91 - THE PSYCHOMOTOR AT SCHOOL FOR THE 1ST YEAR OF ELEMENTARY EDUCATION VERIFIED BY MOTOR AGE X CHRONOLOGICAL AGE

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The Psychomotricity has strands of rehabilitation, therapy and education, and uses the clinical approach in studying schools. This justifies the importance of studying and applying the findings in the school, especially in the beginning years of Elementary School. This study used as a theoretical basis, the Negrine (1987, 2003); Lobo; Vega (2010), De Meuer; Staes (1991), Le Boulch (1987), Gallahue; Ozmun (2003) and Rosa Neto (2002 , 2010) studies. In Brazil, Negrine (2002) adapted this educational alternative study for Physical Education classes. Le Boulch (1987) states that the body exercises and activities should ensure awakening body components and is affective in causing intellectual autonomy. This objectifies the child to a good social enviroment. Investigative studies reached the conclusion that the Physical Education teacher is key in the first years of primary education, especially in developing their basic motor skills and psychomotor functions. It was found that the Pedagogy courses generally enable the teacher to work with the line of Relational Psychomotricity, which uses this game as a teaching tool. Even under the watchful eye of the student this does not give them the notion of their phychomotor development. This approach aims to promote the development of the essential functions for the learning of reading and writing. Psychomotricity lies within human development as a hierarchical factor for the acquisition of basic motor skills.

As a result of cultural factors, these motor skills have a relatively predictable developmental sequence, verified through the developmental stages (GALLAHUE; OZMUN, 2003). In the literature review several studies were found that relate motor development to difficulty of learning and to overall school performance. These studies demonstrate characteristics of deviations in school engine development, which is the cognitive learning intrinsically related to motor learning. Many researchers have used the Motor Development Scale (EDM), proposed by Rosa Neto (2002), to demonstrate deficiencies related to psychomotor functions, as being responsible for learning difficulties in the classroom. In this study the EDM was used to set the motor age (IM) of first year elementary students for the two different schools, public and private, in the Northern District of Porto Alegre, RS, Brazil.

With the information about the motor age of these children, we are seeking an understanding of psychomotor education globally. Addressing this motor domain as being inseparable from the other domains: cognitive, affective and social formation in humans. The study aimed to evaluate the motor age of children entering two separate types of schools,public and private in order to have a meaningful sample. The choice of two schools, public and private, intended to verify whether the fact of having a specialist teacher in physical education, as is the case of the private school, influences the development of psychomotor functions. In the public schools of our state, regular teachers are responsible for motor development of students. The state does not have a specialized teacher of physical education in the early years of elementary school.

The need to recognize the motor age coinciding with the chronological age of the child is important for planning lessons. The evaluation of the motor profile of children should be the first step in this planning process, as it allows the Physical Education teacher and pedagogue to define a program that assists students in their motor development. Rosa Neto (2010) asserts that the use of motor assessment made by Physical Education teachers before starting a program of lectures, "... enables better diagnosis of the child, a deeper understanding of their possibilities and limitations and the actual triggering planned intervention". (p. 192). It further states that the result of tests of psychomotor and literacy must be associated to classroom tasks "... especially where these attributes are motors required in the learning process of reading and writing, as well as the simplest tasks of everyday life." (p. 192).

The study (THOMAS; NELSON, 2002), was characterized by qualitative research which was descriptive and exploratory. Although the study was qualitative, it was necessary to use a battery of tests to determine the delays in motor ages. The population studied consisted of a sample from four classes of Primary School, year 1, with 58 students, six years of age, and not having any physical limitations that prevented them from taking the tests. The students were assessed individually at the school where they study. The tests were scheduled with the teachers and the teaching staff of the school after their parents had signed a letter of consent. The time for administration of the test was on average 30 minutes per student.

