work, we can not appreciate that we have solved this desirably in the best way, but it is a point of view, a small contribution in this vast and tortuous field of activity. A good orientation, prospective thinking and a careful follow-up of pupils, and especially the judicious use of the most effective stimuli, can lead to good and very good results in the direction of the psychomotricity of the school population.

## **2.1. Place, period, subjects**

The study was conducted at the Hoghilag Gymnasium School, Sibiu County, whose material base consists of a small gym (as a classroom) and a concrete yard. We have been working on this experiment with four grades, namely the VII and VIII of the Hoghilag School and the Valchid structure, numerically testing 60 pupils, 30 boys and 30 girls aged 13-14. The general training and enrollment of the results, as well as the experiment itself, took place in the school year 2015-2016. Of the 7 test, 2 tests were addressed to the somatic development and 5 tests were addressed to psychomotor development.

## **2.2. The research methods used**

Observation methods (measurement of somatic and motoric indicators)

In the paper we proposed to do, we measured only two somatic indicators, namely the height and weight, data we recorded and then compared them with those included in the biometric potential of pupils in grades VII-VIII. These data would confirm how the two indicators influence the development of psychomotricity in 13-14-year-olds.

The sense of balance

To measure the sense of balance, we used the following test: the subject should maintain one-leg balance with his hands on the hips and his eyes closed to a T-shaped device placed opposite, 4 cm high, 2 cm wide and 60 cm long. Counting the time until the subject touches the ground with the other foot, falls off the device or raises the hands from the hip. The subject has the balance the more developed as it stays in the corresponding position more on the device.

Ambidextrous

We tested this sense of great utility not only in sports activity but also in everyday life by repeated throws (5) with the right arm and the left arm at the target. The goal consisted of five concentric circles, dotted with points, respectively from the inside to the outside with 10, 8, 6, 4, 2 points. The diameter of the circle is 1m and the throwing distance is 8m. The strikes are made with balls of oina, making the average of the points obtained from the throws made with the two arms. The maximum score obtained can be 100 points and the minimum score 0 points.

Spatio-temporal orientation

To highlight the level of development of this sensation, we used the following test: the subject bound to the eye should move in a straight line over a distance of 8m. The distance traveled in plus or minus is measured, plus the deviation to the left or right of the trace. Finally, when we analyzed this test, we averaged the deviation with the plus or minus the allowed distance.

Kinesthetic

To highlight this sensation, we used the following test: the subject having ten identical boxes in size, shape, and color, but different in weight, has to put them in order, starting with the easiest and ending with the hardest. If the boxes were initially mixed at will, the subject, by weighing the weights two by two with both hands, should place them in order having an unlimited time. The qualifiers are given according to the number of mistakes.

General Coordination

General coordination as Prof. Dr. Epuran Mihai in Psychology of Physical Education, we checked it by conducting the Motorin test. The subject has the task to perform 3 jumps around the vertical axis, to the left, and to the right, turning as much as possible. The turns of the rotation are measured in degrees with using the compass to remove the errors that can occur from the lateral movement of the rotation axis projection. The heading is as follows: Very good - over 360 \*, Good - between 270 \* -360 \*, Satisfactory - 180 \* -270 \*, unsatisfactory - below 180 \*.

Statistical method

All the data obtained in the experiment was statistically matched and processed. We used the following indices: arithmetic means, standard deviation, the coefficient of variability, graphical representation.

### 3. Results

After the initial and final test, the data obtained were recorded separately by classes and sex groups, after which we switched to data processing for the calculation of the mean, the standard deviation and the coefficient of variability.

Regarding the somatic parameters, the results obtained reveal in these medium classes that characterize the team well. The average height in boys is 1.42 in the 7th grades and 1.46 in the 8th grades. In the final test, a slight increase of 1-2 cm was observed. The standard deviation is between 4.47-8.08 and the coefficient of variability between 3-5.66 on the final test. In girls, the environments tested in the initial phase were 1.43 in the 7th grades and 1.47 in the 8th grades. In the final testing, the increases were insignificant, the standard deviation and the coefficient of variability being between 4.73-6.38 and 4.07-4.39, which is a good homogeneity.

In terms of weight, the classes are well structured, with standard deviations between 4-7 and the coefficient of variability between 14-18%. The grades are homogeneous, the high percentage being given by some students who exceed the average.

Regarding the psychomotor parameters, after we made the appropriate records, we passed to the average calculation, the standard deviation and the coefficient of variation of the five points performed: balance, ambidextrous, spatiotemporal orientation, kinesthetic and general coordination.

The balance was the weakest results obtained in the initial phase, with values ranging from 2.20 / 2.4 seconds in the 7th grade and 3 / 3.2 seconds in grades VIII- a. In the final testing, progress was observed in all classes, the standard deviation is the same as the very good grade and the coefficient of variability between 3.43-12.72, values that characterize the teams as homogeneous.

Concerning ambidextrous, good results were obtained in the initial phase, the standard deviation was small and the coefficient of variability ranged from 6.27% to 10.76%, indicating a good homogeneity. In the final testing, the results were improved. The standard deviation characterizes the teams and the coefficient of variation was between 4.2% and 7.65%, which denotes the homogeneity of the teams.

Table 01. Results recorded in the ambidextrous test

	Initial test			Final test			Difference		
	Arithmetic mean	Standard deviation	Variability coefficient	Arithmetic mean	Standard deviation	Variability coefficient	Arithmetic mean	Standard deviation	Variability coefficient
<b>VII A</b>	6	2,15	3,60	8	2,07	25,87	2	0,08	10,13
<b>VII B</b>	8	1,36	17	12	1,62	13,50	4	0,25	3,50
<b>VIII A</b>	9	1,64	18,77	10	1,28	12,80	1	0,36	5,97
<b>VIII B</b>	12	1,43	11,91	15	6,40	6,40	3	0,47	5,51

In the spatiotemporal orientation test, both in girls and boys, in the initial phase were observed equally average results obtained in classes so that the final test was between 20-22 cm. Both phases deviation type is small and classes are homogeneous.

As far as the kinesthetic test is concerned, if in the initial phase the average obtained in boys is only one point between classes, the coefficient of variability has increased at final testing. For the girls, this sample was the most agreed, because of the progress made by all classes were great.

In the coordination trial, the boys recorded the initial phase outcomes ranging from 25.42-41.91 to the average variable coefficients ranging from 7.94-14.96, so the results were improved in final testing. The girls, the values were good for the initial test, large type deviation but with average variability. As a result of the activity, the results were improved in all classes.

Tabel nr.2. Results recorded in the coordination test

	Initial test			Final test			Difference		
	Arithmetic mean	Standard deviation	Variability coefficient	Arithmetic mean	Standard deviation	Variability coefficient	Arithmetic mean	Standard deviation	Variability coefficient
<b>VII A</b>	310	62	20	320	46,84	14,63	10	15,16	5,37
<b>VII B</b>	290	45,84	15,80	330	18,37	5,56	40	27,47	10,24
<b>VIII A</b>	310	32,62	10,52	320	21,38	6,68	10	11,24	3,90
<b>VIII B</b>	310	58,73	18,94	350	13,95	3,94	40	44,78	11,96

#### **4. Conclusions**

In order to achieve optimal coordination and the development of balance, kinesthetic, ambidextrous and spatiotemporal orientation, we must take into account several requirements that condition the effectiveness of their improvement: achieving a clear and precise planning, establishing the operating systems with which we will intervene in different stages, setting an optimal working volume and a number of corresponding repetitions, setting those who give the highest yield.

Coordination is a complex quality and it develops in all the moments of the lesson, but especially in the development of speed and coordination, and in the link of learning, fixation, pre-training of motor skills. As a consequence, the development of this quality will be done not only in the hours' of physical education and sport but also in sports activities, mass sports activities, students' independent activity as well as creative activities like games, excursions, hiking.

Coordination is a complex of qualities claimed in all man-made activities, physical education is the task of acting through all possible ways and means to develop it.

#### **References**

- Cârstea, G. (1993). Theory and Methodology of Physical Education and Sport, Universal Publishing House, Bucharest, page 23;
- Coborzan, H., Prodea, C. (1999). The methodology of physical and sports education, C & C Publishing House, Cluj Napoca, page 55;
- Dragnea, A. (1984). Measurement and Evaluation in Physical Education and Sport, Sports Tourism Publishing House, Bucharest, page 35;
- Marolicaru, M. (2008). Differential Treatment in Physical Education, Risoprint Publishing House, Cluj Napoca, page 61;
- Mitrea, G., Mogos, A. (1977). Development of motor skills, Sport-Tourism Publishing House. Bucharest, page 23;
- Ionescu, R. (2005). Operational Means Used in Solving Lesson Topics, Humanitas Educational Publishing House, Bucharest, page 71;
- Scarlat, E. (2006). School Physical Education Guide, Didactic and Pedagogical Publishing House, Bucharest, page 59;
- Zapletal, M. (1980). Little encyclopedia of games, Sport-Tourism Publishing House, Bucharest, page 112;

[www.edu.ro](http://www.edu.ro);  
[www.prodea.ro](http://www.prodea.ro).

## The Use Of Normal Distribution In The Analysis Of Sports Activities

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### Abstract

*In this paper, we are going forward from an impact study of the expedition "Pronatura" in order to make the organization of the physical activity of free time more efficient so that by attractiveness, diversity, and novelty it attracts young people to action and movement. In order to achieve this goal, it is intended both to identify the interests and motivations of children and young people for the different forms of free-time motor activity and to identify the main causes for the difficulties encountered in promoting such activities. In this paper, we will only consider the "Age of the parents".*

**Keywords:** normal distribution, sports activities

## 1. Results

Table 01. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	5	11.4	11.4	11.4
	11	12	27.3	27.3	38.6
	12	13	29.5	29.5	68.2
	13	9	20.5	20.5	88.6
	14	4	9.1	9.1	97.7
	15	1	2.3	2.3	100.0
Total		44	100.0	100.0	

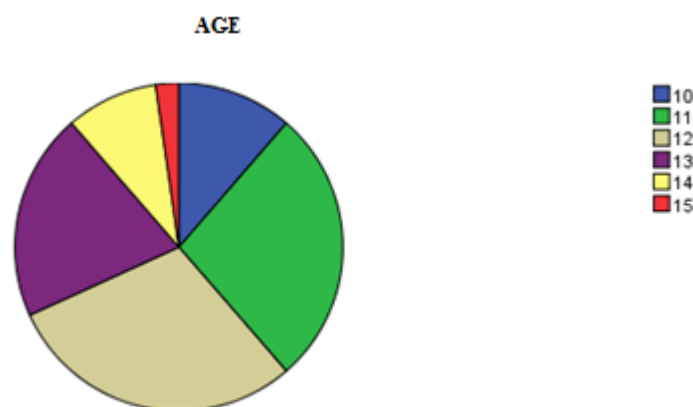


Figure 01. Age



The histogram corresponding to the "Age" feature for the sample of pupils participating in the "Pronatura" expedition is represented as follows:

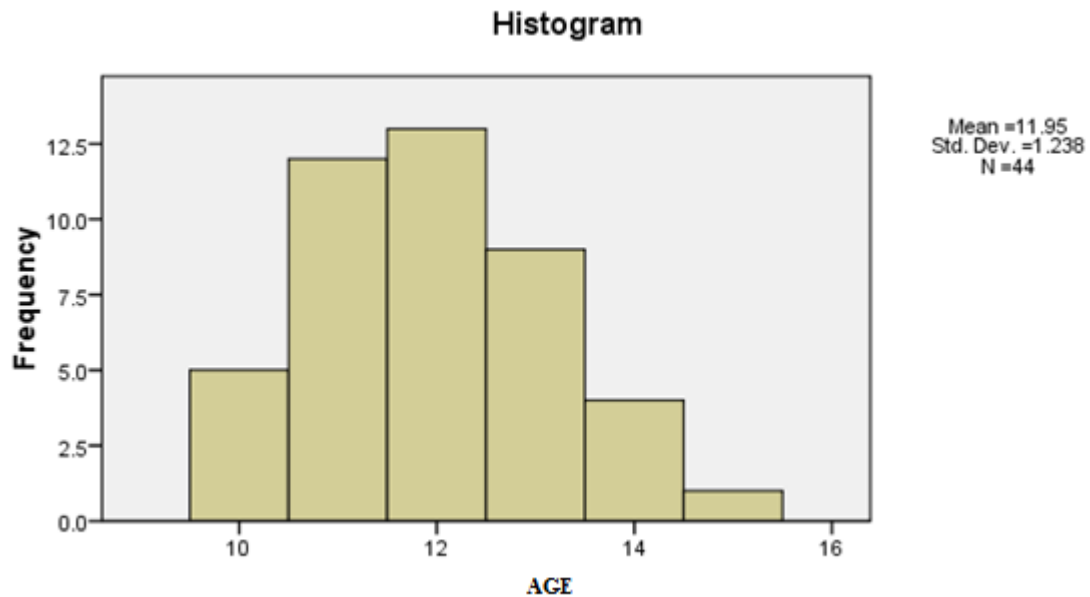


Figure 02. Age historgam

Normal distribution also carries the name of Gauss distribution (Acu et al., 2003). It is considered the most important distribution of probability theory, is the most common. In this paragraph, we propose to make a brief description of this distribution, and then check some of the variables that occur within the two populations if they follow a normal distribution. The Gauss curve is the plot of the probable density of the normal distribution, ie:

$$f(x) = \frac{1}{s\sqrt{2\pi}} \cdot e^{-\frac{(x-m)^2}{s^2}}$$

(Sanislav, 2002)

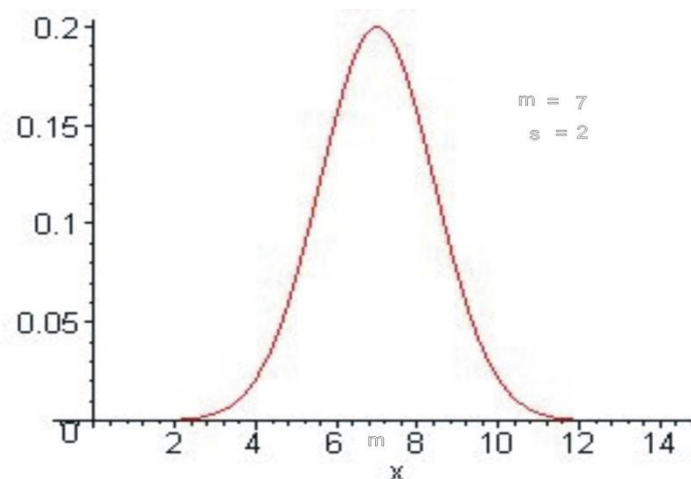


Figure 03. Gauss repartition

The Gauss distribution has the following important properties:

- It is symmetrical to the average  $m$ ,
- Has the maximum for  $x = m$
- In a Gauss distributed population, 50% of individuals are below average and 50% above average
- The area between the curve and the horizontal axis is 1.

- The area between the curve, the horizontal axis and two verticals next to the numbers  $a$  and  $b$  is the probability that, by randomly drawing out an individual from the population and measuring on that individual, the value obtained  $x$  will be between  $a$  and  $b$ .

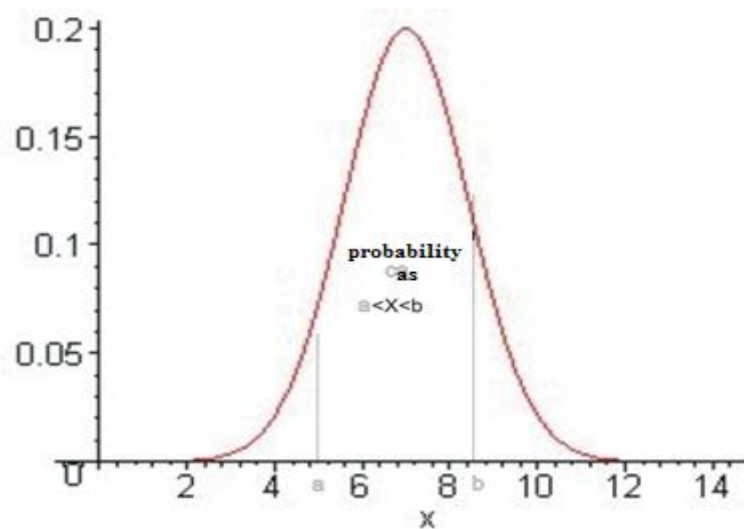


Figure 04. Normal distribution

For a distribution to be normal, 68, 28% of the values of the variables must fall within the range  $(m-s, m+s)$ ; in the interval  $(m-2s, m+2s)$  fall 95, 55% and in the interval  $(m-3s, m+3s)$  fall 99, 73%. Next, we want to check the "age" variable normality for the two populations, the pupils, and the parents respectively. The study is done using the SPSS program (Mocan, 2005). In the figures below, the normal curve is compared with the age variable histogram.

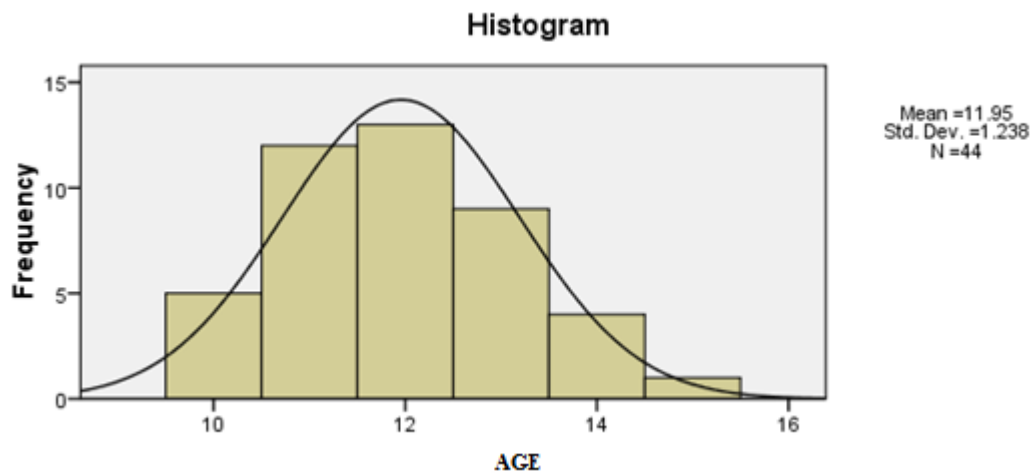


Figure 05. The normal curve histogram for the age variable

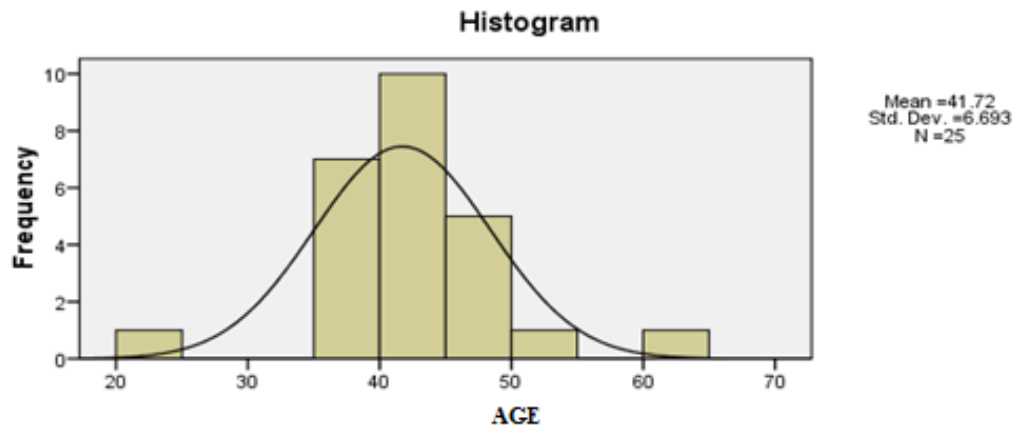


Figure 06. Normal curve histogram compared to age parameter

We will compare the data observed for the two collectives with the data we should have if our distribution would perfectly fit a normal distribution with the same average and the same standard deviation. The observed values and the hop values are compared on a graph, where the abscissa is the values observed for the "Age" variable, and on the order are the values of the variable Z (with the normal distribution). If the distribution of the Age variable would be normal, then the graph should show a linear trend, as can be seen in the figures below

A. Students' collectivity - "age"

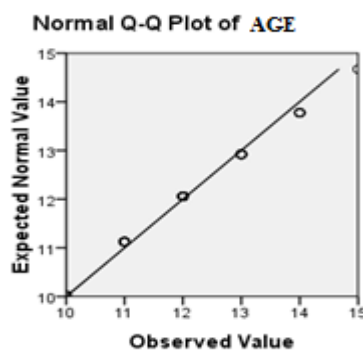


Figure 07. Student collectivity characteristic age

B. Parental Collectivity - "Age"

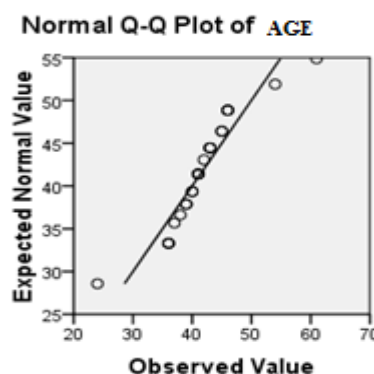


Figure 08. Parental collectivity characteristic age

To determine the distribution type of a variable, this graphical method, which although visually excellent, may not be enough, does not provide a mathematical support that assures us that "the hypothesis that the variable has a normal distribution is accepted". For this, we can use the "Kolmogorov-Smirnov" test (Sanislav, 2003), which tells us whether the variables are or not normally distributed. Applying this test to the "Age" variable, the following data is obtained for the two collectives studied:

A. Students' collectivity - "age"

Table 02. One sample Kolmogorov – Smirnov Test – Students' collectivity

One-Sample Kolmogorov-Smirnov Test		
		Age
N		44
Normal Parameters <sup>a</sup>	Mean	11.95
	Std. Deviation	1.238
Most Extreme Differences	Absolute	.167
	Positive	.167
	Negative	-.128
Kolmogorov-Smirnov Z		1.109
Asymp. Sig. (2-tailed)		.171
Test distribution is Normal.		

