

**163 - PROFILE AND PSYCHOMOTOR LEARNING-TEACHING PROCESS OF DYSLIXIC CHILDREN**

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This work was carried out by undergraduate courses and Physical Education Pedagogy, Faculty of Science and Technology - UNESP, Campus of Presidente Prudente Laboratory of Recreational Activity (RTA). The Lab aims to psychomotor reeducation through recreational activities and attend school-age children who have learning difficulties that are related to psychomotor issues.

Considering the demand of children referred to the RTA with the clinical diagnosis of dyslexia, there was the importance of developing a work to examine the influence of psychomotor approach to motor development and learning of children with difficulties in reading and writing. Moreover, there is a concern with the study of specific intervention practices that can work together in overcoming the difficulties of children.

For children psychomotor deficits and learning disabilities are studies by Neto (2001). In this study, the dyslexics showed lower performance in motor skills than expected for their chronological age. Fiat (2001) and Costa (2001) also conducted studies that indicate that children aged 5 to 7 years, which have deficits in their psychomotor development, learning difficulties.

The dyslexia, Topczewski (2005) describes two types: the development of dyslexia and specific dyslexia, also described by Capovilla & Capovilla (2007) as developmental dyslexia. Dyslexia of evolution is a transitional framework that can be overcome and has direct correlation with the development and brain maturation.

The specific dyslexia is defined as a neurological difficulties, congenital that can difficult the acquisition of ability to read and write (CAPELLINI, SA; CIASCA, SM, 2006).

According to the DSM IV (1995) dyslexia is characterized as a severe impairment in the development of skills of word recognition and reading comprehension. This has a significant failure in school performance or activities of daily living that require reading skills, but are the result of a disturbance of the development or sensory problems. You may notice some predominant features in reading and writing of dyslexic children, which are usually incomprehensible commit jumble of letters with different spatial orientation, the jumble of letters whose sounds are similar reversal of syllables, repetition of syllables or words, between others.

The main objective of this research is to verify the psychomotor, as well as diagnosing the difficulties of written language and reading in children with dyslexia and we adopted the approach and techniques Psychomotor Playful as primary procedures in addition to the educational intervention focused on the rehabilitation of written language and reading, with emphasis on recreational activities.

Some psychomotor acquisitions are central to this aspect, such as the concept of handedness, a sense of body, position in space, a sense of time, coordination of gestures and movements, among other capabilities.

Participants were four children with chronological age of 11 years, diagnosed with dyslexia. Assessment was carried out motor, by applying tests such as the Psychomotor Development Scale (EDM) - (Neto, 2002), which evaluates the following psychomotor: fine motor, motor overall balance, body scheme / speed, spatial organization and temporal organization. The test objective is to examine whether the motor age of the child is compatible with chronological age. The variables of the evaluation are: General Motor Age, Motor Quotient and General Motor Scale. The main index to note is the General Motor Age, for it is through it that understands the delay same engine. Therefore, we adopted the following formula:

$$IMG = \frac{IM1+IM2+IM3+IM4+IM5+IM6}{6}$$

Where:

IMG: is the old general motor;

IM1: is the old motor on the fine motor;

IM2: is the old motor on the Global Kinetics;

IM3: is the old motor on the Balance;

IM4: is the old motor on the body schema;

IM5: is the old motor on the Space Organization;

IM6: is the old motor on the Temporal Organization.

The delay engine is checked by the difference between chronological age and the general motor (IC - IMG), (NETO, 2002).

Subsequently held a poll on the level of acquisition of writing (FERREIRO & TEBEROSKY). And the Competence Test reading words and pseudo words and this in order to identify and analyze the level of development of the written language of the subject. This shows the level Pre - syllabic, where the subject does not distinguish between letters, numbers and drawings, and does not understand the quantity of letters you must use to write a certain word, syllable level, where no notion of syllable and spelling hypothesis, each syllable, but write only one letter; Alphabetical level, in which the learner already understands the writing system, requiring only the interventions spelling.

The Competence Test reading words and pseudo words (Capovilla & Capovilla) is to provide compounds pairs of pictures and written words, some of which are pseudo. These tests are divided into 7 categories of words or pseudowords, namely: 1) regular words correct, 2) correct irregular words, 3) words with incorrect semantics, 4) with pseudo visual exchanges, 5) with pseudo phonological changes, 6) pseudo homophones; 7) pseudo strange. The child must accept the pairs whose words are spelled correctly and reject those whose words or pseudowords are written incorrectly or giving inconsistent semantics. In the analysis we can see if the child has more difficulties in storing lexical (vocabulary), semantics or difficulties regarding the relationship of letter and sound (phonetics).

