130 - EVALUATION OF THE FUNDAMENTAL MOTOR SKILLS IN CHILDREN 10 TO 12 YEARS: A COMPARATIVE STUDY

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1.INTRODUCTION

The Physical Education should be seen as conducive to the promotion of regular physical activity, it involves a fair number of children who regularly participate in class this discipline (DARIDO, 2003). This participation should have inserted a garment of meanings and each activity proposed by the physical education teacher should interact with the child pedagogical application of the same. It is with this view, the physical education classes in schools must submit proposals to promote the development of fundamental movement skills of children (GO TANI, 1997).

Some children find it difficult to perform certain movements such as handling, holding something, while others have difficulties in activities of balance, spatial and temporal notions, some authors as Gallahue (1995), Pereira et al. (1997), Krebs (1997) focus these difficulties in the current lifestyle of the people, since the minimization of opportunities for practical exploitation of limited motor movements, which may result in possible motor deficits. So Zimmer and Circus (1987) raises a question: Physical education would not be co-responsible for the situation are the children who have an insufficient engine performance?

The lack of activities that require coordination and motor skills often leads the student to produce a decrease in motor performance, embezzlement and these can be corrected by physical education teachers working in school. These are usually interconnected embezzled the amount of motor experiences experienced by children (CANFIELD, 2001).

The study of motor coordination is of great importance in various scientific disciplines such as motor learning, motor control and motor development (LOPES et al., 2003). It can be noticed that the motor behavior is a broad term, it includes areas of further studies, but essentially understood by different learning, motor control and development (GALLAHUE and OZMUN, 2005).

Based on the theoretical concepts of Gallahue (2005) studies on the differentiation of motor coordination is the understanding of specific terms, encompassing studies of motor learning, which aim to changes in motor behavior as a result of previous experience, studies of motor control covering the mechanisms responsible for movement, ie, that have been or are being controlled and how they are being held, and finally, the study of motor development, which refers to the constant changes in motor behavior during the life cycle of the child . This last aspect allows you to track over time potential changes in the child's basic skills, these skills can achieve more complex levels as result of the maturation process (GESELL, 2002), but also because of the favorable environment, which includes an adequate stimulation through different forms of motor activity (BEE, 2003; PAPALIA et al., 2006). Gallahue (2005) referenced three hierarchical stages of motor development: early, elementary and mature, to describe the advances in the field of fundamental motor skills in children.

According to the developmental approach of Go Tani (1997) have growth, development and motor learning in each different stage of life, this has nothing to do with weight or height, but with maturity and basic motor skills acquired. Another author who covers basic motor skills is Gallahue (2005), and says that individuals of different ages are at different stage of development, both physical and psychological. The theoretical descriptions of Gallahue and Ozmun (2003) form an analytical matrix, whose analysis allows the observation of the movement, as well as understand the external causes that change. These authors describe a pattern of movement, whose performance is observable through basic locomotor movements, stabilizers and manipulative.

Building on the foundations of Gallahue (1995), Go Tani (1997) and Gallahue and Ozmun (2003), referring to the basic motor skills, this study investigated the following questions: What levels of these children are motor skills? Do the kids have the motor skills corresponding to their age group?

It is expected that this age group studied, motor skills are more refined and that the child can perform many sophisticated skills, such as hitting a pitched ball, while consisting of an act that improves with age and with practice, because according to Gallahue and Ozmun (2005), from six years of age children have a development potential to reach the mature stage in most motor skills. Based on the reasoning in working together, we can see that the practice is the key to the development of standards for maximum motor skills in children and should be developed that can be opportunities. So children can refine their fundamental movement skills in the following areas: locomotor, manipulative and stabilizing. Thus, this study aimed to analyze and compare the levels of motor skills of children ages 10 to 12 years in a public school in the city of in relation to children of similar age in a city public school Marshal Deodoro, suggesting a proposed physical education classes focused on the performance of children in the process of motor development.

2.METHODOLOGY

2.1 STUDY FEATURES

The research is descriptive and comparative, as, as explained Gil (2007) have as main objective the description of the characteristics of a given population and the phenomenon goes beyond the simple identification of the existence of relationships between variables and want to determine the nature of relationship. Research of this type include an organization's use of standard techniques in the process of data collection, and intended to describe group characteristics (age, gender, etc.). According to Mattos (2004), descriptive research method is characterized observe, record, analyze, describe and correlate facts or phenomena without manipulating them, trying to discover the precise frequency at which a phenomenon occurs and its relationship to other factors.