In interpreting this table, the value of "Asymp. Sig. ", This value is the basis of the decision criteria ([2, pp. 40-41]):

- If the sig is less than 0.10 then the test is 90% significant, ie the assumption that "distribution is normal" can be rejected with 90% confidence.
- If the "sig" is less than 0.05, then the test is 95% significant, that is, the assumption that "distribution is normal" can be rejected with 95% confidence.
- If the "sig" is less than 0.01, then the test is 99% significant, ie the hypothesis that "distribution is normal" can be rejected with 99% confidence.
- The result of applying this test to the Age variable indicates that the variable is normally distributed (the null hypothesis: "the variable is normally distributed" cannot be denied).

A. Parental Collectivity - "Age"

Table 03. One sample Kolmogorov – Smirnov Test – Parental Collectivity

One-Sample Kolmogorov-Smirnov Test		
		Age
N		44
Normal Parameters <sup>a</sup>	Mean	42.16
	Std. Deviation	6.423
Most Extreme Differences	Absolute	.184
	Positive	.184
	Negative	-.146
Kolmogorov-Smirnov Z		1.221
Asymp. Sig. (2-tailed)		.102
Test distribution is Normal.		

It can be noticed that even in the case of the parents' collectivity, the variable "Age" is normally distributed (the null hypothesis: "the variable is normally distributed" cannot be rejected).

The correct interpretation of the data obtained by different subjects to multiple tests is the most important step in the appreciation of performance in physical education and sports.

With the help of statistical analysis, expressed in numerical form, the conclusions provide added certainty to the actions undertaken in the direction of scientific research in physical education and sports.

The probabilistic character of the phenomena of physical education and sport must gain consistency on the basis of statistical and mathematical processing, thus overcoming descriptive, contemplative, less effective interpretations.

The statistical and mathematical analysis of measured data can provide rigor and objectivity in the following directions:

- calculating the average performance obtained by a group of subjects at each sustained sample;
- the significance of the performance achieved by each subject in relation to the group;
- grouping of subjects in a homogeneous manner and effective application of differentiated treatment;

- establishing the criteria that will form the basis for drawing up the rules for awarding grades in physical education and school sports;
- identify the level of homogeneity of the results obtained by a group of different samples and tests by calculating the dispersion indices, in particular, the coefficient of variability.
- the close correlation between the leisure activities of the subjects and the level of training of their parents.

## **References**

- Acu, D., Acu, M., Dicu, P., Acu, A. M. (2003). *Applied Mathematics in Economics Volume III - Elements of Probability Theory and Mathematical Statistics*, Publisher, „Lucian Blaga” University from Sibiu, page 33;
- Mocan, I. (2005). *SPSS Introduction to Data Analysis*, Publisher „Lucian Blaga” University from Sibiu, page 36-41;
- Sanislav, M. (2002). *Methodology of scientific research in physical education and sports*, Publisher Alma Mater, Sibiu, page 79.
- Sanislav, M. (2003). *The theory of physical education and sport*, Publisher Alma Mater, Sibiu, page 66;
- Savu, O. (2011). *Theoretical aspects on the role and methods of action in free time activities and conduct training*, University Pitești, page 21.

## Theoretical Aspects Of The Relationship Between Free Time Physical Activities And Youth Health

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### Abstract

*Maintaining and promoting health are priority directions for developed states in the world. Health prophylaxis is today a multidisciplinary phenomenon in a continuous dynamic that is given by the cultural particularities of each state and the level of educational development of the population. Fighting risk factors by promoting physical activity has become a constant concern of industrialized societies. Over time, it has been proven that motor activities improve physical and mental health.*

*Systematically, they have a positive contribution to the human body, bringing significant morphological and functional changes (improving exercise capacity), but also to the process of harmonious personality development (reducing the risk of mental illness).*

*The present paper aims to present the main theoretical aspects regarding the relationship between the health of individuals and the systematic practice of physical exercise, as well as the latest recommendations and guidelines of the international forum in this direction. Also included in the article are studies of worrying situations encountered nationally and internationally from this perspective.*

**Keywords:** physical activities, leisure time, youth, health

### 1. Introduction

Although man's genetic code has not changed for thousands of years, mankind's concerns have changed with the evolution of society by generating a lifestyle for which it is not programmed. The rise in living standards since the twentieth century has resulted in sedentary behaviors different from those of earlier civilizations in which physical effort in daily concerns was considerable. Millions of people are currently inactive, being susceptible to chronic diseases due to the slowing down of the body's biochemical processes, due to the fact that they spend most of their time sedentary (sitting or lying down). Also, the unhealthy behavior among young people (drug abuse, alcohol, and tobacco) overlapped with lack of nutrition and nutrition education is a worrying factor for contemporary societies that are today exposed to serious physical and mental health risks. At least in the last two decades, the efforts of various forums at the global level have intensified in order to study, understand and combat sedentary and unhealthy habits, especially among young people. Public health and its prophylaxis are directions of multidisciplinary and intersectoral deepening (Bocu, 2011). In this situation, our field has a basic role in solving health prevention, and it is our obligation that specialists make our contribution in this direction through the complex understanding of the phenomenon.

The literature offers enough arguments about the role of motor activities for good physical and mental functioning throughout life. Lack of physical activity, overweight and obesity have become a major social problem today. Physical inactivity is associated with an increased risk of chronic diseases being one of the reasons for premature mortality due to illness. Benefits are well-known in the cardiovascular system, mental health, bone health, blood pressure, blood composition regulating glucose, insulin, lipid levels. In addition, current studies indicate that moderate physical activity reduces depression and anxiety, improves mood and improves quality of life throughout it (Wang, 2011).

Health professionals have investigated these benefits over the past decades. Research on the link between physical activity and health started in the second half of the 20th century. Londoner Jeremy Morris is credited as one of the first specialists to undertake systematic research on inactive lifestyle and his relationship with leisure time activities and heart conditions. The observations in the studies were accepted and extended by other specialists, including Micheal Pollok, considered a leader of this type of research. Since the mid-1980s, studies have begun to include more accurate recommendations on this problem, amount and intensity of effort required for an active and healthy lifestyle in physical activities (Blair, 2004). In the 1990s, research began to incorporate historical information, bringing new evidence on the importance of systematically practicing physical activities of moderate intensity (walking, cycling) on health and fitness (Bouchard, 2012).

Numerous international organizations such as the World Health Organization, the International Federation of Sports Medicine, the Council of Europe have highlighted, through the development of statistics, strategies, and recommendations on combating physical inactivity, the importance of systematically practicing physical activities on health. There are opinions in the literature that consider physical inactivity one of the most important public health issues of the 21st century (Blair, 2009).

The prophylactic effects of physical activities are well-known, but they differ according to a number of factors such as the type of physical activity and the time it is allocated to, as well as some individual characteristics (age, gender, health). For example, engaging in a moderate physical activity for at least 30 minutes a day helps to ensure a caloric consumption sufficient for better health. Such an effort, with a minimum level of intensity, will, for the most part, generate about 600-1100 calories a week. If the intake of calories remains constant, this consumption translates into a weight loss of 588.9-724.8 grams per week. Increasing the time spent on physical activity so as to ensure a weekly consumption of 1000 calories would bring additional benefits in preventing coronary heart disease. This level of activity is achievable for most people, even though the intensity of any activity varies with age (A.N.S. Coach Library, 2006).

The efficiency of physical activity can be assessed on the basis of physical activity index (IAF) and caloric energy consumption (CEA). The physical activity index is valued on the basis of three parameters: intensity (I) with 5 items, duration (D) with 4 items and frequency with 5 items and is calculated by multiplying the scores of each parameter ( $IAF = I \times D \times F$ ). The score is used to determine the physical condition category and the aerobic exercise capacity, the 40-60 score being accepted as reasonable. A lower score requires IAF improvement, which can be achieved by increasing the intensity and frequency of the effort (Boroş-Balint, 2007).

In order to optimize physical activity patterns, several aspects need to be considered, such as personal preferences, health risks, and physiological health benefits. Thus, evidence has been provided over time on the sanogenic role of different types of activities, relative to the effort parameters. It is currently recognized that sustained physical activity is recommended to improve the cardio-respiratory system, but more and more arguments suggest that moderate physical activity brings significant benefits from this perspective. Even minimal increases in physical activity generate significant health benefits for inactive individuals. Thus, the role of moderate physical activity is accentuated, being sustained more easily than vigorous physical activity (A.N.S. Coach Library, 2006).

The World Health Organization's latest recommendations on physical health activities were structured into three age groups: 5-17 years, 18-64 years and over 64 years. In the case of children and young people, the recommendations suggested physical activities of play and recreation, to include sports games, tourist activities, active transport, and planned physical exercise in the context of family, school and community activities.

With regard to health recommendations, it was mentioned that they must accumulate at least 60 minutes of moderate physical activity, combined with sustained physical activity, every day. In case of accumulation of more than 60 minutes and the predominance of vigorous intensity activities, in a minimum amount of 3 days per week, additional health benefits may be beneficial.

Observing these recommendations will bring sanogenic benefits by improving cardio-respiratory function, increasing muscle and bone resistance, reducing the risk of cardiovascular and psychiatric illness, (Who, Global recommendations on physical activity for health, 2010).

The World Health Organization has shown over time that most countries are exposed to major risk factors generated by unhealthy lifestyle behaviors and causing most of the deaths. It is currently known that "people who lead a physically active, non-smoking, drinking moderate amount of alcohol, consuming many fruits and vegetables, have lower risk of disease and death than those who have unhealthy habits related to these behaviors, for example an overweight person with an average height, increases the risk of death by about 30% for every 15 kg extra" (Domnariu, 2011).

According to data from World Health Organization statistics, lack of physical activity is the fourth risk factor for mortality, causing about 3.2 million deaths annually (6% of the world total). Physically inactive people have a risk of up to 30% higher premature mortality compared to active people, being exposed to diseases such as ischemic heart disease, diabetes, cancer, stroke, depression, obesity, etc. A worldwide report in 2008 shows that about 31% of the population aged 15 and over is actively unemployed, the average for women being 34% and men for 28%. Romania is in a worse situation than in the world: 38.7% of the total population is inactive, with women and men being 46.2% and 31.2%, respectively. (Who, 2012).

Statistics provide alarming data especially among children and young people. Recent studies show that in Europe it is estimated that the number of children affected by overweight and obesity would increase. According to a study by the International Obesity Task Force quoted by Van Tuyckom in 2010, an estimated three million European children are obese, the number rising by 85,000 each year, and more than half of the adult population in Europe are overweight or obese (Van Tuycom, 2010). Overweight and obesity are the fifth risk factor for premature mortality worldwide due to the harmful effects they have on the body since childhood

and continuing in adulthood. Obesity is a risk for cardiovascular disease, high blood pressure, increased risk of fractures, respiratory difficulties, insulin resistance, and adverse effects on the psychological component of development. All these conditions that occur at this age influence adult life (Who, 2010).

It is currently known that obesity is associated with the spread of chronic diseases that "affects longevity, especially among young adults. Statistics suggest that the number of obese people in Europe has tripled over the last 20 years, with the current population accounting for about 130 million obese people and over 400 million overweight." (Domnariu, 2011). This is all the more worrying as this growth trend persists if the patterns observed so far are not changed.

In a study conducted by high school and lyceum students from eight cities in Transylvania, they show that leisure concerns are predominantly sedentary, especially during the week. Concerns that occupy the most leisure time are watching TV programs, computer use, and other static activities. Only 54 minutes are used daily for physical activity, of which about a quarter represents sports and exercise.

Of the total physical activity, only 8.3 min/day during the week and 29.6 min/week in the weekend are allocated to sports activity and physical exercise, the daily average being 14.3 min/day at the level of the whole week. In addition to these activities, the investigated students use active transport for 44.9 min/day during the week and 28.1 min/day at weekends, recording a total daily average of 40.1 min/day. (Soos, 2012).

The causes for which the situation is worrying are numerous and within the framework of national research, specialists at the national level report that leisure activities are not sufficiently addressed. "Physical activities have a smaller share in the free time of young people, which is somewhere in the second half of the ranking or even at the lower limit" (Moldovan, 2007).

In general, the most common barriers that underline the extra-curricular physical activities can reveal the following aspects:

- concerns about the health and safety of participants,
- teacher's lack of trust in this way of learning,
- the requirements of educational plans in schools and universities,
- lack of time, resources and support,
- important changes within and outside the educational system (Rickinson, 2004).

Organizing, conducting and promoting them has serious difficulties at the level of Romanian systems. In another study from around the country, about the importance of specialists in physical education and sports knowledge of the role, difficulties and possibilities of organizing physical leisure time activities are multiple. It has been found that most teachers do not encourage the pursuit of these activities. The main difficulties encountered by the 60 teachers in Bucharest participating in this study are economic and administrative-organizational. According to the author, this situation generates "weak preoccupations regarding leisure education through extracurricular sports activities with heuristic and playful value." (Armanu, 2007).

Analyzing the worrying situation in which Romania is in relation to the content of O.M.S. it can be concluded that the two mandatory physical education and sports classes provided in the Romanian curricula do not meet the necessary physical activity for health. Although the debate continues on the topic of introducing three hours of physical education for most classes, additional health promotion through physical activities outside compulsory classes is required to promote active transport, camps, hiking, excursions as well as activity physical outdoor activities with family and friends. Recreational, sports, leisure time activities play an important role in improving health through the development of the body as a result of exposure to varying environmental factors, contributing to increased resistance to different types of effort. In addition to health benefits, the benefits gained from such activities enable students to translate and use them effectively in solving their own daily life activities (Dragomir, 2004).

## 2. Conclusions

Participating in physical activities, especially those taking place in the open air, improves the health status with multiple benefits to the physical and mental, which contributes significantly to the harmonious development of the personality of children and young people. There is a high probability that participation in such extracurricular motor activities will generate a further change in the lifestyle of children and young people.

Sustained intensity activities are poorly represented in leisure time concerns, especially during the week, which highlights the importance of increasing the number of organized physical activities (play and competition), extracurricular or day-to-day, and/or increasing the number of physical education hours to increase health benefits through vigorous physical *activity* as intensity. In order to record a higher amount of time spent on both moderate physical activity as well as the formation of habits and skills that can be transferred later in adult life, holidays and weekends should include the practice of extracurricular physical activities with touristic nature excursions and camps) containing active transport implicit.



There is an increasing tendency among young people to maintain and expand sedentary behaviors that are also revealed to us in the country, and is mainly due to the development of new technologies, but also to the lack of accessibility to participation in physical activities in the free time of children and young people.

For field specialists and those involved in education, including policymakers at the local and national level, engaging in designing and developing programs to promote physical leisure time activities for children and young people should become a priority and implicitly increasing the number of physical education hours in line with the health recommendations of the World and European forum.

## References

- A.N.S., I.N.C.S. (2006). *Fitness, Introduction to a Healthy Lifestyle*, Coach Library, No. 1, Bucharest, page 10;
- Armanu, M. (2007). *Study on the possibility of improving the content and forms of extracurricular sports activities in high school students*, Publisher Fest, page 33;
- Blair, S. N., LaMonte, M. J., Nichman, M. Z. (2004). *The evolution of physical activity recommendations: how much is enough?*, American Society for Clinical Nutrition, Volume 79,(suppl.), Pages 913-920;
- Blair, S. N. (2009). *Physical inactivity: the biggest public health problem of the 21st century*, British Journal of Sport Medicine, Volume 43, Issue 1, Pages 1-2,;
- Bocu, T. (2011). *Palestrica Mileniului III – Sport and civilization*, Vol. 12, no. 1, January-March 2011, 7–10;
- Boroş-Balint, I. (2007). *Psycho-physiological particularities of the individual, stress and physical effort*, Palestrica Millennium III - Civilization and Sport, No. 2 (Volume VIII 28), June 2007, 93-97;
- Bouchard, C., Blair, S. N., Haskell, W. (2012). *Evolution of physical activity guidelines reflects changing body of evidence*, Human Kinetics The Information Leader in Physical Activity & Health, Cloth Book, page 33;
- Domnariu, C. (2011). *Intervention Models for Nutrition and Physical Activity in Romania*, Acta Medica Transilvanica, Volume II, No. 1, page 56;
- Moldovan, E. (2007). *Relevant psychosocial aspects of outdoor education activities in the educational process of young people*, National Scientific Conference, Bucharest, page 76;
- Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., Benefield, P. (2004). *A Review of Research on Outdoor Learning*, National Foundation for Educational Research and King's College London, page 45;
- Soos, I., Biddle, S., Boroş-Balint, I., Sandor, I., Szabo, P., Hamar, P., Simonek, J. (2012). *Prevalence of sedentary behaviour in young people in Romania and Slovakia*, European Physical Education Review Published by Sage Journals, 2012, Volume 18, pages 19-46;
- Van Tuyckom, C. (2010). *A multilevel analysis of social stratification patterns of leisure-time physical activity among Europeans*, Elsevier Masson SAS, Science & Sports, Volume 25, Issue 6, Pages 304-311;
- Wang C. K. J. (2011). *A latent profile analysis of sedentary and physical activity patterns*, J Public Health, DOI 10.1007/s10389-011-0464, page 1;
- World Health Organization, (2010). *Global recommendations on physical activity for health*;
- World Health Organization, Regional Office for Europe, (2012). *Seventh annual meeting of HEPA Europe*, Report of a WHO meeting 12-13 October 2011 Amsterdam, Netherlands.

## Using The Zuckerman-Kuhlman Questionnaire In Analyzing The Personality Of Students Practicing Motor Activities

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### Abstract

*Motor activities must be part of the overall education of each student, through such activities the student succeeds in maintaining muscle tone and optimal health, improving communication and social relations, and positively modifying their personality.*

*This paper aims to highlight the beneficial effects of the motoric activities on the students' personality level. So we started from the hypothesis that motor activities have effects on the personality sphere on the five scales: sociability and social integration, anxiety, sensation, aggression, and level of activity. We formed two samples of students (N = 25), the experimental group, 12 girls and 13 boys, and the control group, 11 girls and 14 boys, both groups with children aged 9 to 10 years. We followed the school curriculum in the control group and in the case of the experiment group we used a training program that included playful and agonistic action systems with dynamic games and sports competitions.*

*Following the application of the differentiated programs on the two groups, we found using the Zuckerman-Kuhlman personality questionnaire that the experimental group students have a better level of sociability and social integration, a low level of anxiety, are not so attracted to new sensations, have low aggressiveness and increased activity level compared to the control group.*

**Keywords:** motor activities, personality, socialization, social integration.

### 1. Introduction

Sport and physical education and sport activities can be considered very important social tools, and therefore any state has a great responsibility to promote and develop it (Tufan, 2016).