Started, a brief explanation about the data collected and its significance. These include psychomotor assessments, survey of reading and writing and Competence Test words and pseudowords presented in the methodological procedures.

We present below results of the motor and test power of words and pseudowords in graphs to clarify the level of each child studied.

The results and discussion starts on Figure 01 and shows the results of the motor and test power of words and pseudowords is showed in Figure 02. It is also emphasized that the survey the level of acquisition of writing all children in the study showed the alphabetic level, that is already understood the whole system of writing, but had spelling errors, exchanges of letters and syllables reversals, characteristics of the problem.

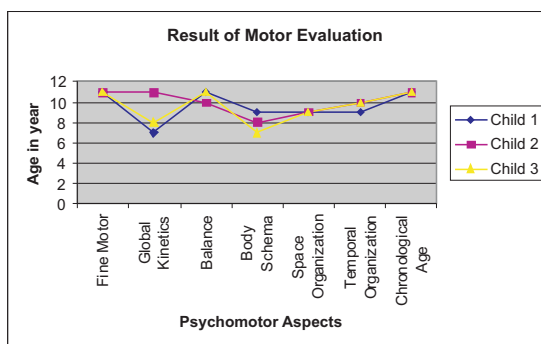


Figure 01: Result of motor evaluation

As shown in Figure 01 the child had 01 seconds to assess motor difficulties in global motor (7 years) in Schedule Body, Space Organization and Temporal Organization (9 years) and fine motor function and balance had to be compatible with his chronological age of 11 years. Already Child 2 was noted that major difficulties were analyzed in the body schema and spatial organization, respectively, 8 and 9 years. There was also delay in the balance and temporal organization both at age 10, but in the fine motor aspects and overall the child reached 11 years was appropriate for their age. And finally the 3rd child who obtained the following results motricity 11 years, 8 years overall motor skills, balance in 11 years, 7 years in the body schema as well as 9 years at the Space and 10 years at the Temporal. It was noticed that the last child's difficulties is related to body scheme, mobility and global spatial organization.

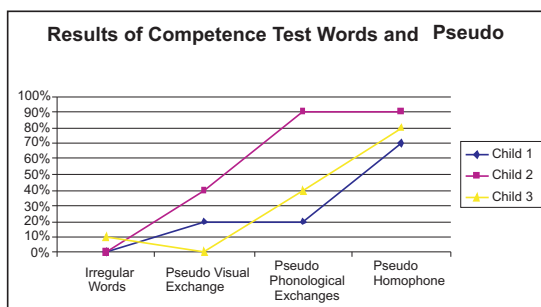


Figure 02: Results of Competence Test words and pseudo

Of the seven items assessed the Competence Test words and pseudo words all children assessed in the study showed no errors on regular words Correct, incorrect words with semantics and pseudo Strangely, it was noted that only one child was only 10% error which characterizes an error in irregular words, without result highlighted, as well as pseudo error with Visual Exchanges that only two children had difficulty in this item. However all the children had errors in pseudowords with Exchange Phonological Homophone pseudowords with high rates of errors in the last named.

Considering the data it is observed that for the motor evaluation all children presented difficulties both in the body scheme and the spatial and temporal organization, it is important that the child in which the lateral is not well defined presents difficulties in space, ie following a direction card, problems with reading and mathematics, among others (Mascaretti, 1999). The author also states that the change in motor coordination and balance, the spatial, temporal, among other things, can interfere with school learning and behavior in the child. Hypothesizing a possible relationship between these aspects engines and dyslexia you need a larger number of studies to detect such a relationship.

Another important point was that none of the children studied had difficulty in fine motor, this shows us that all dyslexic children probably develop positively evaluated the question of tone and fine movements such as pinch and grip, and that even this aspect is directly connected with the writing that takes us to think that this aspect does not influence the process of learning reading and writing. In the proficiency test of words and pseudowords for the items, which draws attention is the number of errors in the rejection of pseudo homophones, suggesting difficulty in lexical processing and indicates a restricted repertoire of vocabulary and, therefore, difficulties in storage of writing correct words and their spelling rules.