2.2POPULATION

The population defined for the application of motor tests were regularly enrolled students, aged 10 to 12 years in a public school in the city of , near the Federal University of Alagoas, located on the seventh administrative region of the city and students regularly enrolled, aged between 10 and 12 years, a public school in the town of Marechal Deodoro, belonging to the metropolitan region of Alagoas.

2.3 SAMPLE SELECTION

The sample selection was done randomly in the two study sites. Thus, the divisions of paragraphs 5 and 6 s have been recruited since the age group chosen was characterized in these classes. We excluded students who had some type of physical disability or sensory impairment, or is not properly dressed (light clothing) on the day set for the motor testings. The selected students were tested for motor skills proposed by Gallahue (2005).

2.4 DATA COLLECTION INSTRUMENT

According to Mattos (2004), tests are tools used for the purpose of obtaining data to gauge its performance, the frequency, capacity or conduct of individuals or groups in a quantitative manner.

The tests were based on analytical matrix of fundamental motor skills Gallahue (2005): Tasks locomotor, manipulative and stabilizing. These tasks were developed based on this framework, having as a stage on which to assess the child is, according to their age, their performance relating to the patterns of motor development stage, which are: initial, elementary and mature.

Three motor tests will be conducted:

a. Locomotor - Vertical Jump;

b. Manipulative - Throwing;

c. Stabilizer - Walking on the basis of a Swedish bank in an inverted position.

Ii - Vertical Jump: The children were positioned within an arc willing to soil, 20 cm in diameter, vertical jumping as high as you can without moving from inside the arc.

II.I - Pitching: children were to toss a tennis ball within an arc whose diameter is 20 cm long, posted on the wall at eye level of children.

III.A - Stabilizer: children should walk on the lower base of a Swedish bank, with a height of 40 cm, placed in an inverted position.

2.5 PROCEDURES

A team of six students from the Physical Education course at the Federal University of Alagoas in Maceió was school, while another team also six college students from the same school was the Marechal Deodoro to talk to the director of each place on our study design, in order to ask permission to carry out testings motor with students.

The request was accepted and later the teams were talking to the teachers and students to become aware of the project, stating that we would use a weekday round of classes for them to perform the tests. By acceptance of both parties began the process of data collection on the day and time stipulated.

All students were removed from the classroom and went to the library, because they had already done the tests were going straight to the classroom, not to have contact with those who had not yet done, avoiding a possible description of the tests. The children were removed one by one from the library and brought to the test site, where they were assembled activities. The first activity included the vertical jump, a throw to second and finally the balance. All testings were filmed by a digital camcorder brand Flee, finepix series S2500HD/S2700HD, 12 megapixel resolution, 15x digital zoom, and recording information for later analysis.

Data analysis was done following the classification described in Matrix Analytic Gallahue (2005). The frequency data, means and standard deviations were performed using Excel 2003. This study followed all ethical principles. The start of testings took place only after reading and signing an informed consent (IC) with the caretakers.

3.RESULTS

The final sample consisted of 94 students, 47 school students from Maceio and 47 students from the school of Marechal Deodoro. In the school of Maceio 52.3% of children were female, while boys accounted for 47.7%. In the Marshall School, 51.1% of children were female, while 48.9% were male. The average age of children at school in Maceió was 11.3 years (SD 0.98), being 11.77 years (SD 1.11) in girls and 11.02 years (SD 1.07) in boys. While in school Marshal the average age of the children was 11.9 years (SD 1.10), being 11.83 years (0.91 SD) in girls of 11.95 years (SD 1.29) in boys. A comparison of the average age of the children of the two groups did not differ significantly ($p = 0.87$).

Regarding the results of the testings motor of children, observed in Figure 1 the results of three tasks performed (locomotor, manipulative and stabilizing) of school children in. In locomotor task (walking on the Swedish bank), 38% were in the initial stage, 62% in elementary, while no child was in the mature stage. In the task stabilizer (vertical jump), 55% of children were in the initial stage, 32% in elementary and 13% in the mature. Since the task manipulative (throwing), 66% of children were in the initial stage, 26% in elementary and 8% in the mature.