Another important contribution of motor activities is their socializing role, demonstrated by many researchers in different areas, most of them claiming that these activities represent the perfect framework for the social development of young people. Socialization through sport is a process of social integration through communication, understanding and cooperation, with an interactive role for conflict resolution. Therefore, it is structured on cognitive, affective and motivational constructions, as well as the performances, behaviors and performances of sports groups (Sopa & Pomohaci, 2014 e). Sports activities also develop communication, intergroup relationships and group cohesion. Motor activities can develop group cohesion, develop positive intergroup relationships, discover the group leader and most importantly integrate and reintegrate children into the social group. The cohesion of the school group is very important in the evolution of performance as a group, so in groups where we have positive sympathetic relationships, the efficiency of work is high (Sopa & Pomohaci, 2014).

The motor activity is a component of active life, an "important lifestyle link, which involves making moves, according to your own choices, several times a week, moving to enjoy, to consume energy and to produce satisfaction" (Grigore, 2007).

Regarding the physical education and its effects on the cohesion of the groups the specialists assert the following: "Physical education can also improve the cohesion of the groups, having a good cohesion of the group is considered important and can lead to better performance of the group. The relationship between cohesion and performance has been studied by many specialists, most have come to the conclusion that "the connection between performance and cohesion is reciprocal" (Sopa & Pomohaci, 2014 b). Also, successful groups or teams are built around strong leaders and the importance of this role is increasing in today's sport in all categories (Sopa & Pomohaci, 2015 a). Situational factors that are important for group cohesion are also living together, sharing the same hobbies and activities, the same uniforms or clothing, group rituals, etc. (Sopa & Szabo, 2014).

A lot of skills are taught by young people through team sports, one of which is competition. Today we meet the competition every day and every field. As adults meet the competition when looking for a job or trying to find better jobs, children meet the competition at school for notes (Sopa & Pomohaci, 2015 b).

Seen as a social institution, sport has its own basis in society, it has a regulation, specific laws, sanctioning ways, links friendships (both social and cultural) and communication systems, principles and ideologies (Sopa & Pomohaci, 2014 f).

Besides family, the first and most important socializing group, other groups contribute to the socialization of individuals: school colleagues, friends and later professional groups. One of the ways in which socialization within the group of friends or colleagues is achieved is the practice of sport. Individuals learn through sport to work together, to assume certain roles within the group and to define themselves within it (Sopa, 2014 a).

## **2. Aim of the research**

The primary purpose of the research was to analyze the effects of motor activities on the five spheres analyzed using the Zuckerman-Kuhlman personality questionnaire: sociability and social integration, anxiety, sensation, aggression, and level of activity. The objective of the research

The objective of this research was to apply the Zuckerman-Kuhlman personality questionnaire to the two pupils and analyze their results and progress.

## **3. Research hypothesis**

The use of Zuckerman-Kuhlman's personality questionnaire as a research tool can give us the opportunity to investigate the personality traits of pupils present in the two experimental and control groups as regards sociability and social integration, anxiety, seek of sensation, level of the aggressiveness and level of activity.

## **4. Research methods**

In the experimental research we have chosen to use a questionnaire used in the literature in psycho-social and personality research, called the Zuckerman-Kuhlman Personality Questionnaire.

The Zuckerman-Kuhlman questionnaire (Zuckerman et al., 1993) aims at analyzing five dimensions of personality: socialization and social integration of the individual (SY), neuroticism-anxiety (N-Anx), impulsive sensation of impatience (Agg-Host) and activity level (Act).

The Zuckerman-Kuhlman questionnaire is a model of multivariate analysis of personality, a model by which to analyze the personality traits and its basal factors. In previous models, psychologists have attempted to propose different models of baseline personality analysis, some of which have three factors (Eysenck, 1985), others with five factors (Costa & McCrae, 1985). Of all these, the most used model is the five-factor model, which also includes the Zuckerman-Kuhlman questionnaire.

Other research methods were the following: the bibliographic method, the statistical-mathematical method.

## **5. Results**

Following the psychological questionnaire Zuckerman-Kuhlman we managed to establish the psychological profile of each student in the two groups, experiment and control. The statistical interpretation of the data obtained was achieved using the SPSS 22 program, performed on each scale.

### **Social affiliation and social integration of the individual**

In the case of sociability scale items, analyzing the responses of the two groups, experiment and control, we came to the conclusion that 72% of the experimental group students and 68% of the control group pupils obtained a t on the T-test within the population average.

Applying the significance T-test we observed that the value of p calculated was 0.00001, lower than the value of T (-10.907800), which indicates a significant difference between the two groups of students.

Analyzing the results of the Zuckerman-Kuhlman test on the sociability scale, we could see that 8% of experimental group students prefer individual activity, and their results are considered better when working alone. In the case of the control group, we noticed a higher number for students who prefer individual activities, ie 20% of the total number of pupils in the control group.

We obtained high scores of about 20% of the experimental group's students, 12% of those in the control group, at the top of the scale, which may indicate the presence of many friendships.

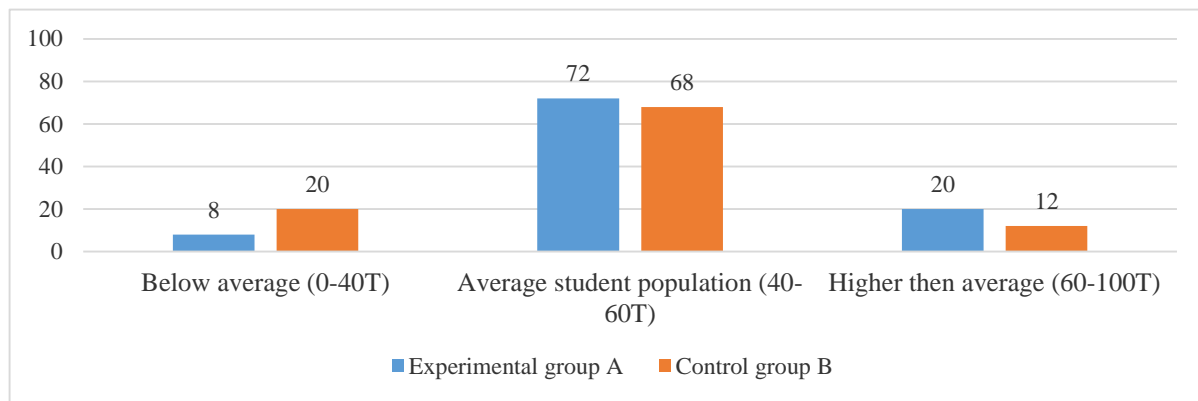


Figure 01. The scale of sociability and social integration

Table 01. Statistical indicators of the sociability and social integration scale

Experimental group A			Control group B		
The scale of sociability and social integration	Cases	%, N = 25	The scale of sociability and social integration	Cases	%, N = 25
Below average (0-40T)	2	8%	Below average (0-40T)	5	20%
Average population (40-60T)	18	72%	Average population (40-60T)	17	68%
Over average (60-100T)	5	20%	Over average (60-100T)	3	12%
Total	25	100%	Total	25	100%
Mann-Whitney U Test		Z-score = 2.4933	U-value = 183.5	p-value = 0.01278	$p \leq 0.05$
Test-T		p-value = 0.00001	T-value = -10.907800		$p \leq 0.05$
One-Way ANOVA		f-ratio = 7.89464	p-value = 0.007153		$p \leq 0.05$

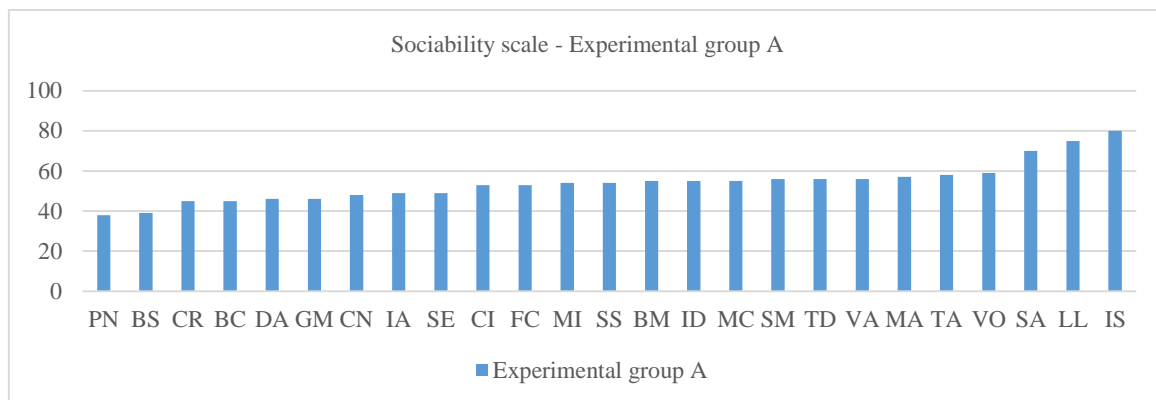


Figure 02. Sociability scale – Experimental group A

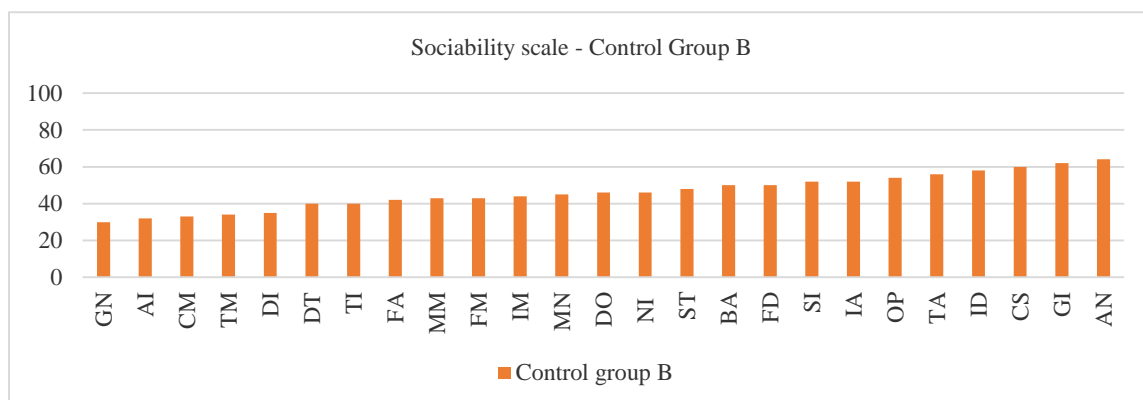


Figure 03. Sociability scale – Control group B

**Neuroticism-Anxiety**

In the case of items that focused on neuroticism-anxiety scale, we watched emotions, worries, anxiety level and distrust of the students in the two groups. Significant scores show the sensitivity of the subject, distrust in their own forces, and the level of anxiety. So analyzing the responses of the two groups, the experimental group, and the control group, we concluded that 48% of students in the experimental group and 46% of control group students are in the average population.

Applying the significance test T-test, we noticed that the value of t was 4.471485, higher than the p value of 0.000159, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

Analyzing the results of the Zuckerman-Kuhlman test application, on the neuroticism-anxiety scale, we have seen that 40% of students in the experimental group have no fears, worries or other anxieties.

In the control group, we noticed a larger number of pupils who are fearful, worried or have high levels of anxiety, at 24% of all students from the control group.

Regarding the upper part of the chart representing students with a high level of anxiety, we have scores of 12% of the students from the experimental group, compared with 28% of those from the control group, which may indicate a high level of resistance to stress, and a lower level of fear and anxiety in experimental group compared to the control group.

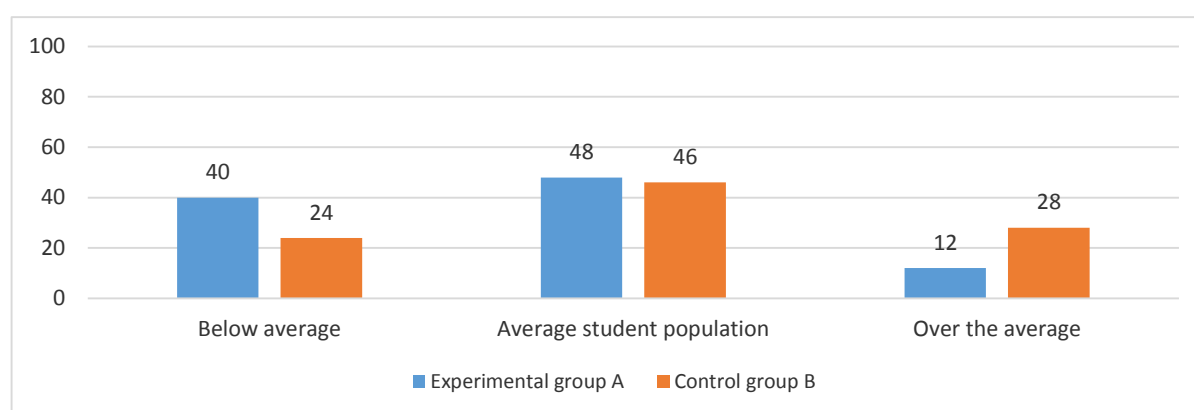


Figure 04. Neuroticism-anxiety scale

Table 02. Statistic indicators of neuroticism-anxiety scale

Experimental group			Control group		
Neuroticism-anxiety	Cases	%, N = 25	Neuroticism-anxiety	Cases	%, N = 25
Below average (0-40T)	10	40%	Below average (0-40T)	6	24%
Average population (40-60T)	12	48%	Average population (40-60T)	11	46%
Over average (60-100T)	3	12%	Over average (60-100T)	8	28%
Total	25	100%	Total	25	100%
Mann-Whitney U Test		Z-score = -1.0478	U-value = 258	p-value = 0.29372	$p \leq 0.05$
Test-T		p-value = 0.000159	T-value = 4.471485		$p \leq 0.05$
One-Way ANOVA		f-ratio = 2.2064	p-value = 0.143978		$p \leq 0.05$

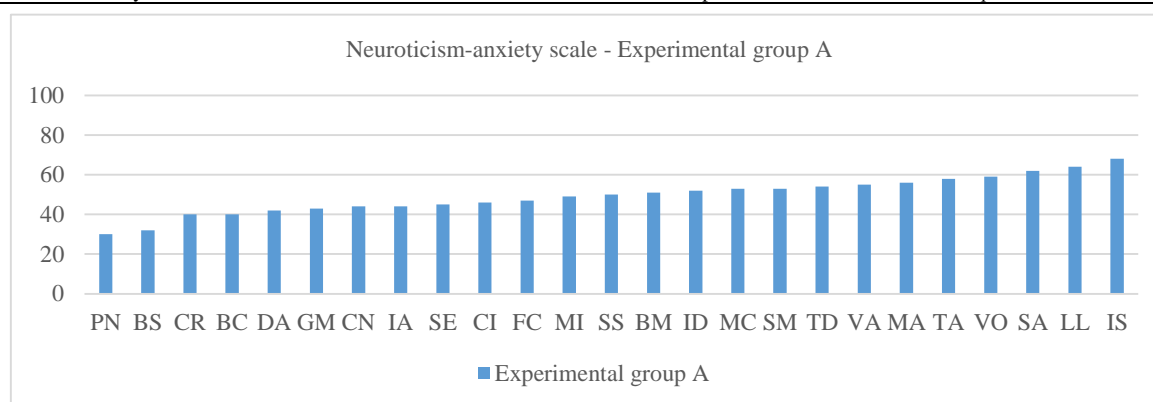


Figure 05. Neuroticism-anxiety scale – Experimental group A

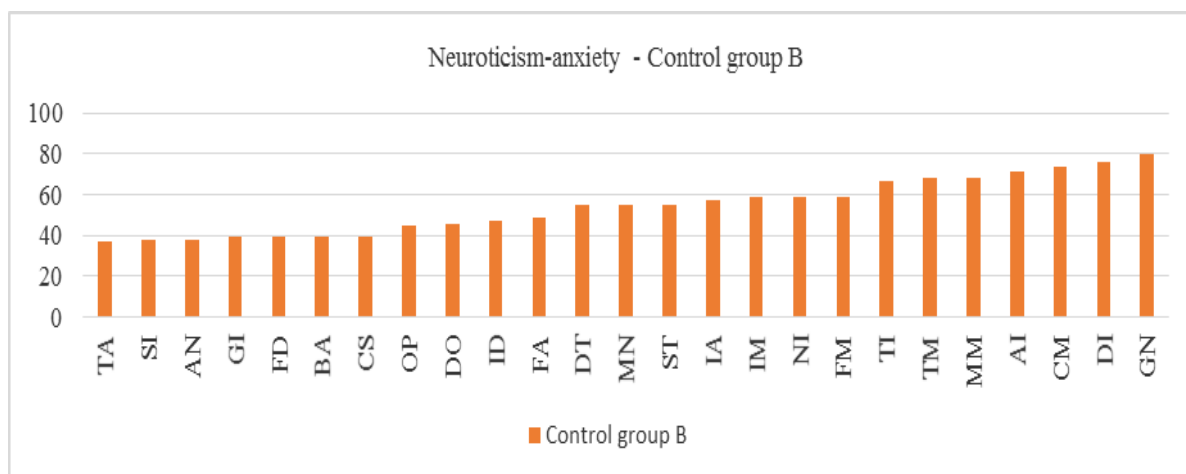


Figure 06. Neuroticism-anxiety scale – Control group B

### Impulsive search of sensations

In the case of items that focused on impulsive scale search of sensations, we followed the subject need of new, characteristic of those to impatience, rapid response and impulsive without prior reflection, unexpected, spontaneous, unpredictable.

Therefore analyzing the responses of the two groups, the control group, and the experimental group, we concluded that 60% of students in the experimental group and 58% students of the control group have obtained a quota T below the average population.

Applying the significance test we noticed that the value of  $t$  was 11.037062, higher than the  $p$  value of 0.00001, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

Analyzing the results of applying the Zuckerman-Kuhlman test on the scale of the impulsive search of sensations, we have seen that 20% of students in the experimental group tend to not seek thrills or to hasty decisions, they are not anxious, thinking clear, imperceptibly need for contingency. In the control group, we observed a higher rate number of students with impulsivity and sensation seeking, up to 16% from the total of the students.

We obtained lower scores in the case of the experimental group, approximately 20% of students, compared with 24% of those from the control group regarding students who need sensational, unexpected, being impulsive and uncontrollable. Therefore we can say that motor activities have influenced the students from the experimental group to be more patience, being more calculated, more attentive, more disciplined, compared with those from the control group.

Impulsive search of sensations, we have seen that 20% of students in the experimental group tend to not seek thrills or to hasty decisions, they are not anxious, thinking clear, imperceptibly need for contingency. In the control group, we observed a higher rate number of students with impulsivity and sensation seeking, up to 16% from the total of the students.