According Capovilla & Capovilla (2007) most of the children in their studies had difficulties in phonological processing, ie, greater difficulty in grapheme-phoneme correlation and decoding of words, yet the children evaluated in this study had greater difficulty in processing lexical as already mentioned. This difference in results suggests some hypotheses about broader social issues that may be influencing these results. It is noteworthy, then, the importance of going beyond the identification of aspects present in the manifestation of dyslexia, but look for causes of social character and organic produce and maintain the difficulty of the subject's life, compromising their actions, especially in school. Evaluations were performed and the results obtained shows the need for action in the motor aspects of lag, as well as educational, since it is understood that these aspects baseline for the process of teaching and learning to occur properly.

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#### **PROFILE AND PSYCHOMOTOR LEARNING-TEACHING PROCESS OF DYSLEXIC CHILDREN.**

Dyslexia is presented as a phenomenon that deserves the attention of researchers in education, especially because it can significantly impair the process of development of children in school. It is noteworthy that about 10 to 15% of the Brazilian population has dyslexia, is considered the highest incidence of difficulty in the classroom. Then, noted the need to conduct a study to examine the psychomotor profile, as well as the difficulties of written language and reading in children with dyslexia. Participants were three children with dyslexia with chronological age of 11 years, it is emphasized that the diagnoses of the children were performed by a qualified professional to do so. The methodological procedures used to Motor Development Scale (EDM) to detect the motor difficulties of dyslexic children and also held Survey of Reading and Writing Skills Test and the words and pseudo words (TCPP) to identify possible difficulties that affect the the teaching-learning of dyslexic children. The results that all children presented late in the body scheme, the spatial and temporal organization in Motor Development Scale. In the survey of Reading and Writing children had an alphabet, ie, already understand the whole system of writing, yet have misspellings, exchanges of letters and syllables reversals, characteristics of the problem. And Competence Test words and pseudo words in the results highlighted that all children also showed difficulties in pseudo homophones which suggests difficulty in lexical processing and indicates a restricted repertoire of vocabulary and, therefore, difficulties in storing the correct writing of words and their spelling rules. Evaluations were performed and the results obtained shows the need for action in the motor aspects of lag, as well as educational, since it is understood that these aspects baseline for the process of teaching and learning to occur properly.

**KEYWORDS:** Dyslexia, Psychomotor Profile, Teaching and Learning

#### **PROFIL ET PSYCHOMOTEURS-PROCESSUS D'ENSEIGNEMENT DES ENFANTS DYSLEXIQUES.**

La dyslexie est présentée comme un phénomène qui mérite l'attention des chercheurs en éducation, en particulier parce qu'il ne peut entraver de manière significative le processus de développement des enfants à l'école. Il est à noter qu'environ 10 à 15% de la population brésilienne est dyslexique, est considérée comme la plus forte incidence de difficulté dans la classe. Puis, a noté la nécessité de mener une étude visant à examiner le profil psychomoteur, ainsi que les difficultés de la langue écrite et de la lecture chez les enfants atteints de dyslexie. Les participants ont trois enfants dyslexiques avec l'âge chronologique de 11 ans, il est souligné que les diagnostics des enfants ont été effectuées par un professionnel qualifié pour le faire. Les procédures méthodologiques utilisés pour Motor Development Scale (EDM) pour détecter les difficultés motrices des enfants dyslexiques et l'enquête ont aussi eu lieu de lecture et d'écriture d'essais et les mots et les pseudo-mots (TCPP) afin d'identifier les éventuelles difficultés qui affectent la l'enseignement-apprentissage des enfants dyslexiques. Les résultats que tous les enfants ont présenté en fin de schéma corporel, l'organisation spatiale et temporelle dans Motor Development Scale. Dans l'enquête de lecture et d'écriture des enfants avaient un alphabet, c'est à dire déjà comprendre l'ensemble du système d'écriture, tout en ayant les fautes d'orthographe, des échanges de lettres et de renversements syllabes, les caractéristiques du problème. Et compétence test des mots et des pseudo-mots dans les résultats mis en évidence que tous les enfants ont également montré des difficultés dans les homophones pseudo qui suggère des difficultés dans le traitement lexical et indique un répertoire restreint de vocabulaire et, par conséquent, des difficultés à stocker l'écriture correcte des mots et leurs règles d'orthographe. Les évaluations ont été effectuées et les résultats obtenus montre la nécessité d'agir dans les aspects moteurs de lag, ainsi que pour l'éducation, puisqu'il est entendu que ces aspects de base pour le processus d'enseignement et d'apprentissage s'effectue correctement.

