

# KINESTHETIC ENCOURAGEMENT TO STUDENTS WITH SPECIFIC MEANS PLAYING VOLLEYBALL

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**Abstract** *The research aimed to monitor and determine a methodological system of actions, with specific methods of volleyball game and its implement in the didactic sportive activities with students and not only in order to develop the psychomotor skills with instruments specific to volleyball, but also for kinesthetic sense development. The research was conducted in two groups of subjects. The experimental group included 44 Year I students, Faculty of Medicine. The control group consisted of 51 Year I students, Faculty of Medicine. Research took place from 01 October 2011-31 January 2012.*

*For the experimental groups, the development of the didactic activities was characterized by the introduction within the training of instruments and of technical procedures specific to the volleyball game. If the control group, to kinesthetic sense development was performed only with specific means for the sportive branches, others than volleyball.*

*As a consequence of the experimental intervention, the values of the kinesthetic sense corresponding experimental group, skills increased progressively in comparison with the performed pre-testing phase at the beginning of the 1st semester of the university year 2011/2012. According to this study we can conclude that the development of the kinesthetic sense at students can be achieved more efficiently, with means specific to the volleyball game.*

**Key words:** *volleyball, kinesthetic sense, students.*

## 1. Introduction

The process of education is the educational activity complex, organized and carried out systematically by students and teachers in universities, thanks to which students are gifted work with a system of knowledge, skills, abilities, intellectual and motor purchases, from which they gain scientific knowledge of reality, he formed the design world, moral

beliefs, traits and skills of knowledge, research and creative [1, p.126, 154-157], [7].

It is known that the result of integration psychomotricity motor and mental functions in the nervous system maturation effect subject to the report aimed at his body.

Psychomotor abilities require individual opportunities to acquire and perform complex motor actions (with greater

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difficulty), conducting accurate and economic movements in time and space, speed and strength required in accordance with the situations that arise during the performance shares [6]. Literature [2], [3], [8], [9], considers five fundamental manifestations of psychomotor skills such as: capacity assessment and regulation and spatial-temporal dynamic parameters, the ability to maintain balance, sense of rhythm, spatial orientation ability, the ability to coordinate movements. Descriptive taxonomy of psychomotor skills, treated in synthetic form is: - perceptual skills and perceptual - motor - coordination - dexter - sights - skills (qualities).

## 2. Materials and methods

### 2.1. Purpose

Research aims to develop a methodology for driving with specific means of volleyball game and its implementation in teaching physical education with Medical students, to develop kinesthetic sense.

### 2.2. Objectives

The main objective of the research was to introduce the game of volleyball in the teaching of Medical students as a means of achieving the objectives of training and development as a means of psychomotor capacity in general and especially kinesthetic sense.

#### *Background:*

The concept of psychological preparation and hence psychomotor training can not be limited to the sphere of moral and volitional factors, because they engage in some way and those intellectuals and attitudes, all constituting manifestations of the human psyche. So, psychological

preparation, the psychomotor component, can be considered part of the whole process of education and training of the student.

### 2.2. Hypothesis

In this research we intend to demonstrate that the development of kinesthetic sense by medical students can be made more efficient through specific means playing volleyball.

### 2.3. Research methods used

1. Data collection methods system research: observation method, psychopedagogical experiment method calls, method of research documents;
2. Liquid mathematical-statistical methods of processing and interpretation of research data: organization and presentation of data, statistical graphs, determining statistical indicators, comparison / reporting;
3. Checking and evaluation of research results: the current observation, questioning.

#### *Subjects*

The research was conducted on two groups of subjects from the Faculty of Medicine, second year of study: the experimental group (E) consists of 44 students and control group (C) consists of 51 students.

The research was conducted between October 2011 – Jan. 2012. In group E, teaching activities were characterized by the introduction of the training elements and specific techniques of volleyball game. If Lot C, was operated solely by means specific to other sports other than volleyball.