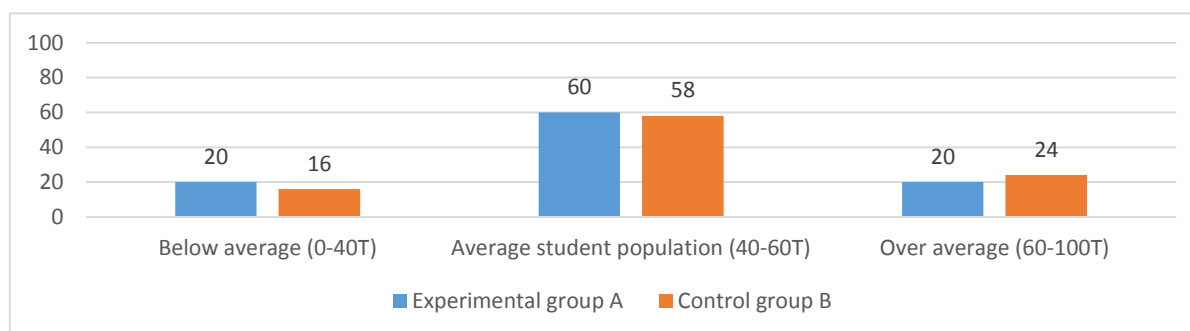


Figure 07. Impulsive search for sensations

Table 03. Statistic indicators of impulsive search for sensations scale

Experimental group			Control group		
Impulsive search for sensations scale	Cases	%, N = 25	Impulsive search for sensations scale	Cases	%, N = 25
Below average (0-40T)	5	20%	Below average (0-40T)	4	16%
Average population (40-60T)	15	60%	Average population (40-60T)	14	58%
Over average (60-100T)	5	20%	Over average (60-100T)	7	24%
Total	25	100%	Total	25	100%
Mann-Whitney U Test		Z-score = -2.1246	U-value = 202.5	p-value = 0.034	p ≤ 0.05
Test-T		p-value = 0.00001	T-value = 11.037062		p ≤ 0.05
One-Way ANOVA	f-ratio = 5.09013	p-value = 0.028655		p ≤ 0.05	

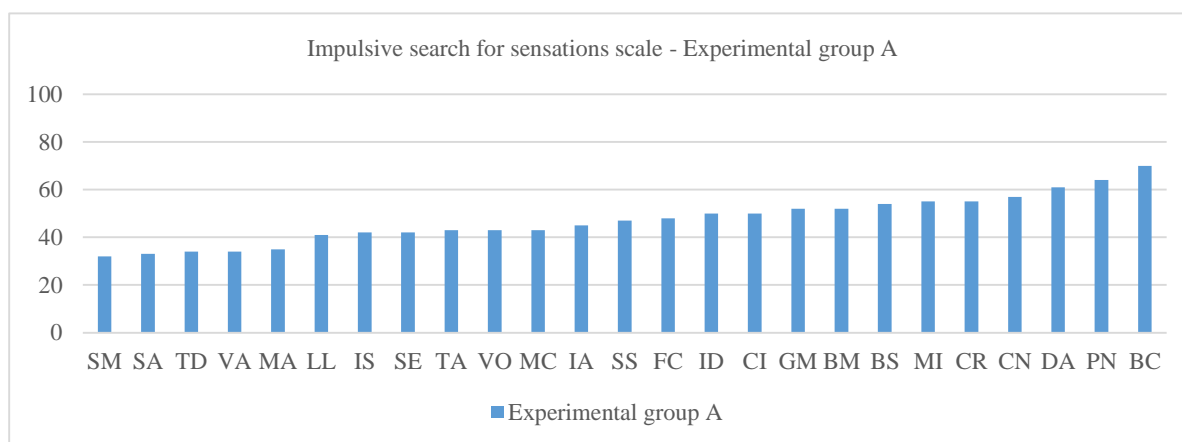


Figure 08. Impulsive search for sensations scale – Experimental group A

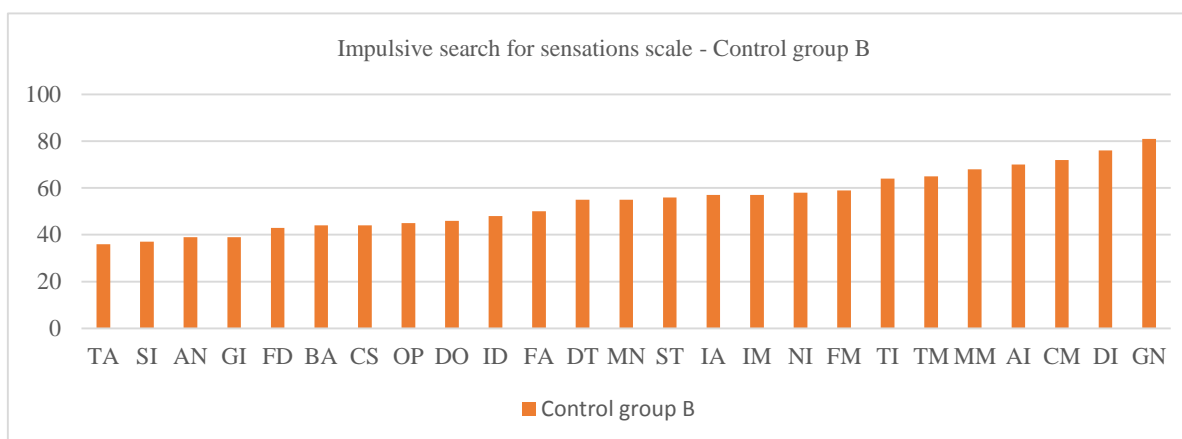


Figure 09. Impulsive search of sensations scale – Control group B

**Aggressive-hostility:**

In the case of items that focused on aggressive, hostility scale, we watched subjects' inclination towards an increased level of aggression, both physically but mostly verbal. Subjects exhibit impulsive behavior, they don't have patience in interpersonal relationships, and they have a choleric temperament. Therefore analyzing the responses of the two groups, the control group, and the experimental group, we concluded that 56% of students in the experimental group and 48% of control group students have obtained a quota T below in the average population.

Applying the significance test T-test we noticed that the value of t was 12.545046, and the p value was 0.00001, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

Analyzing the results of Zuckerman-Kuhlman test application on the aggression and hostility scale, we have seen that 32% of students from the experimental group have low hostility or aggression level. In the control group, we noticed a lower number of pupils who do not show aggression or hostility, over 24% from the total of students from the control group.

In the case of the experimental group 12% of all pupils achieved above-average results regarding hostility and aggression compared to a larger number of students, 28% of all students from the control group who exhibit these traits of aggression and hostility.

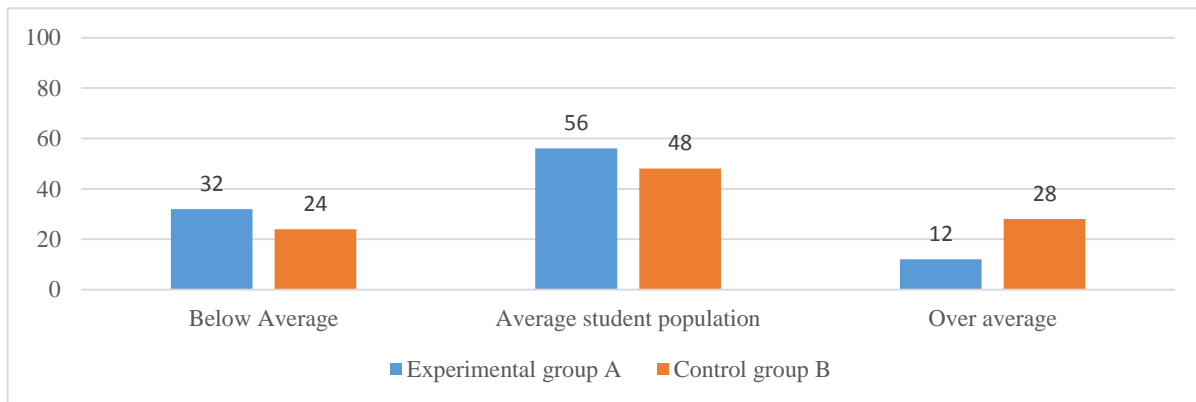


Figure 10. Aggressive-hostility scale

Table No. 4 – Statistic indicators of Aggressive-hostility scale

Experimental group A			Control group B		
Aggressive-hostility scale	Cases	%, N = 25	Aggressive-hostility scale	Cases	%, N = 25
Below average (0-40T)	8	32%	Below average (0-40T)	6	24%
Average population (40-60T)	14	56%	Average population (40-60T)	12	48%
Over average (60-100T)	3	12%	Over average (60-100T)	7	28%
Total	25	100%	Total	25	100%
Mann-Whitney U Test	Z-score = -2.3186	U-value = 192.5 p-value = 0.02034	p ≤ 0.05		
Test-T	p-value = 0.00001	T-value = 12.545046	p ≤ 0.05		
One-Way ANOVA	f-ratio = 6.5087	p-value = 0.013977	p ≤ 0.05		

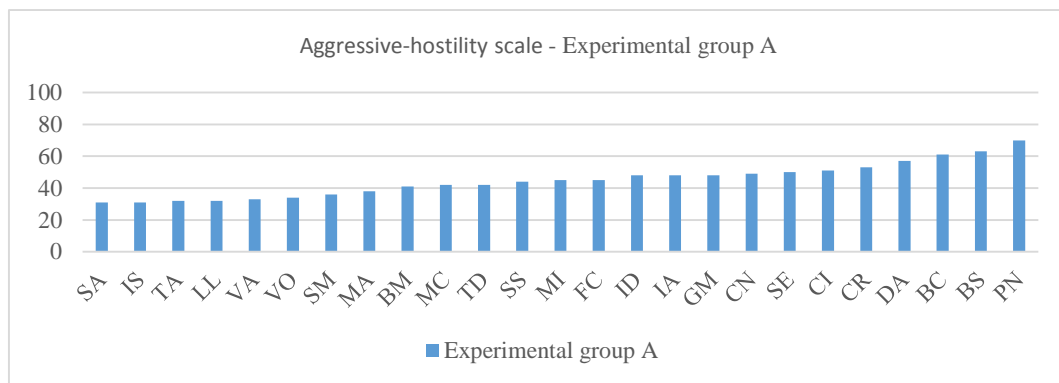


Figure 11. Aggressive-hostility scale – Experimental group A

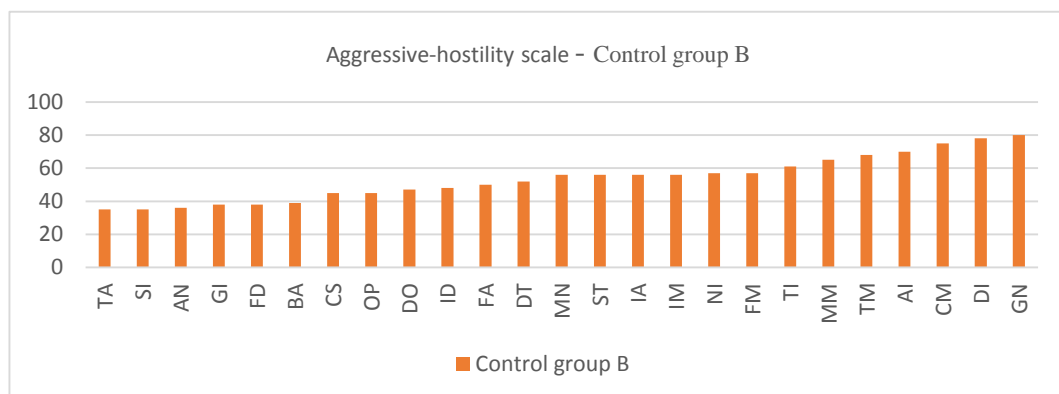


Figure No. 12 – Aggressive-hostility scale – Control group B



### Activity

In the case of items that focused on the scale of activity, we watched the subject need to be active at all times, of working hard, subjects who prefer demanding activities with high energy consumption, the items showing also the subject level of anxiety, impatience when they are inactive. Therefore analyzing the responses of the two groups, the control group, and the experimental group, we concluded that 48% of students in the experimental group and 56% of control group students have obtained a value of T below the average population.

Applying the significance test T-test we noticed that the value of t was -0.303393 and p value was 0.764205, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

Analyzing the results of Zuckerman-Kuhlman test application on activity scale, we have seen that 8% of the experimental group students are not very active. In the control group, we noticed a larger number of pupils who prefer not to work, 16% of the total number of students from the control group.

In the case of students who prefer sports activities, we have achieved high scores about 44% of the experimental group compared with 28% of those from the control group, which may indicate an increased desire for activity in the experiment group.

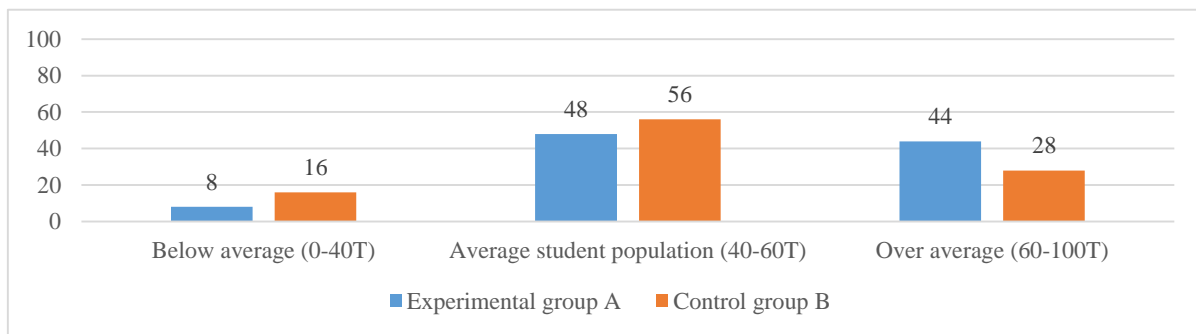


Figure 13. Activity scale at Experimental group A and Control group B

Table 05. Statistic indicators of activity scale

Experimental group			Control group		
Level of activity scale	Cases	%, N = 25	Level of activity scale	Cases	%, N = 25
Below average (0-40T)	2	8%	Below average (0-40T)	4	16%
Average population (40-60T)	12	48%	Average population (40-60T)	14	56%
Over average (60-100T)	11	44%	Over average (60-100T)	7	28%
Total	25	100%	Total	25	100%
Mann-Whitney U Test	Z-score = 0.1358 U-value = 305 p-value = 0.88866				
Test-T	p-value = 0.764205 T-value = 0.303393				
One-Way ANOVA	f-ratio = 0.0848 p-value = 0.927006				

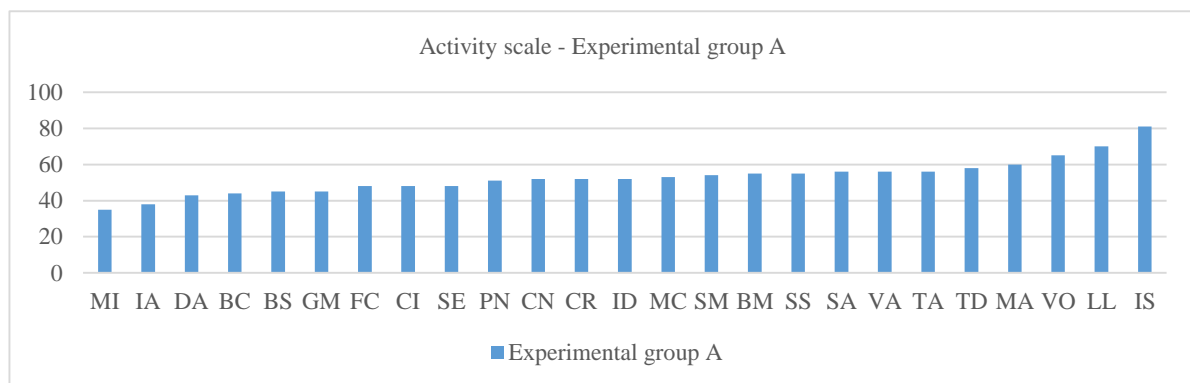


Figure 14. Activity scale – Experimental group A

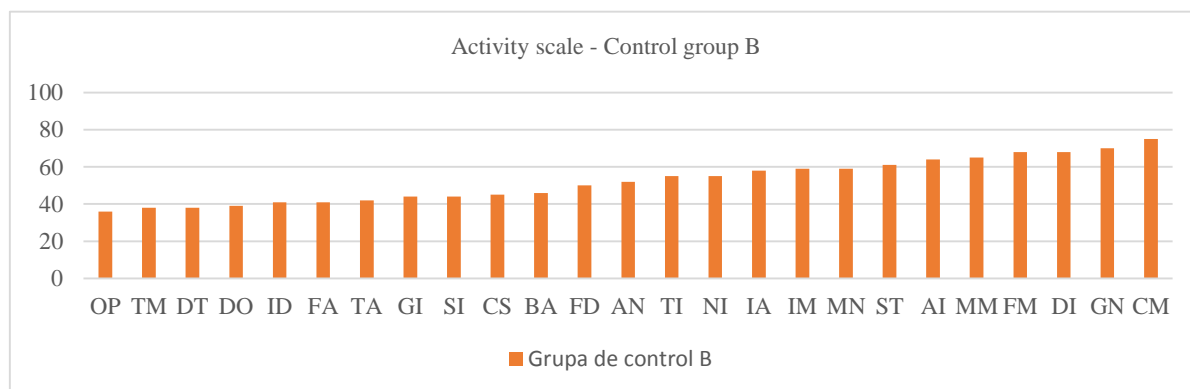


Figure 15. Activity scale – Control group B

## 6. Conclusions

After the applying of differentiated programs on the two groups, we found using the Zuckerman-Kuhlman personality questionnaire, that students from the experimental group had a better level of sociability and social integration, lower levels of anxiety, are not so attracted to newer experiences, have a low level of aggressiveness and increased activity levels compared to the control group. So we can say that the research hypothesis, according to which "used as a research tool the Zuckerman-Kuhlman personality questionnaire can give us the opportunity to investigate the personality traits of students present in both the experimental and control group in terms of sociability and social integration, anxiety, look for sensations, the level of aggression and activity level", was validated, we can say that students in the experimental group who completed the training program with motor activities, playful and agonistic games, are as the questionnaire say, more sociable, applying the significance T-test we noticed that the p-value calculated was 0.00001 and the value of T was -10.907800, indicating a significant difference between the two groups,  $p \leq 0.05$ .

Also on the scale of neuroticism-anxiety we found that students in the experimental group had a lower level of anxiety and nervousness than students from the control group, applying the significance t-test, we noticed that the value of T was 4.471485, and the value p was 0.000159, indicating a significant difference between the two groups of students,  $p \leq 0.05$ . Therefore we can say that the motor activities carried out with the experimental group had positive effects, students in the experimental group increased levels of resistance to stress, mastering the situation, they did not quickly lose their temper, and have a lower level of anxiety.

Regarding the scale of "impulsive search for sensation", we noticed that the experimental group has a lower level regarding impulsivity in search of sensations, students are more calculated, more patient, and more careful, with a higher level of discipline compared with the control group. Therefore applying significance T-test we noticed that the value of T was 11.037062 and p-value was 0.00001, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

On the scale of "aggression-hostility" we can observe that students from the experimental group had a lower level of aggressivity and hostility compared to students from the control group, therefore applying the significance t-test we noticed that the value of T was 12.545046, and the value of p was 0.00001, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

Looking at scale of "activity" we can see that both groups of students met an increased willingness for activity, children are willing to make as many sports activities, therefore applying significance T-test we noticed that the value of T was -0.303393 and p-value was 0.764205, indicating a significant difference between the two groups of students,  $p \leq 0.05$ .

## References

- Costa, P. T., McCrae, R. R., (1985), *The NEO Personality Inventory*, Odessa.
- Eysenck, H. J., (1985), *The Biological Basis of Personality*, Springfield, IL:Thomas, p. 681–706.
- Grigore, V., (2007), *Physical exercise. Active factor in preventing the aging and degenerative diseases installation*, Editor Didactic and pedagogic. Bucharest.
- Sopa, I. S., (2014, a), *The socializing role of motor activities at primary school level*. Bulletin of the Transylvania University of Brasov, Vol. 7 (56) No. 2.

- Sopa I. S., Pomohaci, M., (2014, a), *Developing Cohesion in Sportive Group through Socializing Means of Motor Activities*. Published in: Medimond by Editografica, Bologna, Page 135.
- Sopa, I. S., Pomohaci, M., (2014, b), *Group cohesion important factor in sport performance*. Published in European Scientific Journal, Volume 10, No 26.
- Sopa, I. S., Pomohaci, M., (2014, c), *Study regarding the impact of sport competitions on student's socialization*. Published in European Scientific Journal, Volume 10, No 26 (2014)
- Sopa, I. S., Pomohaci, M., (2014, d), *Socialization through sport, effects of team sports on students at primary school level*. Published in: Medimond by Editografica, Bologna , Page 351.
- Sopa, I. S., Pomohaci, M., (2014 e), *Contribution of sportive game in children socialization process*. Scientific Conference „Physical education and sports in the benefit of health” – the 40<sup>th</sup> Edition, Oradea.
- Sopa, I. S., Pomohaci, M., (2014 f), *Study regarding group cohesion of students*. The International Scientific Conference „Physical education and sports in the benefit of health”, Oradea.
- Sopa, I. S., Pomohaci, M., (2015 a), *Finding the leader of a volleyball team using the socio metric survey method*. Published at the International Congress of Physical Education, Sports and Kinetotherapy 5th Edition „Education and Sports Science in 21<sup>st</sup> Century”, Bucharest.
- Sopa, I. S., Pomohaci, M., (2015 b), *Improving socialization through sport games. How does team sport affect children at primary school level*. International Scientific Conference „Sport, Education, Culture – Interdisciplinary approaches in scientific research”, Galati 28-30 May 2015.
- Sopa, I. S., Szabo, D. A., (2014), *Study regarding the importance of developing group cohesion in a volleyball team*. Published in: Procedia Social and Behavioral Sciences, Elsevier Publication, Volume 180C, 5 May 2015, Pages 1343-1350.
- Tufan A. (2015) *The impact of the motor activities on the education of a healthy lifestyle at students*, UNEFS Bucharest.
- Zuckerman, M., Kuhlman, D. M., Joireman, J., Teta, P., Kraft, M., (1993), *A comparison of three structural models for personality: The Big Three, the Big Five, and the Alternative Five*, Journal of Personality and Social Psychology, 65(4), 757-768.