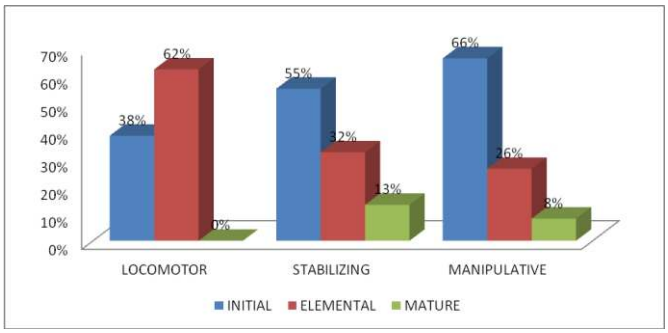


Chart 1 - Frequency distribution of school children from in three stages Gallahue (2005) for the three motor tasks performed (N = 47).

Figure 2 presents the data of motor testings of the school children of Marechal Deodoro tasks performed in three (locomotor, manipulative and stabilizing). It is observed that the locomotor task (walking on the Swedish bank), 66% of children were in early stages, 23.4% and 10.3% in elementary mature. In the task stabilizer (vertical jump), 44.7% of children had initial classification, 46.8% and 8.5% elemental mature. Finally, the task manipulative (throwing), 55.3% of children were in early stages, 31.9% in elementary and 12.8% in mature stage.

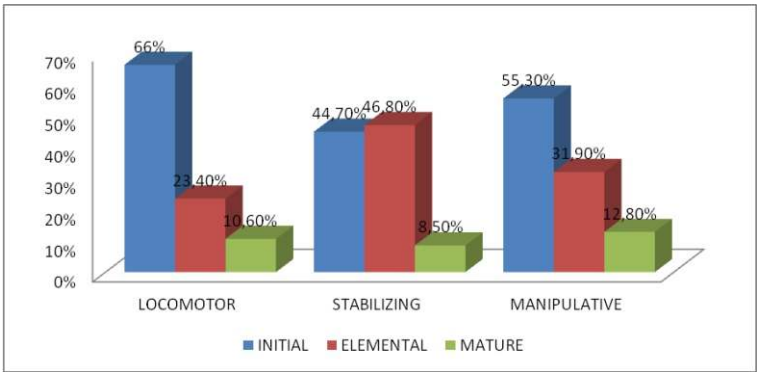


Chart 2 - Frequency distribution of school children of Marechal Deodoro in three stages of Gallahue (2005) for the three motor tasks performed (N = 47).

Are observed in Table 1 Comparative data of the motor assessment conducted among school children from Maceio and the school children of Marechal Deodoro. Among the comparative figures in three stages (initial, elementary and mature) for the three motor tasks performed (locomotor, manipulative and stabilizing), one realizes that the task locomotor groups differed significantly in three stages: the initial (p <0, 05) in the elementary (p <0.01) and mature (p <0.001). While stabilizing the task, only significant difference in frequency of the elementary stage (p <0.05). In the manipulative task, only the initial stage was no significant difference between groups (p <0.05).

TABLE 1 - Comparison of the frequency values in the stages of assessment for the three motor tasks performed among groups of school children from Maceio and Marechal Deodoro (N = 94).

Avaliação motora	Group 1 (School of Maceió) (N= 47) n %	Group 2 (School of Marechal Deodoro) (N=47) n %	p-value*
TASK LOCOMOTOR			
Initial	18 (38)	31 (66)	p<0.05
Elementary	29 (62)	11 (23.4)	p<0.01
Mature	00 (00)	05 (10.6)	p<0.001
TASK STABILIZER			
Initial	26 (55)	21 (44.7)	p=0.12
Elementary	15 (32)	22 (46.8)	p<0.05
Mature	06 (13)	04 (8.5)	P=0.41
TASK MANIPULATED			
Initial	31 (66)	26 (55.3)	p<0.05
Elementary	12 (26)	15 (31.9)	p=0.08
Mature	04 (08)	06 (12.8)	p=0.39

* Level of significance (p<0.05) from the chi-square test.