**MOTS-CLÉS:** Dyslexie, Psychomoteur profil, d'enseignement et d'apprentissage

#### **PERFIL Y PSICOMOTOR PROCESO DE ENSEÑANZA-APRENDIZAJE DE LOS NIÑOS DISLÉXICOS.**

La dislexia se presenta como un fenómeno que merece la atención de los investigadores en educación, sobre todo porque puede afectar de manera significativa el proceso de desarrollo de los niños en la escuela. Es de destacar que alrededor del 10 al 15% de la población brasileña tiene dislexia, es considerada la mayor incidencia de dificultad en el aula. A continuación, señaló la necesidad de llevar a cabo un estudio para examinar el perfil psicomotor, así como las dificultades de la lengua escrita y la lectura en los niños con dislexia. Los participantes fueron tres niños con dislexia, con la edad cronológica de 11 años, se hizo hincapié en que los diagnósticos de los niños fueron realizadas por un profesional calificado para hacerlo. Los procedimientos metodológicos utilizados para impulsar el desarrollo Escala (EDM) para detectar las dificultades motoras de los niños disléxicos y de estudio también se celebró de lectura y escritura de ensayo y las palabras y las palabras pseudo (TCPP) para identificar las posibles dificultades que afectan a la de enseñanza-aprendizaje de los niños disléxicos. Los resultados que todos los niños presentan retraso en el esquema corporal, la organización espacial y temporal en el desarrollo motor de escala. En la encuesta de la lectura y escritura de los niños había un alfabeto, es decir, ya entender todo el sistema de escritura, aún con faltas de ortografía, los intercambios de letras y sílabas inversiones, las características del problema. Prueba de Competencia y palabras

y palabras pseudo en los resultados de relieve que todos los niños también mostró dificultades en homófonos pseudo lo que sugiere la dificultad en la elaboración de léxicos e indica un repertorio limitado de vocabulario y, por tanto, dificultades para almacenar la escritura correcta de palabras y de sus reglas de ortografía. Las evaluaciones se realizaron y los resultados obtenidos muestran la necesidad de la acción en los aspectos motores de retraso, así como la educación, ya que se entiende que estos aspectos de base para el proceso de enseñanza y aprendizaje se realice correctamente.

**PALABRAS CLAVE:** Dislexia, Psicomotor perfil, Enseñanza y el Aprendizaje

#### **O PERFIL PSICOMOTOR E O PROCESSO ENSINO-APRENDIZAGEM DE CRIANÇAS DISLÉXICAS**

A dislexia apresenta-se como um fenômeno que merece a atenção dos pesquisadores em educação, sobretudo porque pode comprometer de forma significativa o processo de desenvolvimento das crianças na escola. Destaca-se que cerca de 10 a 15% da população brasileira apresenta dislexia, sendo considerada a dificuldade de maior incidência nas salas de aula. Então, verificou a necessidade de realizar um estudo que analisasse o perfil psicomotor, assim como, as dificuldades de linguagem escrita e de leitura de crianças que apresentam dislexia. Participaram do estudo três crianças disléxicas com idade cronológica de 11 anos, ressalta-se que os diagnósticos das crianças foram realizadas por um profissional habilitado para tal. Como procedimentos metodológicos utilizou-se a Escala de Desenvolvimento Motor (EDM) para detectar as dificuldades motoras das crianças disléxicas e também realizou-se Sondagem da Leitura e Escrita e o Teste de Competência de Palavras e Pseudopalavras (TCPP) para identificar possíveis dificuldades que influenciam no processo ensino-aprendizagem de crianças disléxicas. Os resultados obtidos que todas as crianças avaliadas apresentaram atraso no esquema corporal, organização espacial e organização temporal na Escala de Desenvolvimento Motor. Na sondagem de Leitura e Escrita as crianças apresentaram nível alfabético, isto é, já compreendem todo o sistema de escrita, no entanto apresentam erros ortográficos, trocas de letras e inversões de sílabas, características do problema. E no Teste de Competência de Palavras e Pseudopalavras os resultados em destaque que todas as crianças também demonstraram dificuldades em pseudopalavra homófonas o que sugere dificuldade no processamento lexical e indica um repertório vocabular restrito e, com isso, dificuldades no armazenamento da escrita correta das palavras e suas regras ortográficas. Através das avaliações realizadas e dos resultados obtidos, mostra-se a necessidade de intervenção nos aspectos motores em defasagem, assim como, pedagógica, pois entende-se que tais aspectos são basais para que o processo de ensino-aprendizagem ocorra adequadamente.

**PALAVRAS-CHAVES:** Dislexia, Perfil Psicomotor, Ensino-Aprendizagem

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