The tests were administered based on the Motor Development Scale (EDM) proposed by Rosa Neto (2002), comprising of six batteries of tests to evaluate the motor development of children from ages two to eleven. However, for this study, the age of 6 years actually referred to students 4-8 years old. This had a margin of two years or more and less than two years of age standardized in order to determine the motor age. This was obtained through the points achieved in the trials, and does not always correspond to chronological age. An exception to this was the body schema, where Rosa Neto (2002) divides the tests into two groups: 2-5 years and 6-11 years. There the participants made the whole battery (2-11 years). The Motor Development Scale (EDM) covers seven dimensions of human movement: fine motor (IM1), gross motor control (IM2), balance (IM3), body schema (IM4), spatial organization (IM5), temporal organization (IM6) and laterality (the latter presents different methodology and was not used in the study). The tests used in the EDM 4 to 8 years consist of five tasks, progressively becoming more complex, with motor age scores measured in months. For each correct task ther is an assigned a value corresponding to the old motor (IM) in months. At the end of the battery of tests was a child motor age (IM) was given in each of the dimensions of human movement (IM1, IM2, IM3, IM4, IM5, IM6). After the motor ages were calculated, overall (IMG) and general motor quotients (GMQ) were calculated for each child. The amount of motor ratio was obtained by dividing the chronological age multiplied by 100. Each student had their data recorded on an evaluation form to determine the motor age in the six dimensions of human movement, making the calculation of IMG, was made after the MGQ, which determined the final values. The formulas used to arrive at the result according Rosa Neto (2002):

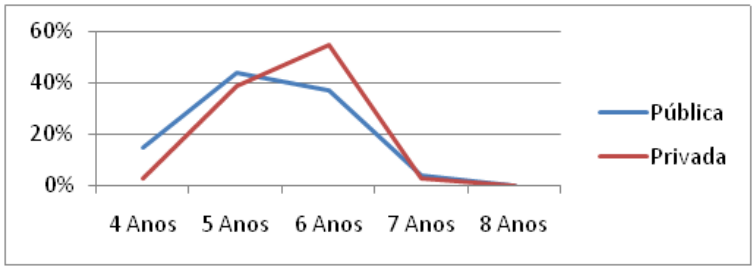
$$IMG=\frac{IM1+IM2+IM3+IM4+IM5+IM6}{6} \qquad QMG=IMG.100$$

The final values of the quotient motor and its corresponding diagnostic category are:

130 or more: Very Good; 120 – 129: Good; 110 – 119: Normal high; 90 – 109: Normal average; 80 – 89: Normal low; 70 – 79: Low; 69 or less: Very Low.

The chart below gives an overview of the results in percentages:

GENERAL MOTOR AGE OF STUDENTS ENROLLED IN PUBLIC AND PRIVATE SCHOOLS



Graph 1

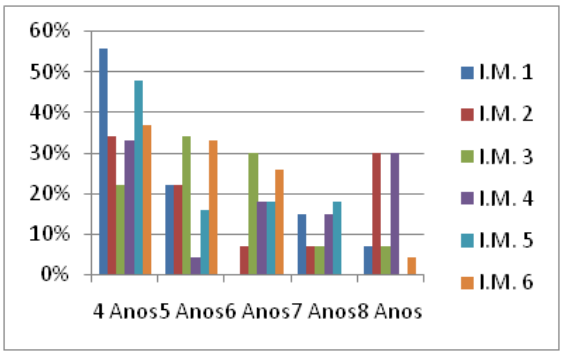
The General Motor Age (IMG) was obtained by adding the positive results in assessments expressed in months for data analysis and discussion, and converting them into years (graph 1). Figure 1 shows that in private schools, 55% of students have a motor age of 6 years, which is the mandatory age of enrollment in primary schools, and 37% in public schools. Only a little over half of the students surveyed in the private school reached the correct General Motor Age (IMG) age and in the public school, scores dropped significantly. This is an alarming rate because we know the influence this will have on learning and literacy. At the age of 4 years driving the private school received only 3% of private school students had the correct General Motor Age (IMG), while public schools had 15%. This is hardly worrisome because the interviews revealed that these children did not attend preschool, so the motor delay is justifiable. For students with motor age of 5 years, there was a difference of 5% more in public schools (44%), indicating that even with the intervention of a specialist teacher in physical education private school students were 5% lower (39%). This is probably because children from public schools are more active outside of school, as was also verified in the interviews. In public school, students only get physical education in their free recess time, which is twice a week. In private school, the time is also twice a week but the physical education teacher works with the line psychomotor relationship, which uses this teaching tool as a game.

