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COMPARATIVE STUDY ON THE LEVEL OF PSYCHOMOTRICITY OF STUDENTS (1ST AND 2ND YEAR)

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Abstract: *This paper is a concluding study aimed at identifying the psychomotor level of some students (aged 19-21 years old) from various faculties. In this regard, a battery of specific tests was applied and the results were compared comparatively, the criterion being the gender (male, female). In three tests the boys got better results, and in one of the tests the girls scored higher. The overall conclusion was that the whole group of students had a middling (acceptable) psychomotricity level.*

Key words: *psychomotricity, students, evaluation.*

1. Introduction

Psychomotricity is a component of applied psychology and is based on the inclusion of motor and psychic functions as an effect of nervous system development and education [1]. Being considered a complex process, the development of psychomotricity refers to a set of peculiarities such as: the manifestation of new behavioural variants are conditioned by the effects of quantitative accumulations on qualitative leaps; through successive and progressive reorganizations, new performances are consequences of transformation of the previous ones; the different characteristics have personal developmental rhythms, the evolution is in phases, each age stage having a certain specificity.

According to the Romanian author Epuran M. [4], the components of psychomotricity are: scheme body, dynamic coordination, and general segmentary; static-balancing coordination, perceptive motor coordination and rapidity of movements.

In the lesson of physical education it be can educate the motric qualities, also basic and specific skills for various sports disciplines and of course, within this approach the psychomotor component includes all these in a smaller or bigger proportion, depending on the characteristics of the respective acts and actions [2].

"The psychomotor domain has relevance for education in general as well as for such areas of specialization as industrial education, agriculture, home economics, music, and art and physical education." [5, p.60].

An interesting approach on testing psychomotricity on students is a research

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aimed at identifying basic skills and psychomotor abilities on students of medicine (4th year) to manage the initial intervention with a critically ill patient status [6].

These abilities and capacities are in fact focused on a set of standardized measures and procedures specific to saving and maintaining the lives of patients, such as: preparation for intubation, performing artificial breathing with the bag, managing hypotension situations, etc. The conclusion was that appropriate aspects of thinking and psychomotor skills came only after a month, which reveals the need for a learning time in this direction.

Another study evaluating psychomotricity on students was conducted by De Andres A.G. and his collaborators [3] had a group of 306 students from the dentistry specialization. Following the application of a psychometric test battery, it was concluded that there is a clear link (mutual conditioning) between the academic results of the students and the results of the psychomotor tests.

2. Organization of the Research

The research design used was in the form of an ascertaining study to identify the psychomotricity level of a group of students from the Transylvania University of Brasov. The subjects of the research were 30 (15 male, 15 females), on the 1st and 2nd year students at various faculties (Economics, Wood Industry, Psychology and Educational Sciences, Alimentation and Tourism). It was applied a specific test battery only once, at the middle of the second semester of the year 2016. After this stage, the obtained data were recorded and processed.

3. Material and Methods

The test battery used in this study comprised the following:

- *Stork test* with closed eyes [7]. Through this test, one identifies and tracks the individual's ability to maintain balance in a static position. Conducting the test involves the following sequence of moments: from the standing position with your hands on the hips, it passes to the position standing on one leg, the other being pointing to the fingers of the foot paw on the knee of the support leg. Then, at the command of an assistant, the eyes must be closed (at the same time as the timer is started) and the balance is kept in that position for as long as possible. The stopwatch will be stopped when: either the eyes open or the hands move or one or both legs move;
- *The scoring test* evaluates eye-hand coordination [8]. This tool is part of the battery test called MAC-Quarrie Mechanical Aptitudes. The subject has to make a point in each circle, the whole sample containing 100 circles placed at different distances from each other on a winding line. This type of pencil-paper test identifies the number of dotted circles for 30 seconds; the test is performed once;
- *The Matorin test* [7] - evaluates overall coordination, involves a snap-off jump, followed by rotations around the longitudinal axis of the body. The test is applied by drawing a line on the ground of 30-35 cm, the subject is positioned with the legs close to one side of the line. For measurement, use a 40-45 cm compass and ruler, placed between the feet of the performer after the landing phase. It performs three jumps to turn to the left and three to the right and the average is computed degrees. Interpretation has as standard: - Enough - for values between

180 - 270 degrees; - Good - for values between 271 and 360 degrees; - Very good - for values over 360 degrees.