4.DISCUSSION

Through the exhibition of the results can be seen that the task locomotor applied to groups of children in the sample, the most mature stage distribution was present among students in group 2 (Marechal Deodoro) compared to group 1 (Maceio) with statistical significance. However, it is clear that Group 2 showed also the largest distribution in the initial stage than in group 1 (Maceio), with significant difference. According to Gallahue and Ozmun (2005) from six years of age a child should already be in the mature stage for the most basic motor skills. Following this framework, it is observed that the children in group 2 are more advanced in the task locomotive, once they were significantly more often the children of the group in a locomotor task.

On the other hand, the stabilizing task, it is observed that most of the students from Maceio had the basic classification in relation to the group of the city of Marechal Deodoro, with a significant difference. According to Gallahue and Ozmun (2003) stabilizing activities involve tasks which are based on balance, is of great importance for the other tasks (locomotor and manipulative). Berleze et al. (2007) in a study conducted in Rio Grande do Sul compare normal weight and obese children in relation to motor performance and to show that the activity of balance, both groups have low distributions in the mature stage.

The present study did not aim to compare children in relation to their nutritional status, but in relation to motor development evaluation shows similar results to the study cited, since the largest proportion of children was at the elementary stage. Already Melo et al. (2008) to make a kinematic analysis of the vertical jump in school from 04 to 12 years of public Florianópolis, describe the importance and mechanical advantage in the heel in children who are in the mature stage for this ability since the coordination segment body allows for greater range of motion and better performance in different motor activities. Thus, the results of this study suggest that children of both groups are still in the process of stabilization in this task.

In the manipulative task, the children in group 1 (Maceio) had the highest percentage in the initial stage in relation to children in group 2 (Marechal Deodoro), with significant difference. Following the direction of stabilizing task, once again the data from this study have the lowest distribution of the sample to the mature stage of motor development in manipulative skill, agreeing with the results of Berleze et al. (2007), who found lower results in the classification of manipulative ability applied with children. This suggests that the acquisition of manipulative skills happen later than the other fundamental motor skills in children, as pointed out by Gallahue and Ozmun (2003).

5.CONCLUSION

This study made it possible to realize at what level of motor skill groups of students are surveyed, following the analytical matrix Gallahue and Ozmun (2005). The results indicate significant differences between groups of schools in the cities of Maceio and Marechal Deodoro, showing that recruited children still have low frequencies in the mature stage of the classification of fundamental movement skills.

However, it is clear that although the students have available regular physical education classes in school, possibly from the results, which reveal high frequencies of the students in the classification of the initial stage, one wonders how such classes are proposed and performed with these students. Thus, this study highlights the need for physical education classes to meet the broader needs of children motor stimulation.

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EVALUATION OF THE FUNDAMENTAL MOTOR SKILLS IN CHILDREN 10 TO 12 YEARS: A COMPARATIVE STUDY

The lack of activities that require coordination and motor skills usually entails decreased motor performance, and these are intertwined with embezzlement amount of motor experiences lived. Taking into account that the practice is the key to the development of standards for maximum motor skills, children will refine their motor skills in physical education classes at school. This study aimed to analyze and compare the levels of motor skills of 47 children aged 10 to 12 years in a public school in the city of in relation to 47 children of similar age in a public school in the city of Marechal Deodoro. This was a descriptive and comparative, using tests based on analytical matrix of fundamental motor skills Gallahue (2005). The results indicated significant differences between groups of schools in the cities of Maceio and Marechal Deodoro, showing that recruited children still had low frequencies in the mature stage of the classification of fundamental motor skills despite students have available regular physical education classes in school. Making a real need for physical education classes to meet the broader needs of children motor stimulation.

KEYWORDS: fundamental movement skills, physical education, assessment of fundamental motor skills.