These results probably were due to the individual children. The two school systems were evaluated at the beginning of the school year and encompased the vast majority of early childhood education. Perhaps the fault is at this stage of schooling is that the schools did not bother to evaluate the students as to whether they had developed the psychomotor functions at acceptable levels prior to enrollment in elementary schools. The two schools also showed rates very close for the motor age of 7 years but the rates were insignificant. The rates were 4% in public schools and 3% in private schools. No school had students with general motor age of 8 years.

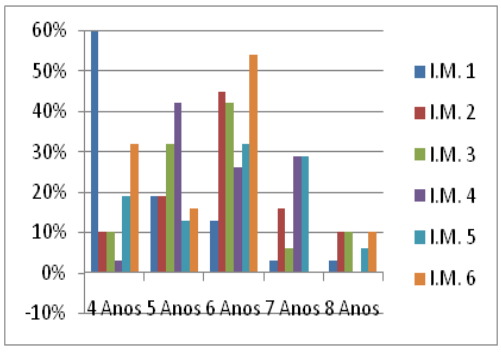
One goal of this research was to examine the two school systems, in order to prove the need for a teacher specializing in physical education to work in the early years of elementary school. Our concern is the importance of developing the psychomotor functions in children beginning in elementary schhol. Only a qualified professional will be able to develop these functions and teach thise fundamental movement skills. Upon examination of curricula we found that pedagogy courses that have no more than two disciplines working with human movement and that is not sufficient enough to plan an adequate program of motor development. We are quoting the Education Course, since it is the trainer of teachers working with early years of elementary education in the schools of both networks. What has been proven is that the state public educators educate students without any help from experts, due to unidocência. In private schools, teachers of physical education are part of the expert group working in student early year development.

After analysis of General Motor Age (IMG) data obtained from the two schools in 58 school systems, which according Rosa Neto "is an arithmetic procedure for scoring and evaluating the results of the test. The score thus obtained is expressed in months and the motor age". (2010, p. 37th). The dimensions correspond to motor psychomotor functions fine motor (IM1), gross motor control (IM2), balance (IM3), body schema (IM4), spatial organization (IM5) and temporal organization (IM6).

MOTOR AGE OF STUDENTS OF PUBLIC AND PRIVATE SCHOOLS



Graph 2 - Public Schools



Graph 3 - Private School

The survey results are about the motor ages (IM) of the two school systems (Figure 2) The results were broken down as follows: in fine motor (IM1), in which the movements are more specific and involve small muscle groups, responsible for