Thus, the drive technology for the experimental group consisted of learning, consolidation and improvement of specific elements and techniques of volleyball game:

- Field trips;
- Fundamental position on the ball with two hands passing up and down;
- The bird with both hands and lift up the attack;
- Organizing three hits in their own land;
- Taking two hands off the ball and attack coming from work;
- Service up front payments;
- Individual and collective learning blockage;
- Learning to dive back and sides;
- Duplication and self-doubling kick attack.

#### 2.4. Protocol research

Research was conducted during the academic year 2011-2012, the University of Medicine and Pharmacy in Târgu Mureș, Physical Education Department. Program and testing stages for both groups included:

- T1 test or pre-test was conducted in October 2011, the beginning of Semester I.
- T2 test and post-test was held in January 2011 at the end of the first semester, after the implementation of specific technical complexes volleyball game in Lot E.

##### *Control samples:*

Administration of pre-test (T1) aimed at the qualitative level of initial verification and data collection kinesthetic sense of home. Kinesthetic sense, we measured kinesis meter which schematically can be described as follows: ruler graduated provided with the course, which examined

the subject performs a certain amplitude motion, eyes closed, it will then reproduce without the features cursor marks. It will measure the difference between the two designs, skillful arm for the purposes of seeking subject.

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Verify the hypothesis of the research was to determine three parameters statistics: mean variance and comparison test “z”. Thus, we used the following formula to test “z” [1].

$$z = \frac{m_1 - m_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}} \quad (1)$$

where:

$$m_1, m_2 = \text{environments} = \frac{\sum x}{N} = \frac{T}{N}$$

T = total of sample values

$\sum x$  = the sum of the individual

N = number of sample  $\sigma_{1,2}$  = dispersion

$$= \frac{\sum (x - m)}{N - 1}$$

$N_1, N_2$  = number of subjects

$\sum (x - m)^2$  (sum of squares)

$$\sum x^2 - \frac{T^2}{N}$$

**3. Results**

Measurements made to determine kinesthetic sensitivity parameters are:

*Summary of the results of the experimental group (E)*

Table 1

The difference between executions (cm)	frequencies Pre-test	frequencies Post-test
-5	1	0
-4	1	0
-3	2	1
-2	5	9
-1	3	8
0	2	5
1	10	11
2	7	6
3	6	3
4	4	1
5	3	0
6	0	0

*Summary of the results of the control group (C)*

Table 2

The difference between executions (cm)	frequencies Pre-test	frequencies Post-test
-5	6	7
-4	6	5
-3	5	4
-2	4	5
-1	5	4
0	4	5
1	4	4
2	4	4
3	3	4
4	4	3
5	3	4
6	3	

For calculation comparison test "z" were needed to determine the mean values and corresponding variances of the two groups. These are the values:

- For the experimental group in pre-test:  $m_1 = 1.02$ ,  $\sigma_1^2 = 6.20$
- For the experimental group in the post-test:  $m_2 = 0.15$ ,  $\sigma_2^2 = 3.02$

Post-test analysis between group E and group C:  $m_3 = 0.25$ ,  $\sigma_3^2 = 11.75$

Applying the formula, the following values for "z":

1. Test comparison between pre-test and post-test for group E:  $z = 1.97$
2. Comparison test between group E and group C:  $z = 2.75$

#### 4. Conclusions and discussions

The analysis of Tables 1 and 2, we conclude that, following experimental intervention, kinesthetic sense values increased progressively from pre-test performed at the beginning of semester academic year 2011/2012.

This conclusion is strengthened by the comparison test value "z", the post-test for the experimental group, which has the value of 1.97 is greater than 1.96 then the null hypothesis is accepted hypothesis refuted and specific, considering that the difference between the two averages is statistically significant at p materiality 0.05 [1].

Comparison test was also calculated "z" between group E and group C of frequencies post-test, which was 2.75 higher than 1.96, resulting in the difference between the two means is statistically significant at P materiality  $<0.05$ .

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