ÉVALUATION DE LA HABILETES MOTRICES FONDAMENTALES ENFANTS DE 10 A 12 ANS: UNE ÉTUDE COMPARATIVE

Le manque d'activités qui nécessitent une coordination et la motricité implique généralement des performances automobiles neufs ont diminué, et ce sont entrelacées avec une quantité de détournement de l'expérience vécue du moteur. Prenant en compte que la pratique est la clé de l'élaboration de normes pour la motricité maximale, les enfants vont affiner leur motricité dans les cours d'éducation physique à l'école. Cette étude visait à analyser et comparer les niveaux d'habiletés motrices de 47 enfants âgés de 10 à 12 ans dans une école publique dans la ville de Maceio en relation avec 47 enfants du même âge dans une école publique dans la ville de Le Maréchal Deodoro. Ce fut une descriptive et comparative, en utilisant des tests basés sur la matrice d'analyse des habiletés motrices fondamentales Gallahue (2005). Les résultats indiquent des différences significatives entre les groupes d'écoles dans les villes de Maceio et le Maréchal Deodoro, montrant que les enfants recrutés avait encore les basses fréquences dans le stade de maturité de la classification des habiletés motrices fondamentales, malgré les étudiants disposent cours réguliers d'éducation physique à l'école. Faire un réel besoin pour les cours d'éducation physique pour répondre aux besoins plus larges des enfants du moteur de stimulation.

MOTS-CLÉS: habiletés motrices fondamentales, l'éducation physique, l'évaluation des habiletés motrices fondamentales.

EVALUACIÓN DE LAS HABILIDADES DE MOTOR FUNDAMENTAL EN NIÑOS DE 10 A 12 AÑOS: UN ESTUDIO COMPARATIVO

La falta de actividades que requieren coordinación y habilidades motoras por lo general implica una disminución del rendimiento del motor, y estos se entrelazan con la cantidad de malversación de experiencias motoras vivido. Teniendo en cuenta que la práctica es la clave para el desarrollo de normas para las habilidades motoras máximo, los niños perfeccionan sus habilidades de motor en las clases de educación física en la escuela. Este estudio tuvo como objetivo analizar y comparar los niveles de las habilidades motoras de 47 niños de 10 a 12 años en una escuela pública en la ciudad de Maceió, en relación con 47 niños de la misma edad en una escuela pública en la ciudad de Marechal Deodoro. Este fue un estudio descriptivo y comparativo, con pruebas basadas en la matriz de análisis de las habilidades motoras fundamentales Gallahue (2005). Los resultados indicaron diferencias significativas entre los grupos de las escuelas en las ciudades de Maceio y de Marechal Deodoro, que muestran que los niños reclutados todavía tenía las bajas frecuencias en la etapa madura de la clasificación de las habilidades motrices fundamentales a pesar de los estudiantes tienen disponibles clases de educación física en la escuela. Hacer una necesidad real de las clases de educación física para satisfacer las necesidades más amplias de los niños estimulación motora.

PALABRAS CLAVE: habilidades fundamentales del movimiento, la educación física, la evaluación de las habilidades motoras fundamentales.

AVALIAÇÃO DAS HABILIDADES MOTORAS FUNDAMENTAIS EM CRIANÇAS DE 10 A 12 ANOS: UM ESTUDO COMPARATIVO

A ausência de atividades que exigem coordenação e habilidade motora geral acarreta diminuição do rendimento motor, e estes desfalques estão interligados a quantidade de experiências motoras vivenciadas. Levando em consideração que a prática é a chave para o desenvolvimento máximo de padrões de habilidades motoras, as crianças poderão refinar suas habilidades motoras nas aulas de Educação Física escolar. O presente estudo teve como objetivos analisar e comparar os níveis das habilidades motoras de 47 crianças com idades de 10 a 12 anos de uma escola pública municipal da cidade de Maceió em relação a 47 crianças da mesma faixa etária de uma escola pública municipal da cidade de Marechal Deodoro. Tratou-se de uma pesquisa descritiva e comparativa, utilizando testes baseados na Matriz Analítica das habilidades motoras fundamentais de Gallahue (2005). Os resultados indicaram diferenças significativas entre os grupos das escolas das cidades de Maceió e de Marechal Deodoro, evidenciando que as crianças recrutadas ainda apresentavam baixas frequências da classificação no estágio maduro das habilidades motoras fundamentais apesar dos alunos disporem de aulas regulares de Educação Física na escola. Tornando real a necessidade de aulas de Educação Física mais abrangentes visando atender as necessidades de estimulação motora das crianças.

PALAVRAS-CHAVE: Habilidades motoras fundamentais; Educação física escolar; Avaliação das habilidades motoras fundamentais.