writing. The survey showed 60% of private school (graph 3) students had a motor age of 4 years, 19% IM 5 years, 13% IM 6 years, 3% IM 7 years and 3% IM 8 years. In public schools (graph 2), 56% of students showed motor age of 4 years, 22% IM 5 years, none reached the IM 6 years, 15% IM 7 years, and 7% IM 8 years. In summary, the fact that no public school student was able to achieve IM 6 years and only 13% of private school, shows that there is a very large difference in the relationship between IM (motor age) and IC (chronological age). In gross motor control (IM2), which is the combination of action of various muscle groups, with maximum efficiency and economy, in private school students, 10% obtained the IM 4 years, 19% IM 5 years, 45% of 6 IM years, 16% IM 7 years, 10% IM 8 years. In public school students, 33% obtained the IM 4 years, 4% IM 5 years, 18% IM 6 years, 15% IM 7 years, 30% IM 8 years. Here there was a big difference in IM 6 years, students of private school reached 45%, while public school students reached only 18%. At equilibrium (IM3), which is a combination of muscle actions in order to support the body against gravity, in private school students, 10% stayed with the IM of 4 years, 32% IM 5 years, 42% of IM 6 years, 6% MI 7 years, and 10% of IM 8 years. In public school students, 34% IM of 4 years, 22% IM 5 years, 7% MI 6 years, 7% IM 7 years, 30% 8 IM years. However there is a large difference between the two school systems in the IM 6 years: the private with 42%, and the public with only 7%. This was offset by 30% of public schoolchildren over 8 years IM. This shows that public school students showed more balance than those in private school at the age of 8 years, while private school students only had 10%. In the body schema / speed (IM4), defined as the maturation and experiences and sensations of the body, in private schools, of the students tested 3% had IM 4 years, 42% IM 5 years, 26% IM 6 years, 29 IM% 7 years; and none at IM 8 years and older. In public schools of the students tested 48% had IM of 4 years, 16% IM 5 years, 18% IM 6 years, 18% IM 7 years; and none at IM 8 years and older. The rates for private school students was higher for IM 6 and 7 years. Private school 26% and 29% respectively while public school students were only 18% for both age groups. In spatial organization (IM5), which is the awareness of your own body in an environment in relation to persons and things, private school students showed 19% IM 4 years, 13% IM 5 years, 32% of 6 IM years, 29% IM 7 years, and 6% IM 8 years. In public. 22% IM 4 years, 34% IM 5 years, 30% IM 6 years, 7% IM 7 years, 7% IM 8 years. The data for the two school systems was closest in the IM 6 years. 32% of private students achieved, while in public 30%. But the private school students achieved higher rates at age 7 years: 30% and in public only 7%. In the language / temporal organization (IM6), which has the individual consciousness of the relationship between the movement and the time it is used to accomplish it, in private 32% had the IM 4 years, 16% IM 5 years, 54 % MI 6 years; none had IM 7 years and 10% obtained the IM 8 years. In public IM showed 37% of 4 years, 33% IM 5 years, 26% IM 6 years; any IM 7 years, 4% IM 8 years. Students in private schools were 54% in motor age of 6 years, whereas only 26% of public schools reached that age. Public schools got a higher concentration at ages 4 and 5 years. This is a significant defficiency in this function which is essential for reading and writing.

The study compared the final values of the ratio motor, motor ages and corresponding diagnostic category in both school systems. According to the data collected and analyzed, the study concluded that private and public school students had an age gap between motor (IM) and chronological age (CA) ranked the skills discussed in the public school as much lower, lower, normal, medium, and low normal. In private: low normal, normal medium, lower and much lower. There was a greater gap in public school, where the classification results were much lower in most of the batteries of tests, whereas private schools were classified in low normal, a score better than the public, but insufficient as to the development expected when having a qualified teacher in physical education.

These results in public schools are probably due to lack of stimulation of students by teachers. The lower ratings are not suprising when the physical education teacher is the same as the general studies teacher. This is unlike the private school where the teacher acts as a specialist. These students still remained lower in the top five categories and above in only three catagories. This is lower than would be expected for this type of school and teacher. The rationale for this diagnosis is that the private school teacher probably opted for online teaching psychomotor relationships, working the game as the main tool and not focusing on planning their psychomotor functions which are used in the data collection instrument (EDM tests).

We conclude that for the functions of fine motor coordination and global skills, that are essential for the child to learn to write correctly, the General Motor Age (IMG) is in arrears in the two school systems. In the public school students were higher rated in gross motor control. The psychomotor function of equilibrium with respect to visual sensations, the body in space and the influence of physical factors in achieving balance, had a longer delay in public school, even if the other network had made a significant gap. The body schema, key to the recognition of the body perceived or discovered, had a higher score in the two schools, suggesting that this function was well developed in kindergarten and 1st year, considering that showed general motor age of 7 years. The psychomotor functions of space-time organization, which occurs through movements in the different experiences in relation to body-space-time, so that the child is able to become aware of the situation of things and people together, also showed a significant delay in both of the school systems.