## **Motor Learning A Fundamental Concept In Sports Performance Training**

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### **Abstract**

*Learning in the field of physical education and sports is reduced to the formation of motor skills understood only as automatic acts. This approach is simplistic, learning these acts is a complex process that unites in a specific synthesis motric learning and intelligent learning. The formation of motor skills or motor learning is a complex intellectual-motor process, characterized by the permanent presence of awareness of the motor acts performed.*

**Keywords:** training, motricity, performance

### **1. Introduction**

Learning, accumulation of (new) social and individual experience, the formation of psychic structures, is one of the fundamental forms of human activity which, together with adaptive changes, ensure the survival of living systems.

M. Epuran (2008) believes that learning is "on the one hand, acquisition of meaningful information, on the other hand, the acquisition of instrumental behaviors".

### **2. Discussions**

It can be said that all the structures that are a living system at a given moment (knowledge, operating tools, algorithms, etc.) and non-innate are the results of learning. From birth, the human being is able to learn. As a cybernetic energy-information system, man is "programmed" from the moment of birth for such information processing. Thus, learning and adaptive learning mechanisms are based on the acquisition of information and energy, on negative, positive, corrective and prospective feedback settings, being the basis of psychic structures. From this point of view, learning is the internal organization on the genetic and personal basis of individual experience, with a view to a better adaptation to the environment.

The learning process consists of a set of processes associated with the practice and experience that influence and lead to changes in the ability to respond. Human chores take many forms that emphasize the control and coordination of large muscle groups, in activities involving force such as football or jumping, to those in which muscle groups do not even have to be specially trained. The principles of human performance and learning depend on an extension of some kind of motor skills to be done. Basic skills in learning motor act are motor and cognitive. Motor education should be pursued in two essential directions, the first in which terminology, concepts, and, principles related to qualified human performance are introduced and without much reference to the processes associated with learning. The reaction speed in motor learning is summed up by the difficulty of responding to close stimuli over time so that responses have to be separated in time. A number of procedures have been used in learning skills that can be interpreted as giving a reference fairness for the answer before any practice is started.

Motric Intelligence is defined as the ability to improve muscular abilities, to understand the game, to have a good sport motivation and to gain new knowledge, the opportunity to know the principles, strategies, rules and psychology of sport, to systematize situations quickly changing muscles, adjusting body position and balance, learning and developing control over muscles, learning how to move the body in different situations, and in different environments.

There is a positive correlation between intelligence and motor-learning ability, the more the exercises are more complex.

The motor intellect includes three major coach and sports coordinators, as a cooperative unit in achieving performance and the functional level involved in the temporal dimension of the activity.

Smart learning is about knowledge training and problem-solving. In the training process, the main role is played by the coach, the qualities of his language leading to an efficient acquisition by the pupil of the content of

the message and of the actions that it determines. Logic, clarity, authority, expressiveness (by meaning, gestures, mimics, accents, pauses) are qualities of the language the teacher needs to know to use to achieve the desired effects.

Simion Gh. (2011) defines motor acts as an "assembly of systematized operations associated with the practical activity that lead to permanent relative changes of competences, for sports performance both in training and in competition."

The same author claims that motor learning is concretized by several factors and phenomena (fig.1):

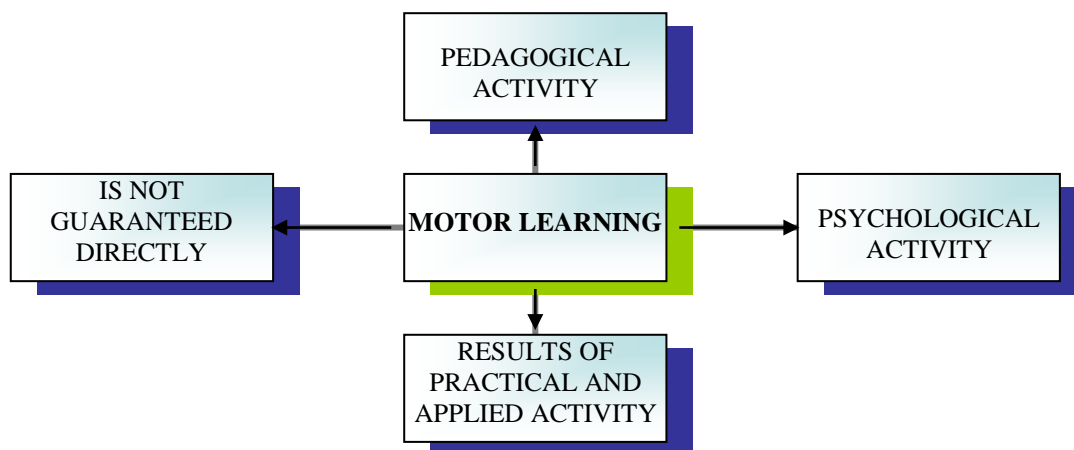


Figure 01. Concretizing factors of motor learning (Simion, 2011)

In motor learning, the use of language ensures the execution of the movements, the possibility of describing, explaining and reporting the execution characteristics.

The practice has several advantages: thinking is active throughout learning, the main idea remaining present, natural, tangible connections that allow full reproduction; the global method is also very effective in motor learning at children with a high imitation capacity.

In motor learning, the exteroceptive, proprioceptive or rational elements are involved with different weights according to the nature of the activity and the actions that make up it. For this reason, it is difficult to make a net difference between perceptual-motor learning and motor-learning, with the perceptual element being present to some extent and the manifestation of closed skills. As the learning of a movement is carried out at higher levels, the sensory indicators that direct the action lose their intensity, the individual following particular features of the movement, finely differentiated particularities, which lead to an increased efficiency of the act.

Motor learning starts from the initial stage of child development, being anchored in natural, innate motor reactions that are associated with external stimuli of nourishment and maternal care.

Learning movements is necessary, both in utilitarian, adaptive acts, specific to the dialogue with nature and peers, as well as in free playable acts. Motricity also responds to the needs of development and social integration, learning the different movement structures being legally determined by the requirements of life. The perceptual-motor learning presents different aspects, consisting in the relative stabilization of some motor responses in relation to the data of the external phenomena, perceived as indicators or stimulators of the activity.

This learning is like an adaptation of pre-existent reactions to changed perceptual conditions, involving either the stabilization of sensor-motor coordination or an increase in the fineness of preexisting coordinations or schemes. New coordination is formed by exercises and their deterioration, in the absence of specific requests. What is preserved in imperfect forms is due to the motric memory and its verbal support, capable of updating.

Motric we learn only what we experience, which results from an active motor experience that leads to the formation of personal motor skills. There are attempts to correlate the theoretical knowledge with the practical problems of motor learning in the field of sports performance by applying cybernetic principles, establish the current models of athletic behavior in specific activity through a functional motor circuit.

Learning begins with a cognitive stage in which the subject understands the requirements and how to accomplish the task, and usually gets a quick breakthrough. In the second stage, called associative stage, the parts of the movement through the exercise are linked and coordinated. This is a lasting step, compared to the first, the progress is slower, but it ends with a certain performance. Automation characteristic of performance is the effect of exercise.

In order to better understand the learning process, it is necessary to know the main phenomena and aspects of central nervous system activity that allow the acquisition and execution of the movement. Motor learning allows the athlete to replicate or create complex, fast and accurate motor actions in a very short time, depending on the training stage, individual particularities and sports performance.

Practicing is the condition of learning, passing the motor act from the untrained motor act to the stage of motor act learned, as changing the situation and exercising in various conditions creates the flexibility, the adaptability of the motor gesture (superior skill).

In the physical education and sports activity, the learning of some basic or structured motives - according to the typology of the sports branches - is the central and specific object of the instructive process, plus the objective of forming a system of knowledge specific to the field of body activities, on the basis on which the motor exercises can gain efficiency in typical or atypical situations through the phenomenon of motor and cognitive transfer.

Sports activity, whether high school or higher (performance), adds to motor the special qualitative parameters, determined by the existence of the acute competitive situation, by the fact that the individual acts in a "limit" of physical and psychological demand.

Prof. Niculescu (2009) describes the determinants in the learning process (fig.2):



Figure 02. Determinant factors of motor learning (Niculescu, 2009)

### 3. Conclusions

Learning in the field of body activities includes, besides gesture learning, motor and motor-perceptual attitudes, skills or habits and intelligent and creative forms of learning. It is, therefore, a complex learning where changes in predominantly motric behavior are accomplished by giving motric and intellectual schemes, the individual consciously guiding his or her own movements or acting intelligently on the opponent, objects or devices, using knowledge and skills in full agreement with the conscious demands of the situation they are in.

### References

- Epuran, M. (2008). Performance Sports Psychology, Publisher FEST, Bucharest, page 33;  
 Niculescu, M., Vladu, L. (2009). Sport performance, Publisher Universitaria, Craiova, page 54;  
 Simion, G., Stănculescu, G., Mihăilă, I. (2011). Sports training - systemic concept, Ovidius University Press, Constanța, page 112.

## **Personal Experiences In Practicing Alpine Climbing**

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### **Abstract**

*I chose this theme because I'm 20 years old on expeditions in tall mountains, over 7,000 meters, where life is known to be impossible. However, by will and oxygen equipment, I managed to escalate the highest and hardest mountains in the world - the Himalayas, Everest. We also considered that, at present, the knowledge, information, publications in the field are quite few. For this reason, I have managed to contribute to completing knowledge in this field. The paper contains information about the experiences of the expeditions in the high mountains of the world. I believe that this information on how to prepare and how to solve the various organizational and personal issues that have secured my success - reaching the peaks - are useful to Everest's future conquerors.*

**Keywords:** climbing altitude, performance;

### **1. Introduction**

Mountaineering was officially born in 1786, when two fellow men, Dr. Paccard and the guide J. Balmot (France) joined forces to climb the highest peak of Europe - Mont Blanc - 4,807 m from the Alps, earning fame and opening the road to the new sport called mountaineering. (Coman, I., 1995)

Slowly but surely the whole world's attention was heading to the world's largest massif, the Himalayas, with its huge peak - Everest - 8,848 m, located on the border between Nepal and China.

Because it is the highest point of the planet, I will write some more important data about it:

1856 - A. Waugh, the head of a British expedition for Indian cartography, reported to R.G.S. that the mountain he identified as Peak XV - 8,840 m, could be the highest in the world. He proposed that it should bear the name of its predecessor, G. Everest.

1921 - The Royal Geographical Society establishes the Everest Committee, which in April sends an expedition to the Himalayas. This is also attended by Professor George Mallory who, in order to prepare for the expedition, resigns from his position. A team of three people led by Mallory begins in September to ascend the north slope, from where they will try to find a way to the peak. A hurricane prevents them from going further. Mallory writes to his wife: "I have grounded the way to the top for anyone who would be willing to try the greatest of all possible adventures."

1922 - Mallory takes part in this new British expedition, along with 16 comrades and an unmanned crew, climbs again on the same route. A strong avalanche kills seven Sherpa - the first victims of Everest.

1924 - On the 8th of June, during the third British expedition, George Mallory and Andrew Irvine climb, with oxygen devices, in the direction of the peak and never see again. It remains a mystery whether they have reached the tip or not. After vain searches, their comrades declare him dead.

1933 - For 9 years, Tibet has closed its gates, hindering any expedition. In the autumn of 1932, the reopening of the border was announced and the English immediately organized a new expedition with a very well-trained team reaching the same point as the 1924 team. This year also takes place the first British double biplane crossing of Everest offers ample photographic documentation.

1935 - The British organize an easy expedition to test a simpler climbing system and look more thoroughly at the Nordic slope of the mountain. Escalation of the peak is stopped by bad weather.

1951 - After the war, Nepal opens its borders to Europeans, allowing the massive approach from the south. A first Anglo-American expedition investigates the general topography of the massif and establishes that the possible route would be over the Khumbu Glacier. It's tried, but it has great difficulty due to an immense and wild ice waterfall. One of the participants, Hillary, manages to move on.

1952 - On the English-speaking road, a Swiss expedition takes off. The route over the Khumbu Glacier, the South Saddle climb and the crest to the top is revealed. Due to exhaustion, the top team, Lambert, and Sherpa

Tenzing dropped to 8,600 m high, setting a record of altitude. In the autumn of the same year, the Swiss made a new attempt, but unsuccessful.

1953 - New Zealander Edmund Hillary and Sherpa Tenzing Norgay are the first people to reach Everest peak - 8,848 m.

1960 - Two Chinese and a Tibetan succeed on 25.05 for the first time to climb the west ridge. They reach the tip in the dark and for this reason they fail to take a picture to prove this. That's why their success has been challenged for a long time, and eventually it is acknowledged.

1963 - On 22.05, Everest was crossed by two Americans Willi Unsoeld and Tom Hornbein, who climbed the west ridge and descended to the south.

1975 - Japanese Junko Tabei, only 1.52 m tall, is the first woman in the world to reach the peak at 16.05. "Maybe women are less powerful than men, but we can also climb the mountain, even if we do it slower," she said.

1978 - Reinhold Messner and Peter Habeler, the Tiroleans, climbed Everest for the first time without oxygen, which was improbable and unimaginable until then.

1980 - Poles Krzysztof Wielicki and Leszek Cichy make the first ascent in the winter. Temperatures of -40 °C stop them several times but peak at 17.02.

1980 - Reinhold Messner is the first man in the world to climb on the top, alone, without oxygen, in three days of the base camp.

1996 - This year, 15 climbers died in a storm that blocked three teams near the peak.

2000 - The Slovenian Davor Karnicar is the first man to descend from the peak with the skis for five hours.

2001 - Bertrand and Claire Roche descend from the top to the base camp with a double paraglider.

- Marco Siffredi manages to get off the snowboard.

- American Erik Weihenmeyer, becomes the first blind who touches the tip, guided by friends.

2002 - Apa Sherpa, aged 41, reaches for the twelfth time on the top. No other climber has ever climbed Everest.

2003 - On the occasion of the 50th anniversary of the Everest conquest, 80 teams have prepared to reach the top. A full Romanian expedition reached its peak on 22.05 Teodor Tulpan, Lucian Bogdan, Marius Gane and Gheorghe Dijmarescu, leading the Romanian tricolor on the highest peak of the planet.

The team of Romania was made up of 14 challengers, including 6 climbers, for the final assault on the top. They were selected from about 100 potential candidates across the country, following a selection of criteria: altitude experience (each climbing over 7,000 m), physical and mental training, strong personality, integrity, a generally good state of health, etc.

The performances of the selected ones (difficult ascents in the Himalayas, Pamir, Caucasus, Tien Shan and the Carpathians of Romania) justified the selection made and the fact that this was the best prepared and homogeneous team of the moment.

The 14 had carried out several expeditions together, occasions in which they had time to know and live in extreme conditions.

The team's departure to Everest was scheduled to take place on April 27, 2003, but before that, the team participated in a preparation stage on the Aconcagua tip - 6,962 m from Argentina, the highest peak in South America.

The purpose of this stage was for team members to know better and test new equipment, as Himalayan equipment is especially the other equipment. Each element of the equipment has many uses and all team members need to know to use absolutely whatever conditions, strong winds, very low temperatures. In addition, supplemental oxygen was also used in Everest to minimize the risk of lung or brain edema.

For us, the 14 climbers, the fact that for almost three months we were going to face the whims of the weather and the mountain, as well as the isolation of family and friends, was a tough attempt. All members of the team were given full medical tests and tests so that the ship's doctor could keep track of the changes that could occur during the expedition.

The road to Everest, about 150 km, was built to ease as much access to the heart of the mountain and cost a lot of lives, being in a very dangerous area, crossing steep slopes in Tibet. This journey lasted a week, as the team had to adjust to the altitude gradually, the acclimatization stages being particularly important, the human body responding quickly to any attempt to force it.

Upon arriving at the camp, we were all tried by the symptoms of altitude: headaches, nausea, vomiting, the time we had to mount the sleeping tents, the kitchen, all that was necessary to install the camp at 5,200 m.

After 5 days of rest, we slowly started, each with 30 kg of equipment in the back, towards the camp at 6,400 m, another step along the way to the top. The high altitude and cold felt at every step, but the sight of the



peak in all its splendor gave me a tremendous momentum, even if the immense Everest made me think it was impossible to climb the peak.

Step by step, camp, we were able to acclimatize and equip our upper camps with what was needed for success: tents, strings, fixtures, food, supplementary oxygen, clothes, everything was carried by the incredible Sherpa - altitude guides - without which no expedition would be successful. It was time to be on our side, that good window of weather to be good and to keep for four days, the minimum necessary for success.

After a sleepless night at 7,000 m, we headed for the next camp at 7,800 m. This was a very narrow place on a slope, where great efforts were needed to dig and build platforms and mount the tents.

The wind was getting stronger, the storm clouds appeared on the horizon, and the good weather had turned out to be a fake prognosis. There was the problem of turning back and giving up, as did other teams. But the vote of all was to continue, knowing that there was only one chance. The return would be equivalent to the failure of all the preparations, but on the other hand, our lives were more important, the success of the expedition meant that the whole team would return home. Here the team arrived at the last camp at 8,300 m where there were dozens of climbing tents waiting on the platforms on the rock and ice.

Here, additional oxygen cylinders are used to rest, very important to have a normal breathing, here being only 30% of the sea-level oxygen. On May 21, 2003, at 23.30 am, he headed himself up to the top with an oxygen tube, and the serpents would come with the other 3 replacement tubes.

The thick mist and the blizzard have put some orientation problems, that's until the entrance to the fixed rope, installed by the Sherpas. There were over 200 climbers who formed a huge column, all of them having Everest goal.

Walking on the two-kilometer-long ridge, the strong wind and the  $-40^{\circ}\text{C}$  temperature slowed down my course, moreover, the sight of the frozen bodies of some deceased climbers long ago, and remaining on the road, posed serious psychological problems. The rest of the Romanian team did not see at all.

The clouds gathered slowly but surely, storming a strong storm that we knew of the weather anyway. Instead, the landscape was extraordinary, the Himalayas could see in all its grandeur. The sun appeared slowly on the horizon, and the tip was closer and closer. With every step done I was closer to the dream of my life. We knew very well what this unique chance meant. Through me could be fulfilled the dream of other people who had invested me with their trust.

The lack of oxygen spoke the word, I heard voices, cars, whistles, it was important not to give up psychic just now. The remembrance of those who 50 years ago managed for the first time with their heavy equipment, encouraged me to continue.

I no longer felt my fingers, oxygen was insufficient, but I only knew that I had a mission to finish. The Romanian flag in the backpack could fly Everest!

I have arrived! May 22, 2003, 8:00 o'clock: there was nothing further; neither before nor back! This was the tip of Everest - 8,848 m, a narrow plateau, just ice, where it was about 10 inches. Its thickness was 13 meters, it was full of flags, oxygen cylinders and other memories left there by the previous ones.

Here, with the last powers, I changed the oxygen bottle, the last one found on the top. The peak pictures, which are undisputed proof of peak hitting and hugging with Korean climbers, were moments of joy that can not be described in words. It was very hard, but now it really was the hard one: the descent.

It was known that at the descent, because of euphoria, inattention, and fatigue, the most accidents occurred. Besides, the other team members did not appear. The thought of something serious happening made me think seriously. Then success would have no value! I asked those who climb if I knew something about the Romanian team, but nobody knew anything. Then I decided to come down after 30 minutes of standing on the top.

The balance of performance achieved during the First Romanian Expedition in Everest was significant: Teodor Tulpan - the first Romanian on Everest at the age of 32 and the long-term record on paragliding in Everest; Doni Sherpa - the youngest person in the world on the top; Lhakpa Sherpa - the only woman in the world with three ascents on the top; Doni, Lhakpa and Gelu Sherpa - three members of the same family on the top; Gica Dijmărescu - five consecutive times on the top.