- *Handing and grabbing the handball ball* from one hand to the other. The test is carried out individually, the subject holds the raised arms laterally and by walking throw the ball with one hand over his head and catch it with the other. The test is performed for 10 seconds, once, and the number of correct executions (when the ball was caught) is recorded.

4. Results of the Research

Table 1

Comparative result obtained to Stork test

Gender	N	Mean (seconds)	Std. Error Mean	Std. Deviation	t	P
male	15	50,73	2,89	11,19	6,76	≤ 0,001
female	15	27, 83	1,77	6,87		

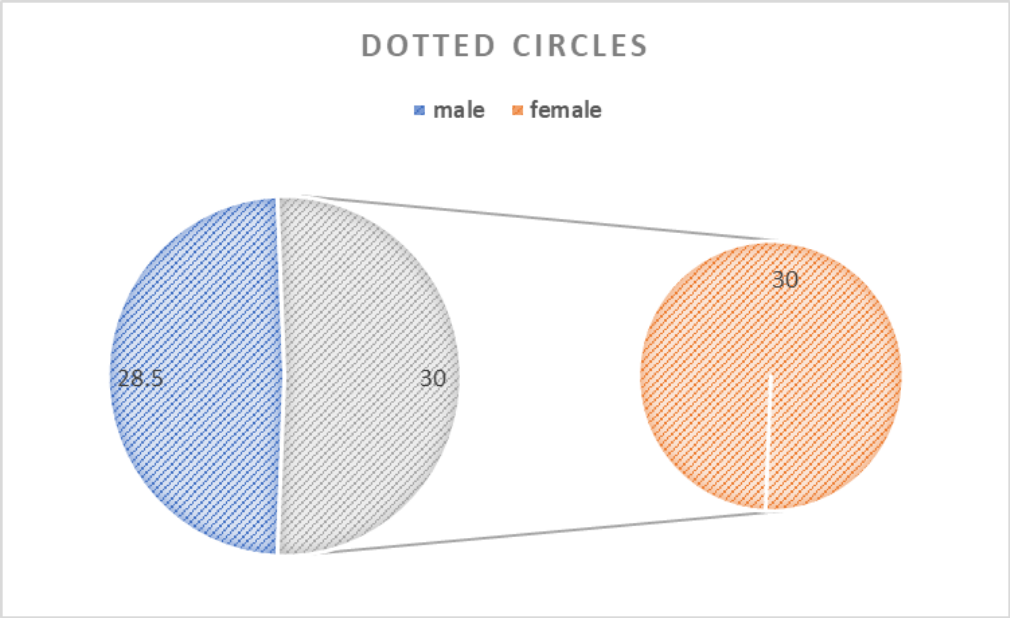

Fig. 1. *Comparative values of the averages obtained to the scoring test*

Table 2

Comparative result obtained to Matorin test

Gender	N	Mean (degrees)	Std. Error Mean	Std. Deviation	t	P
male	15	317,20	8,70	33,69	3,99	≤ 0,001
female	15	243,47	16,32	63,22		