Teachers teaching in the first years of elementary school should be able to work with a design that enhances the development of psychomotor functions because these functions are directly linked to learning in the classroom. The children should be able to learn these without difficulty. The importance of applying these batteries of tests for the recognition of motor skills is so that teachers can find grants to prepare their teaching program. Thus may consider in planning the psychomotor functions aimed at supporting the learning process to help students in their motor development, literacy. The psychomotor functions are intrinsically related to the process of literacy.

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THE PSYCHOMOTOR AT SCHOOL FOR THE 1ST YEAR OF ELEMENTARY EDUCATION VERIFIED BY MOTOR AGE X CHRONOLOGICAL AGE

ABSTRACT

This article is the result of an undergraduate research project - PIC / FISJT which sought to investigate whether motor age corresponded to chronological age in children entering in two different types of schools - one public and the other private. It was used as a tool for collecting a battery of tests of Motor Development Scale (EDM), proposed by Rosa Neto (2002), covering seven dimensions of human movement: fine motor (IM1), gross motor control (IM2), balance (IM3), body schema (IM4), spatial organization (IM5), temporal organization (IM6), and laterality, which was not used in the study because it used a different methodology. Each test contains five tasks that will gradually become more complex. Scores are measured in months to determine the motor age. It was concluded in the study that the final values of the motor ratio, the motor ages and corresponding diagnostic category among schoolchildren showed the age gap between motor (IM) and chronological age (CA) six years showing the classification of the skills assessed in the public school network standards: much lower, lower, normal and low normal average. In private: low normal, normal medium, lower and much lower. There was a greater gap in public school, probably due to lack of stimulation of the students by teachers. In this network there is no separate physical education teacher. It is the same teacher educator, unlike the private school network where there is a physical education expert teacher.

KEYWORDS: psychomotor, motor age, motor development

LA PSYCHOMOTRICITE A L'ECOLE POUR LA 1ERE ANNEE DE L'ENSEIGNEMENT PRIMAIRE VERIFIE PAR AGE DU MOTEUR X AGE CHRONOLOGIQUE

RÉSUMÉ

Cet article, le résultat d'un projet de recherche de premier cycle - PIC / FISJT cherché à déterminer si l'âge correspondait aux enfants d'âge chronologique entrant moteur dans deux écoles - l'un pour les écoles publiques et d'autres réseaux privés à l'école primaire, le rapprochement des deux réalités. Il a été utilisé comme un outil pour collecter une batterie de tests de développement moteur Scale (EDM), proposé par Rosa Neto (2002), couvrant sept dimensions du mouvement humain: la motricité fine (IM1), la motricité globale de contrôle (IM2), l'équilibre (IM3), schéma corporel (IM4), l'organisation spatiale (IM5), organisation temporelle (IM6), et la latéralité (ce dernier présente une méthodologie différente et n'a pas été utilisée dans l'étude). Chaque test comporte cinq tâches qui, peu à peu de plus en plus complexe, avec un score mesuré en mois afin de déterminer l'âge du moteur. Il a été conclu dans l'étude que les valeurs finales du motoréducteur, l'âge correspondant à moteur et catégorie de diagnostic chez les écoliers ont montré l'écart d'âge entre le moteur (IM) et l'âge chronologique (CA) six ans permettant de classer les compétences évaluées dans le réseau scolaire les normes publiques: beaucoup plus faible, inférieure, moyenne et basse normale. En privé: basse normale, moyenne normale, inférieure et beaucoup plus faible. Il y avait un plus grand écart à l'école publique, probablement en raison d'un manque de stimulation des enfants par les enseignants, pour ce réseau, il ya un professeur d'éducation physique qui travaille avec les élèves desservis par le même enseignant éducateur, à la différence du réseau scolaire actes privés où un enseignant expert.