It has proved to be impossible, that teamwork and ambition make everything possible. These performances are all the more significant if one takes into account the fact that the Romanian climbers did not have much experience in the Himalayas. Probably this was just the beginning of a new era for climbing in Romania.

The results of climbing are not only influenced by knowledge and skills, they are based on native skills and on the influence of the environment. Thus, the skill of observing the relief details will increase the observation capacity. At the same time, the skills to properly judge the environment will develop. The dangers that can cause accidents will make the attention constantly distributed and comprehensive, will develop the

ability to skillfully interpret perceptual phenomena. Basic skills elevated to superior values, corroborated with new ones, determined by survival in the mountains, form that sense of the mountain.

Over the last four decades, we have seen climbing diversifying, each branch meaning preference areas or even independent disciplines today.

The use of artificial escalation procedures has intensified to exaggeration, appearing "technological climbing". For a good period, the ideal was the "direttissime" and the winter ones.

Very difficult tracks have been repeated by solitary climbers in incredibly short time, and ice water cascades have won many followers.

High altitude climbing has achieved breathtaking performance. The huge expeditions with hundreds of serpents are contracted by mini-expeditions, and great routes are made in the alpine style - fast, without oxygen, fixed strings, and intermediate deposits. (Suman & Babadag, 1977)

Sports for the mind "is not a new idea and mountaineering is best shown, with the psychic factor playing an important role both in training - training and during the ascension.

We can say that climbing can be a therapy that shapes body and mind at the same time. In addition, walking on the mountain helps to improve mental state and intellectual performance, cure depression and relieve stress.

Outdoor activities (mountaineering, tourist orientation, skiing, horseback riding) are recommended for those who feel the need to explore their deep spiritual side. Establishing a connection with nature contributes to creating a general state of well-being. Escape from daily chaos and stress offers a whole new perspective on your own existence. We realize that our problems are not as big as we thought at first, there is only a small part of something much bigger and more important, that everything has a meaning and purpose, and all this leads to a sense of trust, calm, competence. It has been shown that moderate and regular physical activity helps to moderate reactions in critical situations by eliminating stress. It is important to establish the connection between the body and the mind, then everything comes by itself.

From my personal experience, I can say that the psychic factor is the most important factor in high climbing, the climber must always know what he expects at every step and be very well prepared for any situation, even when he is at extremes and the age of his life. Calm, self-mastery, self-control is vital on the mountain, every mistake is severely sanctioned by nature, especially on the mountain.

Personally, I trained from a variety of endurance rides, cycling at least two hours a day, then swimming at the pool at least once a week, but not in the fastest way possible because at the altitude the speed doesn't matter, but lasting resistance to effort.

Physical effort is, however, only one aspect of the demands that climbers are subjected to. Extremely heights translate them into excessive climatic conditions. The air temperature decreases by about 0.6 ° C for every 100 meters altitude, but other factors influence this coefficient: wind, humidity, solar radiation, slope orientation. As an example, measurements are made in Alaska at 4,400 meters altitude, where daylight was recorded in the sun + 25 ° C and at -32 ° C at night.

As a warm-blooded man, man has a complex internal mechanism designed to keep the temperature necessary for the processes in the body within tight limits, with the smallest temperature differences having important consequences.

When the low outside temperature affects the body, it counteracts heat loss by reducing the circulation of peripheral blood, and the muscles are excited to tremble to produce heat. But if the energy reserves are not sufficiently mobilized or oxygen is lacking, heat production ceases. Under -33 ° C the pulse becomes slow and irregular, unconsciousness occurs, and -27 ~ -24 ° C is near death.

Risky becomes bivouacs in heavy weather, wet sweatshirts, rain, snow. The water consumes a very large amount of heat for evaporation: nearly 600 kilocalories/liter. Medical research has shown that cold resistance is also influenced by the presence of iron in the body. Deficit diminishes cold resistance and should be compensated if needed with medication.

Often we have fossilized for acclimatization of the body at elevated aspirin buffered, knowing that it is a vasodilator, facilitating the circulation of blood at the extremities where the problems appear fast, and can even lead to amputations. I have experienced other medicines, but aspirin has been the one that "takes your hand pain" miraculously.

Through the chemical reactions of the body, especially the muscles, a quarter of the energy reserves turn into mechanical work and three quarters in heat. If it was not transferred to the environment, the body temperature would reach 60° C within an hour. By increasing peripheral blood circulation, the body accelerates the transport of excess heat to the skin.

Diet is an important factor in walking on the mountain. From my experience, I found that it is good to eat what you eat at home, that is, what the body is used to. Now there are all kinds of food supplements and special food of altitude that only involves mixing with boiling water and not the total cooking of the preparation, a very

important work at altitude because every liter of boiled water requires about an hour of boiling, which is hard to do often because of fatigue, cold, wind or snow.

The main objective of the physical training of climbers is the formation and development of resistance, strength, speed, skill, and reactions to act quickly and accurately even under tiredness and nervous strain. Without a very good physical condition, climbing cannot be practiced. In order to be able to cope with the dangers to which he is subjected when hanging from a string, the climber must have great knowledge, skills, and abilities.

We have found that normally a week of accommodation is required for every 1,000 meters, that is, of course, if the body is accommodated and there are no problems: medical, eating, fatigue, stress, hypothermia, etc.

The basic physical quality specific to each climber is the resistance of the body to the effort for as long as possible under heavy weather conditions and stress. The preparation and adaptation of the body are done gradually, through repeated training and day and night marches in rough terrain. During the initiation period, it is necessary for the future climbers to develop skills for adjusting the equipment, breathing, pace and observation of relief details. Then you learn the orientation in the mountains, the difficult paths on the valleys and steep growth, the improvement of a shelter, the purchase and preparation of insulated food, the skiing, the angling or the snow-rafting. (Suman & amp; Babadag, 1977)

Everest's atmospheric pressure accounts for 30% of sea level pressure, so climbers ingest only 30% of the required oxygen, making the body start to creep at over 8,000 meters: the heart beats powerfully, even at rest, hallucinations can create major climbing problems. Similarly, the brain, which is the organ most sensitive to environmental changes, can undergo irreparable, even deadly, changes. (Dragan, 1977)

However, the mountain should not be regarded as an enemy or as a field of competitions, but as a friend, an ally, and a place where we can always find a place of refuge and peace.

As a proposal, it would be good to introduce climbing during school hours as well as in many countries in the European Union, in this way children have the opportunity to develop more qualities and skills, team spirit, calm, motivation to get up in the top.

## **References**

- Coman, I. (1995). Two centuries of mountaineering, Brafil Publishing House, Brasov, page 37;  
Dragan, I. (1977). Altitude Cure, Sport - Publishing House, Bucharest, page 88;  
Suman, G., Babadag, D. (1977). Mountaineering - School of Courage, Military Publishing House, Bucharest, page 77.

## The Influence Of Humanism During The Renaissance Period In Transylvania And Its Effects On Physical Exercises

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### Abstract

*This stage in the history of mankind is particularly important in order to revive physical exercises and place them in education in more outlined positions. Thus, the 14th and 15th centuries constitute a part of the countries of Western Europe - the period of transition from feudalism to capitalism. The critically minded spirit of the nobles and clergy, even the simple people, but especially those who were in the formation of the bourgeoisie, was vigorously manifested. The development of the productive forces imposed a proper development of the technique and natural sciences. Medieval philosophy and theology have been subject to sharp and multilateral criticism. There is a need to develop a new, knowledge-based, science-based method of exploring nature. As early as the 14th century, the first signs of man's return to nature appeared, which meant rediscovering his own nature, appreciating it and expressing opposition to medieval asceticism. Art begins to emphasize the beauty and physical strength of man. Thus the idea of harmonious development, expressed through care for the body, for health, together with care for intellect and moral development, reappears.*

**Keywords:** humanism, science, exercises, gymnastics

### 1. Introduction

This new orientation of culture towards what is human and human at the center of knowledge is known as humanism. The discovery of antiquities creates a powerful effervescence around their works. The place of study of the theological works ("divine studies") takes the study and apology of the works of Greek and Latin antiquity ("human studios"). In the fourteenth century, by the word humanity is meant secular culture, opposed to theological culture.

After the fall of Constantinople (1453), many Byzantine scholars fled to Italy, bringing with them many old manuscripts. The territory of Italy thus becomes the main depository not only of the works of art but also of the philosophical and scientific works of antiquity.

### 2. Material and method

The research methods used are represented by a bibliographic study on physical education in Transylvania and it was realized in the Sibiu State Archives, the Astra Library, the Brukenthal Library and the Library of "Lucian Blaga" The University of Sibiu. Also, the bibliographic resources on the theme chosen at the libraries in Blaj and Alba Iulia were consulted.

### 3. Content

From the analysis and synthesis of the literature, it turns out that after Italy becomes the center of propagation of European culture, there is an intense intellectual life, unknown until then, a period known as the Renaissance - animated by a strong critical spirit towards the authorities and the traditional orientations in many European countries, including our country.

Thus, in Brasov, in 1544, Johannes Honterus, the first high school organized on humanist bases. In the years 1580-1603, in Cluj there was a Jesuit university. Parallel, some Romanian youngsters attended the courses of a foreign university (Krakow, Prague, Padua), Jesuit colleges from Lviv, Bar, and Camenita, as well as the great school of the Patriarchate of Constantinople, where they study, among others, Latin and Elina. German and Hungarian young people also studied in universities in Budapest, Vienna, Prague, Tübingen, Leipzig, Berlin, etc.

The concern for widening the spiritual horizon led Despot Voda to found a Latin school in Cotnari in Moldova, where he was invited to teach German scholar Johann Sommer. Vasile Lupu founded in Iasi the Upper School of "Three Hierarchs", with the study of Latin as the main concern.

In Muntenia the number of schools increases during the reign of Matei Basarab. In Transylvania, in particular, as a result of the Reformation, which needed schools as a means of propaganda, access to culture is widening, since 1624 and serf beings have the right to attend these courses.

In addition to the humanist schools near the great monasteries (Neamț, Bistrița, Putna), the "traditional" ones that wove the theological education with "artistic", oratory and historical studies functioned. During this period, the registered record of the book is printed in Romanian.

Although in the 16th century only about 20% of the books printed under the printing press were in Romanian, in the seventeenth century the works in Romanian became predominant, with a percentage of over 60% of all the printing production. (Papacostea, 1985)

Beginning with the 16th century, the "dancing of the sword", performed by the folk guild - traditional folk tradition, and the "circle dance" - a game performed annually by the guild, are attested in Brașov.

In 1543, Transylvanian humanist and pedagogue Johannes Honterus (1498-1549) publishes the regulations of the school in Brașov, which he leads, in which a great space of physical exercises is reserved, among which we mention: fencing, popes, strikes, "pulling the cock" archery competition where the target was alive cock), etc.

A sensible development has seen the education of the German population in the early years of the Transylvanian Reformation. Humanist Johannes Honterus, who organized a higher-level school called "Studium Coronensis" in Brașov, was noted in this direction.

In order to provide books for education, Honterus published in his printing house some of the most valuable writings of the classical Elis and Latins (Hesiod, Platon, Horatiu, Virgiliu, etc.).

According to the school model in Brașov, Lutheran schools were opened in Sibiu - "Studium Cibirensis", Bistrita and other cities inhabited by the German population.

Also in Brașov, "Sanitatis Studium" (Medical Studies), signed by physician Paulus Kyr, appears in which the author sets forth his theory on the educational valences of exercise as a means of defending and acquiring health.

About the practice of physical exercise in Transylvania, we find that in 1650, the greatest educator of the seventeenth century, I. Komenski, was called by Rakoczi, the prince of Transylvania, to set up a school according to his principles. This school was established in Sárospatak, close to the Tisza, and functioned from 1650 to 1654. The philosophy of Komenski, which forms the foundation of his pedagogy - pansofia (wisdom in all) - is eminently Christian. Reiterating the ancient dictum, he states that "a healthy spirit can only exist in a healthy body. In order for man to be able to perform everything wisely, we need this wisdom to turn it on to our whole body. Physical exercises are apt to remove the clumsiness, the pain of the body and the soul." (Dumitrescu, 1969).

Starting from the principle that the school should take care of the health of the child, he foresaw the preparation of land near the school, where exercises and games are to be held. The Sárospatak school program included a wide space, physical exercise, and games, trying to adapt the classes for this form of school activity. The Orbis Pictus engravings feature outdoor exercise scenes with explanatory legends: ice or ice skating, ball games, bowling, crossbow shooting, rock climbing, walking, swinging, fight, swimming, etc.

In addition to outdoor exercise, students have to make trips and walks together, and finally, "indoor games", aimed at sharpening the spirit, accuracy and fairness of the judgment. In the school program, 8 hours a day were devoted to teaching, 8 hours of sleep, and 8 hours of physical education, hygienic care, and meals.

In 1762, the "Diabetic" written by Mureș doctor Stefan Matyus, who advocates practicing physical exercises in the form of walking, athletics, canoeing, horseshoes, drops, jingles, riding, etc., is being printed in Cluj as absolutely necessary for the health of the body and intellect.

In 1688 the Principality of Transylvania was under Austrian sovereignty. Following the pressures of the Vienna Court, part of the Orthodox clergy accepted "union" with Catholicism (1698), creating a new confession in Transylvania - Greek Catholic.

On the occasion of the union, numerous promises have been made to meet the aspirations of the Romanian people for freedom, culture and the right to participate in the political life of the country, but it will be more than 50 years before the "united" Romanians succeed in acquiring a small part of the promised rights.

In 1738, Blac, the new center of the Greek-Catholic confession, founds a new "elementary school", as there were others for the Romanian population, was opened in Bishop Inocentiu Micu Klein (1692-1768) (Protopopescu, 1966)

In the first half of the eighteenth century, the old schools besides the monasteries, the few parish schools, and the town-maintained by craftsmen and merchants - such as the school of Șcheii Brașov, continued to work. Part of the Romanian youth attended schools for Catholics or Protestants.

The passage of Transylvania under the sovereignty of Austria stimulated a strong cultural offensive to Catholicism in general and Jesuits in particular. They reopened the University of Cluj (1698) reorganized the

gymnasium in Alba-Iulia, new high schools were opened in Braşov (1700) and Tg. Mureş (1712), which were added to older ones (Baia Mare, Satu Mare, Oradea, Aiud, Timişoara and other cities).

Calvinist had colleagues at Aiud, Cluj, Tg. Mures and Gymnasiums in Odorhei, Orastie, Zalău, etc. The German population - almost the entire Lutheran confession - had gymnasiums in Sibiu, Brasov, Medias, Sighisoara, Sebes, Orastie, and Bistrita.

Bishop Inocentiu Micu Klein insists that the provisions contained in the act of religious union be enforced, demanding that the Romanian nation is equated with the other "nations" in Transylvania and that the struggle will gain a political character.

In 1754, through the effort of Bishop Pavel Petru Aaron, in Blaj, besides the public school, a Latin-speaking gymnasium was created. The new gymnasium lasted for three years, and in 1772 - five years. Also in Blaj began a seminary for the preparation of priests. In a series of villages - not many - there were established schools for the Greek-Catholic confession.

After Maria Tereza's founding of border regiments in southern and northeastern Transylvania, a state education for the Romanian population in the Austrian Empire (in the parts of Haţeg, Banat, and Năsăud) was organized after 1763.

In Transylvania, he was distinguished by his ideas, Stefan Ludwig Roth (1796-1849), who left to study in Germany, was attracted by the strong personality of the great pedagogue J. H. Pestalozzi, becoming his collaborator at Yverdon (1818-1820).

He returned to his hometown of Mediaş - became a teacher (1821) and then rector of the high school in 1831.

In 1849 a new organization of education was adopted, based on the law proposed by the minister of the instruction, Leo Thun, valid throughout the Austrian empire.

The accomplishment of the Austro-Hungarian dualism (1867) made Transylvania lose its administrative autonomy in the empire and go directly under the leadership of the Budapest government. Under these circumstances, the school laws adopted in Hungary were valid also for Transylvania. Such a law was that of Iószeff Eötvös, in 1869, which provided for the organization of schools to be dealt with either by the state or communes, or religious confessions, or even private persons.

The language of instruction would be the one decided by school organizers and supporters - usually the pupils' parents' language. They also set up the education plan, but there is an obligation to include in it all the disciplines stipulated in the state plan. Parents were free to send children to any school they wanted. According to this law, primary education had a duration of 6 years.

The Eötvös Law was rightly considered to be a democratic law, especially for the freedom it provided for the organization of education in the mother tongue (Turcu, 2004).

Starting from this law, Andrei Şaguna (1809-1873) elaborated a special regulation for the Romanian Orthodox primary schools, known as the Organic Education Statute (1869).

Almost every village had a school; in the curriculum increased attention was paid to the study of the Romanian language. The religious education of the Greek Catholics also benefited from the provisions of this law.

In terms of education for the Hungarian and German population, it was much better organized, even the confessional, the Hungarian enjoying substantial state support. The number of schools was much higher than those for the Romanians.

An important role in spreading culture among the Romanian population was also the "Transylvanian Association for Literature and Culture of the Romanian People (ASTRA) created in 1861, which also supported the efforts of the school in its action to strengthen the consciousness of national unity" (Albu, 1971).

In the handbook translated by Ion Budai Deleanu in 1785, "a book for teachers of lower-level Romanian schools in the Chesaro-Kings Countries of Inheritance", which in fact constitutes a guide to elementary school teachers, more than a methodical one, insists on the idea that a good teacher cannot be improvised today by tomorrow, that his training requires lengthy study in schools.

The paper contains modern pedagogical guidelines as well as useful fragments of pedagogical psychology such as those in which the current types of pupils are sketched, as well as the ways to act on them.

Differentiated knowledge of child psychology pursues both educational and instructive purposes.

The formation of skills, discipline, order also enter, as is normal, into the concerns of the methodologist, as well as the care; the latter goes so far as to give guidance on the observation of walking, the way the limbs of the body or the expression of the faces of the pupils are held.

The teacher's attention is drawn to these details, for example, on walking:

"Some go on how to say about the people, over the dawn, properly go with their feet crammed in and crossed. Others go, with kneeling, and as they pass, on the right or on the left, their body goes away, and the other in the other." (Protopopescu, 1966)

Interesting local color and time remain the guidance on how the schoolchildren should walk: "him (the teacher) tells them that they must first walk with the soles of the foot before the foot, not the thigh; these proper heels ... after that they leap down and lay them down slowly and without sound, thereby protecting the sound that the peasants make oblivious to the heels of their boots. They must always have your knee stretched out, the armholes of the foot with the whistles, both standing as it went straight, the body and the head oblique, writing, not between the shoulders" (Protopopescu, 1966)

Care for pupils' attitudes is an important factor in the attributions of the school. And in this direction, as in all others, the teacher's example remains decisive.

If the teacher appears in the first part of the book as an educator, in the second part we are in the position of a transmitter of culture, a quality in which the methodist guides him thoroughly.

For the most part, in school, the knowledge was received through the teacher's explanation, to which he says: "Teachers need this insight to draw their interpretations and teachings so that they can be developed, but not long, troublesome, but to be brief and cloaked, understandable, orderly, trustworthy, useful and helpful, both for the elderly disciples as for the younger" (Protopopescu, 1966)

Transylvanian schools started scribes towards Banat and Bucovina, some of them crossed the borders to Moldova and Wallachia where they found a broader field of activity.

#### **4. Conclusions**

The humanism of the age was opposed by all the power of inhuman attitude manifested by the application of corporal punishment in schools; unilateral development, specific to old education, was to be replaced with care for harmonious - physical and spiritual development.

Under the influence of humanism and in the struggle with the ideas of scholastic pedagogy, a series of pedagogical ideas have appeared and manifested with increasing insistence and efficiency, expressing respect for the man, trust in his physical and intellectual possibilities of development.

In this context, Dr. Pavel Vasici, a multilateral personality of the nineteenth century, physician, publicist, the supporter of the Romanian Revolution of 1848, made a substantial contribution to the promotion of physical education. As a editor of the Romanian Telegraph newspaper in Sibiu, in a study titled "Our youth on public schools," she confesses at the end of the study that she will use all the opportunities to promote her gymnastics, personally following her school program gymnastics to see with his eyes the strength that young Romanians will show in these schools.