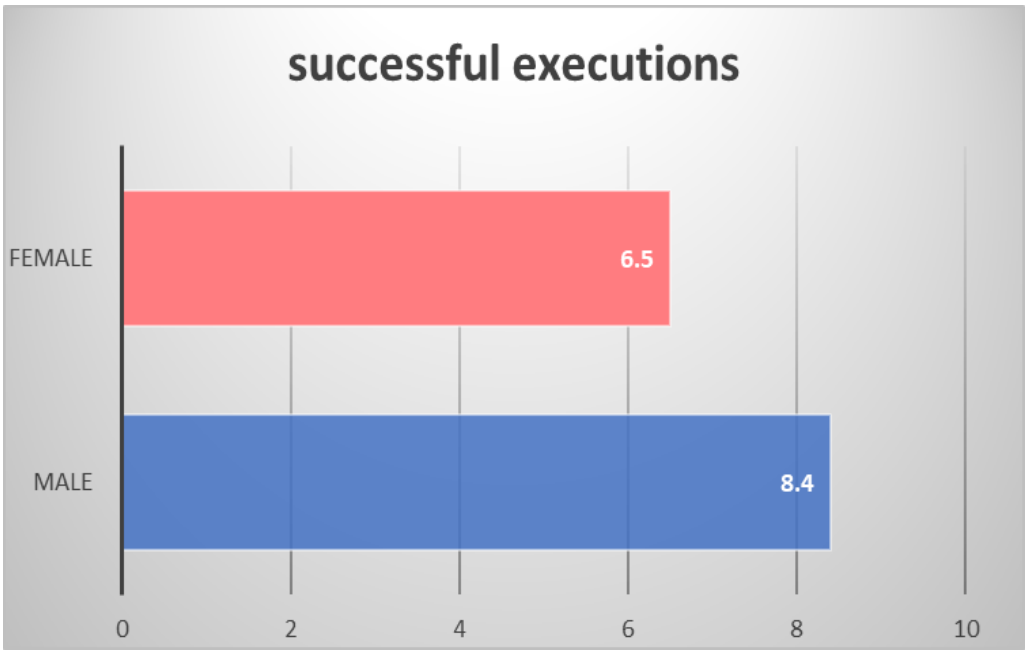

Fig. 2. *Comparative values of the averages obtained to handing and grabbing the handball ball from one hand to the other*

Analyzing the values obtained in the Storke test, we can see a significant difference between averages (Δ = 22,9 seconds), which means much better results for this test for male students compared to females.

The Scoring test reveals close values between the two categories of subjects evaluated, the results indicating scores slightly better for the female than for the male genes. The difference to this parameter is 1,5 dotted circles.

Significant differences ($P \leq 0{,}001$) between environments were also revealed as a result of the Matorin test. 73,73 degrees is the difference of superiority in favor of the male category, the distribution of values being more homogeneous for males group than for the females group.

On throwing the ball from one hand to the other there were better scores for the male Δ = 1,9 succsesful executions.

5. Conclusions

Following the application of the psychomotricity test battery to the evaluated students, we can state the following:

- The Storke test highlights the fact that the young investigated (male) have a significantly better static balance than the girls. The ability to maintain a static balance position on a leg with closed eyes is determined by the ability to self-control body oscillations, and as we said, in the present case it is better represented for the group of boys. Since the balance requires a high level of attention from the performer, being a mechanical condition for achieving an optimum level of motor acts and actions, we can consider that the better

results of the male subjects are mainly due to a higher level of motricity. Thus, we think that this category of subjects prefer the movement in general, be it objectively in the occasional practice of a sport, or a richer experience in playful activities;

- The Scoring test, which highlights the hand-eye coordination, showed better results in young students (gender: female). This reveals a greater rapidity of hand movements at the same time with better precision in scoring the circles on the paper. Reporting on the standard specific to this test, we can say that both categories of subjects are at the very good level, which expresses a great perceptual acuity;

- The Matorin test is a more complex test (compared to the others) and focuses on general coordination and dynamic balance. Referring to the results obtained by the two categories of students investigated at the test bench, it can be said that the boys are at the level: Well, and the girls at the level: Enough. The differences between the mean values are relevant and the results correlate with those obtained from the Storke Test. The level of spatial orientation, coordination, balance is closely related to motric experience previously acquired;

- The test of throwing a handball ball from one hand to another on the side and above the head revealed a modest level of success for boys and slightly hesitant for the girls. An interesting aspect is that (for both categories of students) one could notice a better grip capability by the hand more skilful, especially the right hand. Also, it could observe the amplitude of different hand movements, higher left hands, both girls and boys;

- Overall results reveal a medium-level for psychomotricity, acceptable, but still, considering the young age of the subjects (19-21 years old) we can express the desire for the level to be somewhat higher. This implies a more active involvement of students in physical education classes, participation in as many sporting and recreational activities and these are actually forms of activity in which physical exercise in leisure time to be more frequent, more attractive and more dynamic.

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