MOTS-CLÉS: psychomotricité, de l'âge du moteur, moteur de développement

LA PSICOMOTRICIDAD EN LA ESCUELA DURANTE EL 1 º AÑO DE EDUCACIÓN PRIMARIA VERIFICADO POR EDAD EDAD X CRONOLÓGICA MOTOR

RESUMEN

En este artículo, el resultado de un proyecto de investigación a nivel licenciatura - PIC / FISJT tratado de investigar si la edad corresponde a los niños en edad cronológica que entran motor en dos escuelas - una para las escuelas públicas y la red privada de otro tipo en la escuela primaria, con lo que las dos realidades. Fue utilizado como una herramienta para recoger una serie de pruebas de motor de Desarrollo a Escala (EDM), propuesto por Rosa Neto (2002), que abarca siete dimensiones del movimiento humano: la motricidad fina (IM1), motricidad gruesa control (IM2), el equilibrio (IM3), esquema corporal (IM4), la organización espacial (IM5), organización temporal (IM6) y lateralidad (este último presenta metodología diferente y no se utilizó en el estudio). Cada prueba consta de cinco tareas que, poco a poco cada vez más complejo, con una puntuación en meses para determinar la edad del motor. Se concluye en el estudio que los valores finales de la relación de motor, las edades de motor y categoría diagnóstica correspondiente entre los escolares mostraron la diferencia de edad entre el motor (IM) y la edad cronológica (CA) seis años que permite clasificar las competencias evaluadas en la red escolar normas públicas: mucho más bajo, más bajo, normal normal y baja. En privado: bajo medio normal, normal, baja y mucho menor. Había una brecha mayor en la escuela pública, probablemente debido a la falta de estimulación de los niños por los profesores, para esta red hay un profesor de educación física que trabaja con los estudiantes reciben servicios por parte del educador mismo profesor, a diferencia de la red escolar actos privados donde un profesor experto.

PALABRAS CLAVE: psicomotor, motor edad, el desarrollo motor

A PSICOMOTRICIDADE EM ESCOLARES DO 1º ANO DO ENSINO FUNDAMENTAL VERIFICADA ATRAVÉS DA IDADE MOTORA X IDADE CRONOLÓGICA

RESUMO

Este artigo, fruto de um projeto de iniciação científica - PIC/FISJT buscou investigar se a idade cronológica correspondia a idade motora em crianças ingressantes de duas escolas – uma da rede pública estadual e outra da rede privada no ensino fundamental, aproximando as duas realidades. Utilizou-se como instrumento de coleta uma bateria de testes da Escala de Desenvolvimento Motor (EDM), proposta por Rosa Neto (2002), que abrange sete dimensões da motricidade humana: motricidade fina (IM1), motricidade global (IM2), equilíbrio (IM3), esquema corporal (IM4), organização espacial (IM5), organização temporal (IM6), e lateralidade (este último apresenta metodologia diferenciada e não foi utilizado no estudo). Cada teste contém cinco tarefas que vão, progressivamente se tornando mais complexas, com pontuação expressa em meses, para determinar a idade motora. Concluiu-se no estudo que os valores finais do quociente motor, das idades motoras e a correspondente categoria de diagnóstico nos escolares apresentaram defasagem entre a idade motora (IM) e idade cronológica (IC) de seis anos permitindo classificar as habilidades analisadas na escola da rede pública em padrões: muito inferior, inferior, normal médio e normal baixo. Na rede privada: normal baixo, normal médio, inferior e muito inferior. Houve uma defasagem maior na escola da rede pública, provavelmente devido à falta de estimulação das crianças pelos docentes, pois nesta rede não existe professor de Educação Física que trabalhe com os alunos, sendo os mesmos atendidos pela professora pedagoga, ao contrário da escola da rede privada onde atua um professor especialista.

PALAVRAS-CHAVE: psicomotricidade; idade motora; desenvolvimento motor