#### **References**

- Albu, N. (1971). History of Romanian Schools in Transylvania between 1800-1867, E.D.P., Bucharest, page 123;  
Dumitrescu, G. (1969). Physical Education in the Evolution of Pedagogical Thought, Publishing House of National Council for Physical Education and Sport, Bucharest, page 231;  
Papacostea, D.C., Demeny, L. (1985). Book and print in the Romanian and Southeast European Society (XVII-XIX centuries), Bucharest, page 25;  
Protopopescu, L. (1966). Contributions to the history of education in Transylvania, E. D. P., Bucharest, page 213;  
Turcu, D. M. (2004). Physical Education in Transylvania from the 15th century to the Second World War, Publishing House "Lucian Blaga" from Sibiu, page 120.

## **Study On The Modernization Of Teaching Methods In Alpine Skiing**

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### **Abstract**

*The work proposed by me presents a method of teaching alpine skiing, which is unique in Romania, based on natural elements of human life, on the idea of skiing from the beginning as an Olympic champion and applicable to all levels of practice, recreation, performance and adapted ski.*

*This concept is called Free Motion - Snow Motion, the Free Movement - Free Slide, and was invented by Prof. Heinz Petanjek, former coach of the Austrian Alpine Men's Bundle and Legendary Franz Klammer, together with Prof Rolf Blanke of the "Martin Luther" Haalle-Witemberg Sports University in Germany, a Doctor in Management and Sport Policy.*

*The method has been successfully taken over by six countries and has been implemented in Romania since 2007 and has resulted in excellent results, including a few thousand children, young people and adults who have learned to ski for recreation, stand-by at the World Special Games Olympics and the first Romanian in the history of Romania who participated in a monoscale race (ski for people in wheelchair).*

**Keywords:** alpine skiing, recreation, monoski, performance

### **1. Introduction**

The Alpine Fitness concept, free motion, is based on a method of teaching alpine skiing for different categories of people and is divided into three branches, performance, recreation and adapted ski. As it is known that alpine skiing is not in the human subconscious, at the population of the countries that have mountain and 4 seasons is more pregnant, at the rest is just snow, fighting with snow, ice slip can exist, that is why it is compulsory that this sport is promoted.

At the beginning, skiing appeared as a form of snow travel, later becoming sports, and from the very early age, the child must be pushed to this sport and then be able to work with pleasure and enjoyment. And from the name, we can see that there are a bunch of factors and that more types of activities are involved in one, separating themselves into categories of amateurs and professionals according to evolution, desire, and genetics.

The method reflects the general principles of sports pedagogy but is based on its own rules and principles, elaborated in accordance with the particular features of skiing activity, experience in the field and an estimate of what follows.

Skiing is an activity that takes place in a particular setting, the mountain, with its various aspects, in a natural setting characterized by altitude, sudden variations in temperature, visibility, on a natural element, snow, which allows sliding on skis. The sloping terrain, the notion of sliding in the slope, translates into concrete elements of speed and balance, the ski technique is based on complex, cyclic and acyclic psychomotoric acts, dominated by mechanisms for maintaining balance in slope slipping (reflexive acts) and mechanisms which achieves the objectives imposed by the specific situation encountered: climbing the slope, changing the direction of travel, on the spot or during sliding, reducing the speed of travel, passing over a certain profile of the terrain.

It is a complex activity for which the technique, or the different skier's gestures, carried out within the limits of the axes and planes of the body, with effect at the level of contact with the snow skis, is only the means of expressing the relation between the inner world of the skier and the inner pressures to which it is subject to this game. The number of people who want to learn and practice skiing is steadily increasing. Recently a number of factors have contributed to this, the tourist potential of the mountain resorts in our country, the development of the production of equipment and materials specific to winter sports and the possibility of purchasing them, the popularization of winter sports and the benefits induced by the practice but there is much work to do, the "ski pyramid" will build itself according to desire.

When the ski resorts are full, new and new facilities will be made, thus increasing the selection and performance base, increasing the experience of the coaches and we can make claims in this sport.

The concept proposed for practicing skiing in an organized setting, led by a qualified person, is based on a diverse motivation, which we can express in broad terms with the desire to organize active recreation in the



nature, knowledge of mountain areas, maintaining health and a high ability to work, the desire to learn the ski technique correctly, the interest in improving the known technical procedures and their adaptation to the requirements of alpine skiing, the desire to recreate in the form of a game and collective entertainment, the adaptation to special needs in the case of monoski.

The forms of organization of learning and practicing skiing are determined by several factors, including the duration of the activity. During leisure or holiday time (for students and pupils) when the activity can be organized on a 6 or 12-day cycle during weekend trips where the activity can be organized as 3-cycle, or in the form of individual consultations.

The importance of the concept is based on the fact that the presented method has a wide applicability, both among performance sports and among amateurs, but also for the ski with both intellectual and motor disabilities, in monoski for the wheelchair.

In the performance categories, it is very useful for the slalom test, especially as a form of training, the female nationalities of Austria, Norway, and Canada have taken the concept successfully. The maneuverability of a short skier allows for rapid movement in the development of the working technique, then work on the force and obviously to translate into the rules of the skiing race.

The amateur may have the biggest and most rapid impact, basically, a person who has ever been on skates or rollers in a weekend can descend a red slalom in parallel slalom, and for those who have not experienced anything could be just a 20-hour lesson (divided into 5 days 4 hours a day).

For skis adapted to sport with intellectual disabilities, we can say from our own experience that it is the only chance to put a child with Down syndrome, for example, known to have zero motricity, skis in the first with some skis of its height or smaller by 15 cm, and in the ski, mono bi-ski, in the leisure section, the instructor can only work on "short carving" skis.

### **The Free Motion - Snow Motion concept**

Free Motion - Snow Motion or free snow motion is the new generation of ski carving, a method in alpine performance and amateur ski that is based on natural things in human life, combined with physics, biodynamics, and last but not least performance of sports equipment. Before going to the actual and concrete presentation, to highlight the ease and quality of the working method, we will make it clear that it is being applied successfully at Special Olympics Romania. They are athletes with intellectual disabilities, who have achieved valuable results in alpine skiing, with podium ranking in world competitions, which shows us the value of the concept and its applicability.

Trends and requirements worldwide are increasing, the speed of the century we have repercussions in sport, so the equipment has reached a high level of technique, athletes are getting better prepared. This simple working method, in the first phase, also developed its own equipment. So the rattles are produced by a brand that relies on many years of research, experience, and tests. All this to improve the quality and speed, which characterizes the century in which we live and where patience has no limits, indifferent on which part are you coach, sportsman or patron.

Free Motion is the first name printed on style, then taken over by rattles that are unique in the world, not by design, but by what they express, and later added to the second part of the concept, Snow Motion. Free movement, the free snow movement brings together both the world champion and the amateur to experience, bringing the extremes to consensus and succeeding in the communion of each other's wishes.

The working method was designed and studied for 15 years by Professor Heinz Petanjek, former coach of the Austrian Alpine Ski Team, who dominated the World Cup in 1976-1983. He was the coach of legendary Franz Klammer at the alpine skiing queen skiing event, helped by Professor Rolf Blanke, a Doctor of Sports Management and Sports Policy at Marthin Lauter Haale Sports University in Germany.

The proposed style works on short skis of 99-123 cm and starts from the natural concepts of human life, it is natural for the person who comes to ski to start at 5 years performance, either amateur after 200 days of state sitting at the bank to learn skiing, or for people with special needs.

For example, in a person who walks on rollers in the summer or was on ice in winter, in 3 days he manages to descend a red (medium) level slope in bypassed corners without wearing or plowing through the pits, open plow, elements of the old ski school, ease of maneuvering these skis and bringing self-confidence to continue. The fast jump from the first moment you are on the skis and the moment of sliding is very short, has a major impact on the brain, the one who gives the orders for the next move; then the easy-to-understand and pleasant concept that brings joy through the simplicity of the exercises is an excellent start for performance.

The boys have a different format than the ones we used to be, being very light and adapted to a low level of physical training. It started with the idea that the one who uses them does not need maximum performance, the speed of the movement is reduced. Thus, their weight is 1.5 kg, closes with a tweezer coupled

to the sock of the buckle that fits perfectly on the foot, thus offering maximum heat. Then it closes with a simple zipper and a flap holding the tibia (figure 1)

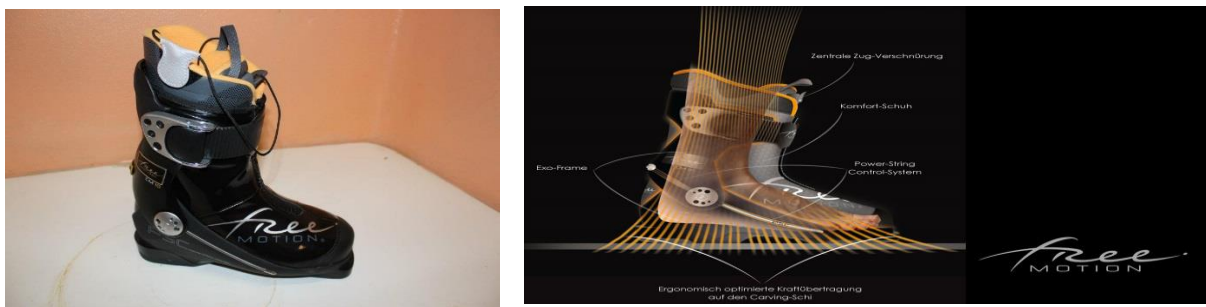


Figure 01. Free Motion Boot

The sole and the contour around the ankle contain some special reinforcements that act when the athlete puts pressure on the turn, accelerating and making an easier, quicker and faster turn. The reinforcement has been optimized for carving, and if used on a short skier or a small ski, the turn guarantee is given from the first days of skiing only due to equipment and physics.

The boot is designed for carving and can be used on any type of skiing, it is modern in design and easy to carry. In the sport of performance at the Österreich Ski Verband (female alpine national team), as well as in the groups of children and youth, the team of Canada, Norway, etc., the slalom training sessions are made on this model due to the ease of cornering and quality, followed by race-specific equipment.

Thanks to the in-house control, the energy transmitted to the ski leads to an excellent result, to a combination of comfort, grace, ease of steering and balance, movement without ski, skiing and long stays, so we must remember that the connection between the ski and the one practicing the sport is given by the boot, which has to offer as many advantages as possible.

The method recommends equipment, skiing between 99-120 cm for learning and refinement, then each one to adapt his skiing to his own style, but not more than 150 cm, the measure of the speed at which is high enough and the level of skiing must be raised.

The well-known coach Petanek said "It's better to know where your skis are than to know where you want it to be"

That's how the first lesson begins with those who come to learn the new carving concept, where the existing ski schools have created a motto that sounds like that, "3 days no ski, money back" ("if in three days you do not ski we give the money back "). And if there was no basis for this statement, nobody would risk, which happens even faster for those who practice, swimming, cycling, climbing.

The position of the body is natural, with arms slightly sloping, curved in banana-like shape, always looking ahead, slightly bent tread, tibia sticking to the tongue, and sticks at the point of torsion around the hip. It imitates the position of running on roller coasters or driving a bicycle so that between head, torso and knee should be symmetry.

The first lessons and the beginning should be light, enjoyable, including from worm up, which is mandatory, the coach must have experience and patience, always be with the smile on his lips. It should not be forgotten that the person who comes to ski learns to leave home with the idea of a dangerous sport, marked by the events presented in the media or comes after ten or hundred days of sitting in the chair. That's why there are a series of games that combine warming up elements, such as walking on boots with the help of sticks; catch on the boots; the rack among the pockets, with the sticks in the hand in the form of a steering wheel; running in perimeter set with open arms simulating an airplane and at the signal catch the nearest one. The atmosphere must be relaxed, friendly, loving, with a lot of smile and cheer, without much explanation, letting the athlete discover himself.

"Locomotion" (according to the author Petanjek) the title of this phase, comes from the motricity and consists in simulating a locomotive, in the ski position described above, the athletes will simultaneously push with both sticks with a slight glimpse and inspiration on lifting and exhaling on the descent. After some executions in a straight line, a push is made to the side, with the distinction that the look, torsion of the body and sticks will be taken in the direction we are going too left or right, the end of the exercise finding the coach ahead and the athletes after him with the obligation to it just goes like a train on the tracks, on the trace of the coach. And here playing begins, the locomotive blows, whistles, sings, it will be watched as the ski does not break out

of the track and the push is simultaneous. The same exercise will take place, then on a land with a slight slope, with a turn in the back and with the aim of executing the pushing movement in the sticks. In short, skis pushing will be done in front of the ski, so without realizing, the athlete keeps the body slightly leaning forward.

Thus, "the method tried to speak very little," Prof. Petanjek said, everything was in the form of play or natural that in the mind of the beginner who is not focused on what to do, think, but only to play by learning. Generic ski instructors in the old school in Austria have been called "NATO", "No Action Talk Only", because it is very much explained to the athlete and is very careful and focused not he can do it, and practically there are moments of uncertainty. We imagine that when crossing the pylon to the parallel ski, the indication is, "we bend to the right and we turn left", the brain has two different commands, the short skis needing no plow, the turn is done only by simply pushing a side arm or a small torsion of the body, to the direction we want, turning the head to the right will point the skis to the right.

During this time, the athlete's eye is always in the front and always in the direction of walking, the parallel but not close skis. As a helpful exercise with a colorful spray, we draw the line on which to go and use later this exercise when we go to carving, we draw a straight line at certain points we draw clocks, numbered 12 to 6 in the morning, the watches must unite with each other and the athlete will always push from the sticks and will go between 12 and 6 o'clock, at the end there will appear 8 beautiful figures. There are a series of games, walking on the line, lifting one foot, the other for bingers, passing under the sticks in the triangle, jumping the line, stepping over the yarn, etc. even the coach's creation is used.

And this phase, where they rest as long as they are needed because they are the basis and obviously depending on the motricity, the sports inclinations, some will catch faster and easier others will be harder but they will all have a guaranteed minimum level. The athlete already trusts him and feels the skis, the boots, has caught the taste of slip, in his mind, there is already the desire for more because he has passed the barrier of fear.

Thus, it will pass on a slightly inclined track. It starts with locomotion, already known by the athlete, but it easily passes into the slopes of the mountain, at the beginning by simultaneously pushing the sticks. After a warm-up of this kind, turn left and right turns one by the "follow your finger" exercise, follow your index finger.

Leading the arm and body to the direction you want to turn, followed by sliding up into the interior of the mountain in the back, where the ski stops alone. The pursuit of the finger only forces the athlete to turn his head towards the direction of travel (see from the beginning) and to twist the body in that direction so that the applied force and the pressure given to the ski, lead to an elegant, simple and easy turn, on the edges; is the first carving of the athlete.

Then, these bends are slowly joined by the entrance with the arm, sliding in, lifting, loading the opposite arm, torsion of the body in the direction, and regrouping of the sticks. In the turn, the arms are open for balance, just like in the beginning lessons, the spinner is in the other direction at the level of the hip. It is very important at this stage that the athlete slides in from one side to the other side of the runway in order not to catch the speed and to make the loading of the ski and the body as smooth as possible. The tendency is to swirl briefly, but at this stage, we are not interested in slalom but the perfection of turning technique in carving, which inevitably leads to braking by slalom. The short ski, with a small radius, cumulated with the correct position and pushing towards the side where it wishes to turn, makes the turn very simple and quick to learn.

As you can see, there is no plug move, and therefore no learning of the turn in the plug move, which is very difficult for those who have worked with the beginners to get out of the working technique. Another aspect is that the plug requires a lot of knees and femoral biceps, which shortens the beginner's skiing hours, but in these conditions, the athlete can slip without worry of fatigue regardless of the level of physical training because the elements are natural and do not use the mind.

In the old ski school, for example, the turn of the plug is running right by bending the body to the left. In the stress of the athlete, he had to process in a very short span that he was left and turned right (also taken from driving schools where beginners have the same problem when driving back to trailer trucks). The method, based on physical and equipment performance, ski boots, skis, everyday life, for example, cycling, to go to the right you tilt to the right and it looks normal, so here, avoiding working hours for plug, braking, etc.

From this moment the directions change, the amateurs begin a series of exercises of pleasure, fun, walking on a foot, skiing at the runway, twists, turns, singing follows the landscape, and those who go on to perform, continue the specific training, strength, ski style, learning of the contest elements.

For the performance module, we will describe some of the main aspects that define the concept and on which the programs and management of the skier or team can be prepared.

It will start with "PURPOSE AND OBJECTIVES", training - for the mobility of the spine and shoulder area, relaxation - the muscles of the neck, shoulders, and thighs, warming up and strengthening the muscles, tendons, and ligaments in the spine. "PERFORMANCE AND MEASUREMENT OF OBJECTIVES", here we follow, the gradual and thorough approach and the process with the eyes of the mind, the highest increase in performance, through the gradual increase of the yield, end-of-life expiration, abdominal breathing, relaxation of

the muscles through deep and controlled breathing (abdominal breathing), increased attention is given to limb tremors when strength increases, selective work of muscle groups, only those related to the performed exercise, relaxation of the arms indicates incorrect breathing and contracting muscles in the shoulder and bust area.

In field and outdoor training, we pursue an energetic rhythmic approach, even explosive at times, deep breathing and constant, not exhausting, expiration, when reaching the maximum physical effort, expanding the visual horizon, peripheral vision, attention to the environment, it helps to improve the sense of balance and anticipation in extremely fast cumulated with decision making.

In cardiovascular training, increasing oxygen concentration in the blood and increasing lung capacity, between and after exercise, shortening the relaxation time, and improving a better concentration, adapting the respiratory apparatus to outdoor activities in winter, at altitude, reduction of stress and emotions, by encouraging without distorting and pushing the athlete towards the growth of "self-esteem" (you are not the best, it is very good what you do but it is even better, we have to grow, you have not lost the 1 place, you won the 2nd place).

The careful approach to increasing resistance levels, accelerated travel - easy running - wide running.

Progressing, if progress occurs, the motivation appears, if the athlete loses concentration and the exercise or even the whole program has to be changed or the athlete turns to a smaller group.

In ski there is no bad weather but only inadequate clothing, always use equipment appropriate to the time and program that is being run, as well as outside temperature or rainfall, training, and age.

Experience carving as an Olympic champion from the beginning, use the right equipment, optimal equipment is the basis for a quick success, fun and a perfect carving technique. Learn the athlete with an encouraging attitude from the beginning, without stress, with much play instead of technical instruction, improvising working methods based on natural things in human life.

Do not ask the athlete to think what he is doing, follow the steps slowly and safely, use the concept and the working technique as a long journey not as a destination. The athlete today has begun to train for more money than for sports, without taking into account the goals of the team or club. From the very beginning, an unprepared carving has to be approached through these methods of encouragement, by demonstrative study, with simple and playful things, with the introduction of the carving elements without observing from the beginning the sliding techniques on the edges.

Grasp your intuitive skills, skate across the terrain with bumps, snow, soft, fine, fresh, frozen, peer-to-peer, encourage the creativity and suggestions of your athlete or group mates, even let you drive group those who bring independent and spontaneous suggestions.

As athletes grow in value, age, power, motor qualities, go from carving to pleasure to performance, sliding along obstacles, competitive technique, but recommending that eventual competition is based on individual levels, not on the group!

In order to be able to control the skis, to move wherever we want, wherever they want, throughout this cycle, this mobility and playful play should be maintained regardless of age, from summer to roller asphalt, swimming, walking cycling or climbing on the rock in nature, each of which has a footprint on the ski, until changing land, stable, stable-unstable, different slopes, elevation temperatures.

The ones described above, the "train" movement, the game that conveys the basic idea of carving, cumulating with carving with sticks, "flying like an eagle", the game that illustrates all the basic motions, or "snow sailing" with a half-parachute, everything in harmony with breathing, are the ones that lead to time-consciousness, ways to control turns in various forms, with knees, torsion of arms, short skis.

The athlete will understand the phenomenon and will go to the sliding step on the edges, the maximum concentration in the abdomen during the turns, the carving imagination by listening to "what the edges say" and establishing a step template.

Applicability to the "Skiing for People with Special Needs" section is, on the one hand, a unique method of initiating and training for people with intellectual disabilities and initiation for those in wheelchairs at the monoski section, where with skis larger than 1 m you can fit between the support belt and the monoski for the first slopes of the athlete.

Skiing for people with special needs has on the one hand importance for integration into society through sports, leisure or sports performance. Although Romania is in the beginning in this segment, we have podium ranking at the Special Olympics Winter Olympics in Korea 2013, athletes with IQ under 70, 5th place at the Sochi 2014 Paralympic Olympics, "Standing" skiing on leg prostheses and a ranking on the podium at the IPCAS European Championship, Italy in the Monoski section, ski slopes.

All have been worked on the method of the Free Motion concept, obviously in this module, with rigorous adaptations, starting with adapted toilet, access to the part and accommodation, specific equipment, for example, athletes with intellectual disabilities participate in skis short, and in Paralympic races where the FIS (International Ski Federation) rules are in place, skiing has the size of the regulation where the monoski is fitted with adaptations for the athlete depending on the lesion.

Adjoined skis are no longer niche, competitions are increasing, at Olimpiade there are 3000 athletes from over 150 countries and with 200 competitors in classes and for recreation is a relaxing way full of adrenaline, enthusiasm and joy and hope for the practitioner.

## **2. Conclusions**

Thus, until we have ski resorts in all the mountains, we will not be able to make a selection and we will not be able to prepare them professionally. A fast-paced approach to skiing can be the concept of FREE MOTION, when you will see on a weekend that you can slide on an average slope, you will want more and so the number of practitioners and all the benefits will increase.

In performance clubs, for very good results in slalom testing, it is already tested that the technique improves and speeds up skiing. Last but not least, confidence in gaining and positive tone increases, especially being very effective in female slalom specimens.

In sports, besides participating in special events such as Special Olympics, integrating into society and IPCAS (International Paralympic Alpine Skiing Committee) for performance sports, it is an excellent means of developing motor skills that are very weak in this category of people.

For the amateur segment, it has many advantages, described in the above chapters, but the old mentality still prevents people from reaching the slope quickly and easily. The "under chin" measure is well known when buying new skis that shoppers promote without seeing that the buyer does not even have the power to carry this equipment or physical training, days of despair, when on short skis you can if not something else, at least go on them and gain confidence.

In the past years, sports was a chance for a better life without alternatives, rather than in school to jobs. Now, the athlete is born and grows with the idea that he can do many other things, so he is not obliged to do sports. Thus, interest in performance sports has diminished, the idea of working hard and long, with sacrifices is no longer acceptable to parents of athletes, even if they are talented. They must not suffer, be good, but lead to an unreal world, which does not exist later. An early grinding in sport can have great benefits in human life, even if it did not perform, remaining with the aspects gained in sports life, such as discipline, work, team spirit, body health, which are useful to any man on this earth.

The method was based on these principles and an estimate of what will follow, trying an alternative to what today's worldwide life offers: reducing appetite for sports, increasing obesity, high risk of developing various diseases, and spending your free time pleasantly. This concept has proven to be a realistic, effective and loving training method, ideal for adapting to the needs of people with special needs.

## **References**

Petanjek, H., Blanke, R. (2005). *Snow Motion Alpine Glide*, Edit. Simon Dr. Und Werbung, page 112.

# **Study On Neuro-Muscle Quality Assessment In The Lower Limbs, With The Help Of "Modified Miron Georgescu", At The Debut Gymnasts**

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## **Abstract**

*The need for movement (dynamic momentum) - the main cause of psychomotricity is one of the most important sources of energy. The later movements, if well organized and dosed, balance the individual from an energy point of view. Starting from these truths, we initiated the study that seeks to discover useful information about neuro-motor and energy qualities in the maximal effort-speed effort at the triple extension level in the case of beginner gymnasts. To evaluate and obtain data we used a computer-assisted measurement technique, namely the "Miron Georgescu Modified" test. The equipment is made up of a computer-aided platform that is coupled to a computer and is intended for research and activities aimed at assessing, enhancing and improving human performance.*

**Keywords:** *evaluation, computerized means, speed control;*

## **1. Introduction**

The test provides information on the level of neuromotor quality of the inferior members in the combination of speed and force mode and highlights the sport's power and control capacity. (Material for internal use, I.N.C.S., Bucharest, 1998). It is known from the literature that psychomotricity as a function is the one that generates energy and can be considered in this context, both the cause and the effect of human activity. De Hillerin P.J. (1999) starts from the premise that optimum results are obtained by athletes moving at speed and force higher than their opponents. The same author emphasizes that maximal effort is helpful in assessing control-related characteristics and at the same time eliminating the possibility of subjective assessment of the effort step.

## **2. The aim of the research**

Highlighting the benefits of computerized means in assessing and improving the neuromotor and energy qualities at the inferior members, at the debut gymnasts..

## **3. The hypothesis of the research**

Neuro-motor, energy and control qualities, in the inferior members, at beginner's gymnasts, can be assessed in detail (refined) and improved through the "Miron Georgescu - modified" test.

## **4. Methods of research and means (equipment) used**

In the research we used the following methods: the theoretical documentation, the observation, the method of investigating and collecting the data, the statistical and mathematical methods of processing and interpretation for the description and characterization on the basis of figures of the obtained results and to highlight what is essential but and to perform generalizations from the investigated group.

We also used the graphical method that allowed suggestive presentation of the data and an image of the results dynamics.

The equipment used consists of a contact platform (with a useful surface of approximately 1 m x 1.2 m) connected to a double-pinning cable connecting the legs to the platform. It also has a device capable of transmitting the values of successive contact or flight times wirelessly to a computer. The device is coupled via serial interface (RS-232) to a computer equipped with wireless link capability and data processing programs

developed in accordance with the methodology developed in the I.N.C.S. The parameters provided by the computer program by which data is collected by this method are calculated with an accuracy of 0.001 s and are of two types:

- energy parameters: mean unit power (PU), in which air time (Ta) and ground time (Ts) are calculated; the average state of ground times or the repetition rate (V.rep.); average flight height (H.zbor).

- control parameters: Energy Variability (CVE) and Structural Variability (CVS).

The following relationships can also be established: unit-speed relationship, unit asymmetry, etc.

The program used for acquisition and processing automatically performs both the primary data measurement and the calculation of the results for each series of jumps and for the sample as a whole (De Hillerin, 1999).

## 5. Description of the study

The study was conducted between 01.06. - 21.06.2016, at the artistic gymnastics hall of the Sibiu School Sports Club, initiation group (4-7 years old).

On 02.06.2016 the initial testing was carried out. Thus, the group of 15 subjects carried out the whole sample, which consisted in the realization of 3 series, of 15 consecutive jumps on a special platform, provided that at each jump, the maximum detachment height and a minimum contact time with the ground. The order of the series was the following: 15 jumping on both legs, 15 jumping on the right foot and 15 jumping on the left foot. The lengths of breaks between jumping series allowed the test to be performed under peak conditions.

During the period 04.06.-18.06.2016 five training sessions were conducted for the energetic capacity of the beginner gymnasts. On 21.06.2016 the final testing was carried out, the conditions of which were identical to those of the initial testing.

During the initial and final testing sessions, the subjects performed two executions, taking into account the best.

## 6. Results

In order to interpret the results, we considered the following energy parameters as an example: the average unit power (PU) that provides information on the power-speed qualities useful for conditional training and the repetition rate (V.rep.) Which refers to the time value on the ground and highlights the rapidity of the excitation succession with inhibition as well as the contraction and relaxation processes, providing information on the force-to-speed relationship.

In the case of a favorable evolution of data recorded at the PU parameter, their value should increase. For the other parameter (V), the positive evolution of the data means lowering the value. The results obtained in the initial testing and in the final testing for the two parameters monitored can be found in Tables no. 1 and 2.

Table 01. Results recorded at Average Unit Power (P.U.)

No.	Subject crt.	M.G.M. Test					
		Initial test			Final test		
		Average unit power on both legs (in W/kg)	Unit average power per foot (in W/kg)		Average unit power on both legs (in W/kg)	Unit average power per foot (in W/kg)	
			Right foot	Left foot		Right foot	Left foot
1.	A.L.	6.39	1.26	2.46	6.27	1.72	2.73
2.	A.S.	2.47	3.73	3.26	2.6	3.83	3.57
3.	B.C.	1.92	1.3	1.82	2.06	1.45	2.08
4.	B.I.	2.19	1.41	1.11	2.65	1.84	1.61
5.	C.O.	2.79	1.29	1.41	3.2	1.56	1.83
6.	G.P.	2.53	2.12	3.37	3.06	2.6	3.25
7.	H.A.	2.52	4.69	1.92	2.82	4.45	2.19
8.	I.I.	2.93	3.67	3.12	3.37	3.65	3.06

9.	M.B.	3.85	1.72	1.82	3.08	1.53	2.36
10.	M.N.	2.11	1.28	1.28	2.23	1.74	1.67
11.	M.R.	2.11	1.51	1.69	2.51	1.92	1.81
12.	Ş.P.	4.17	3.49	3.66	3.82	3.55	3.6
13.	T.R.	2.06	2.15	3.76	2.49	2.2	3.92
14.	T.V.	2.24	3.38	2.83	2.51	2.49	2.76
15.	V.L.	2.29	4.08	8,20	2.4	2.5	9.19
Arithmetic mean		2.84	2.47	2.39	3	2.47	3.04

Table 02. Results recorded at the repeat speed parameter (V)

No.	Subject crt.	M.G.M Test					
		Initial test			Final test		
		Repeat speed on both legs (in ms)	Repeat speed on one leg (in ms)		Repeat speed on both legs (in ms)	Repeat speed on one leg (in ms)	
			Right foot	Left foot		Right foot	Left foot
1.	A.L.	0.05	0.21	0.15	0.03	0.18	0.12
2.	A.S.	0.11	0.03	0.03	0.09	0.01	0.02
3.	B.C.	0.15	0.15	0.1	0.1	0.16	0.1
4.	B.I.	0.17	0.2	0.17	0.15	0.2	0.12
5.	C.O.	0.14	0.15	0.15	0.15	0.11	0.16
6.	G.P.	0.08	0.08	0.06	0.07	0.07	0.03
7.	H.A.	0.12	0.1	0.17	0.14	0.1	0.12
8.	I.I.	0.09	0.06	0.07	0.09	0.05	0.05
9.	M.B.	0.04	0.17	0.17	0.01	0.14	0.13
10.	M.N.	0.16	0.2	0.17	0.12	0.21	0.12
11.	M.R.	0.1	0.12	0.13	0.12	0.11	0.12
12.	Ş.P.	0.08	0.08	0.12	0.07	0.05	0.13
13.	T.R.	0.09	0.07	0.07	0.06	0.04	0.08
14.	T.V.	0.09	0.1	0.1	0.1	0.13	0.1
15.	V.L.	0.13	0.15	0.12	0.13	0.16	0.14
Arithmetic mean		0.11	0.12	0.12	0.1	0.11	0.1



Next, we present in summary the results obtained at both parameters (Table 3).

Table .03 Results at Parameters Average Unit Power (P.U.) and Repetitive Speed (V.rep.)

Table 105 Results at Parameters Average Unit Power (P.U.) and Repetitive Speed (V.rep.)						
	Parameter					
	Average unit power (PU) (on both legs)			Repeat speed (V.rep.) (on both legs)		
	Initial test (in W/kg)	Final test (in W/kg)	Difference between tests (in points)	Initial test (in ms)	Final test (in ms)	Difference between tests (in points)
Arithmetic mean on group	2.84	3	0.16	0.11	0.1	-0.01

## 7. The interpretation of results

At the end of the study, it was found that the values of the two studied parameters (PU and Vrep.) had a good evolution as a whole. As can be seen in Figure no. 1, the arithmetic mean at the level of the group increased from initial testing to final testing in average unitary power and decreased in the repetition rate, which confirms the hypothesis that conditional capacities can be assessed in detail and improved by the "Miron Georgescu Modified".

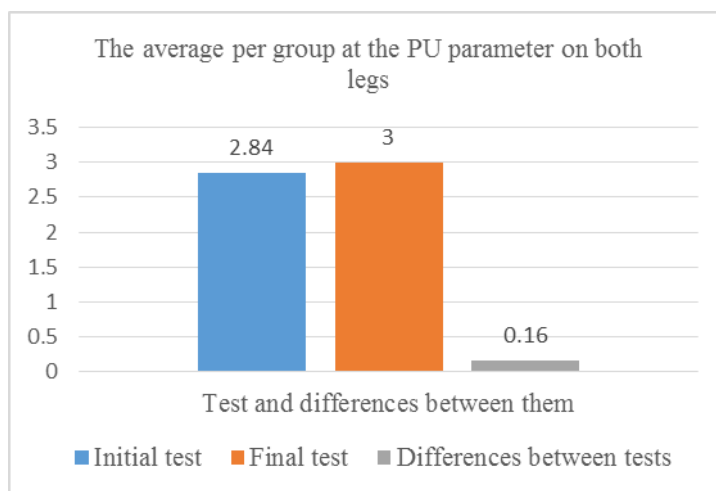


Figure 01. Parametrul P U

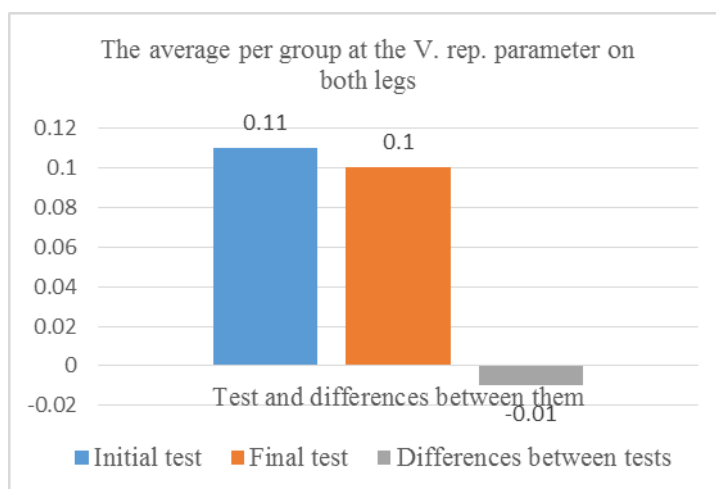


Figure 02. Parametrul V.rep.

Thus, according to the chart in figure no. 3, at P.U. on both legs, 80% of subjects experienced progress.

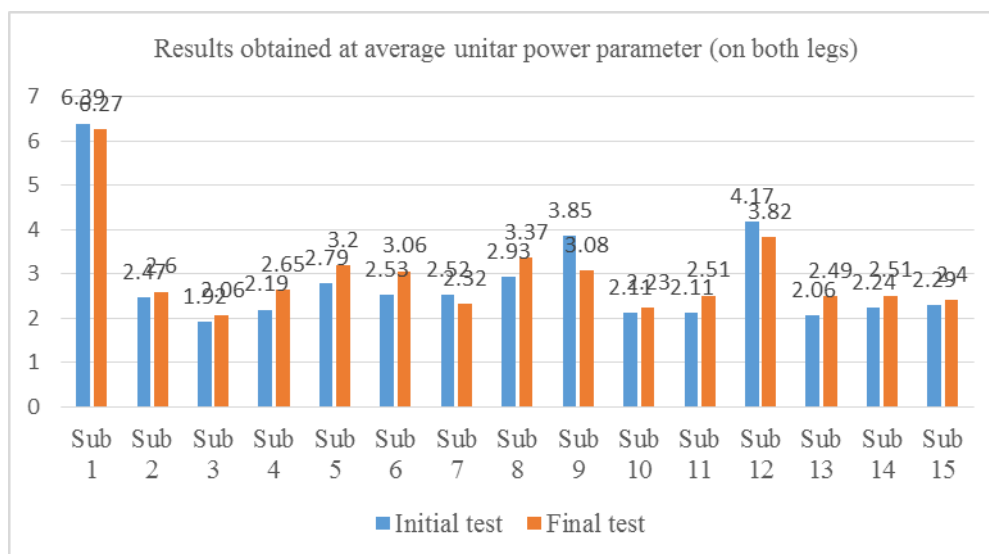


Figure 03. Results obtained at average unitar power parameter

Also, at parameter V.rep. on both legs, 60% of the subjects progressed. Of the remaining 40%, 15% stagnated and 26% regressed (Figure 4).

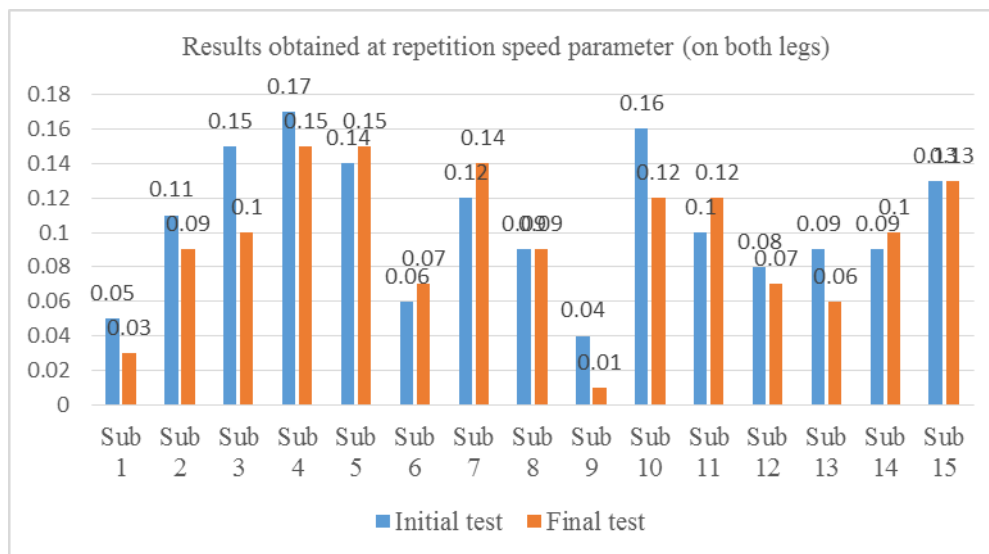


Figure 04. Results obtained at repetition speed parameter (on both legs)

The two energy parameters studied, the average unit power (PU) that provides information on the power-speed and repetition rate (V.rep.) that highlights the rapidity of the excitation sequence with the inhibition, as well as the contraction processes with the relaxation find their usefulness in the specific manifestation of motor behavior in artistic gymnastics.

## 8. Conclusions

- The tests were captivating for the subjects, who showed interest and enthusiasm at each training session at each stage.
- The study offers the opportunity to create a more accurate and realistic picture of how to use computerized means to engage the neuromuscular control of the inferior members.

• The trial can guide coaches on subtle aspects of acts and actions specific to artistic gymnastics, such as:

- imbalances between strength and speed;
- the existence of a right-left motor asymmetry by correlating the results obtained with this sample, with the data referring to the manifestation of the laterality of the investigated subjects; indexes flashed emphasizes development trend symmetrical or asymmetrical legs, knowing that differences in expansion between right and left leg can improve by requiring balanced, so needed to carry proper acts and motor specific actions, especially in the case of equilibrium (eg on the beam);
- the occurrence of some clues about deficiencies in the control of the finishing of the movements or the preparation of the body for landing / contact with the soil.
- results are dependent on the basic qualities of the athlete and are useful steer and focus the gymnastics exercise female mainly at jumping and soil samples, where there is the maximum force efforts in the triple-speed extensions;
- the sample may also provide indirect information on the coordinative capacity if we take into account that it requires coordination of the neuromuscular system segments with different speeds and degrees of tension.

Finally, we consider that regular use of computer evidence (for assessment and/or training) facilitates directing athletes training since the age of initiation, by offering objective data that allows coaches to make predictions concerning the future performance of the gymnasts.

## **Reference**

- Albu, C., Albu, A., Vlad, T. L., Iacob, I. (2006). Psychomotricity, European Institute, Iasi, page 45;  
De Hillerin, P.J. (2015). About the sample Miron Georgescu Modified. pages 1-3;  
De Hillerin, P.J. (2006). Tests made with height jumping (I) the sample "Miron Georgescu". Sports Science Review, Bucharest, page 27;  
Grigore, V. (2001). Artistic gymnastics - theoretical bases of sports training. Publisher Signs, Bucharest, page 67;  
Grosu, E. (2002). Psychomotricity and Educational Gymnastics - vol. I. Publisher G.M.I., Cluj-Napoca, page 66;  
I.N.C.S. (1998). Material for internal use, Bucharest, page 79;  
Zaharie, N. (2015). Psychomotricity at the age of initiation in Feminine Artistic Gymnastics, Publisher "Lucian Blaga" University of Sibiu, page 55.

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