

77 - RELATIONSHIP BETWEEN THE SCHOOL PERFORMANCE AND PSYCHOMOTOR PROFILE

LUCIANA FIGUEIREDO MACHADO;
ISIS ASCENÇÃO CAMARDELLA.

Universidade Castelo Branco. Rio de Janeiro, Brasil
lufigmachado@oi.com.br isiscamardeLLa@yahoo.com.br

Introduction

When it is born, the human being has some set structures. Others are still to be developed as part of the nervous system, that needs favorable conditions to its full operation and development. The cerebral cortex, the gray matter that covers the brain which are located above the functions, are present at birth time in very rudimentary way, during the first months of life, some new cortical cells are added, the cells become bigger and the existing provide more connections between them (OLIVEIRA, 1997, p. 17).

According to Vayer (1985, apud SOUZA, 2005) all children's experiences, whether of pleasure or pain, of success or failure, are always body experienced.

The motor function, intellectual development and emotional development are closely related, promoting an interaction between the mind, whether consciously or not, and the movement performed by the muscles. That interaction is given the psychomotor development, where brain and muscles are influencing each other encouraging developments and progress in terms of thought and the drive (RESENDE; Gorla; ARAUJO & CARMINATO, 2003).

According to Resende, Gorla, and Carminato Araújo (2003), examining the evolutionary process of mankind, it is interesting that there are two points: first, the learning, the method of establishing some connection between certain stimuli and responses to increase the individual's adaptation to the environment, are a greater reliance on internal aspects, that is the maturation of the central nervous system (CNS), then the learning depend more information originated from the outside who are captured by the sensory organs. Therefore, there is an intimate relationship between internal and external influences, creating the need for the integrity of the CNS and subsidies for the establishment of links with environmental stimuli to a percept-normal motor development.

All the behavior involves specific neural processes that occur from the perception of the stimulus to the realization of the answer selected. These procedures allow the neural behavior and learning, which happens in the brain in different ways. Since we were born, the maturation of the nervous system allows for gradual learning of skills. As a particular brain area matures, the person displays behavior related to that area maturing, as long as this function is stimulated (ANDRADE; LUFT; ROLIM, 2004).

This stimulation initially passes by sensory pathways. In other words, to start the learning process there is a need to feel, through the senses, touch, sight, hearing, smell and taste. When there is a failure of any such access roads to stimulate the central nervous system (CNS), difficulties arise in the process of acquiring the information.

The man has a repertoire of skills for the storage of information of various types. But initially it is necessary that there is a process of acquiring new information. In this process there is the name of learning (LENT, 2004, p. 594).

It can be said that learning occurs from the sensation of a stimulus, which is led by the CNS synapses where it is processed and then perceived. After this perception the brain uses information collected to make associations and store this new information. It is from this sequence that is given any learning of daily life. However, this process is not as simple as it seems. There are several factors that can interfere with learning.

According to Fonseca (2007, p.37) learning is the result of creating connections between many groups of cells that are often located in areas distant from each other.

Resende, Gorla, and Carminato Araújo (2003) emphasized that the second and Harlow Brom (1942) cited by Fonseca (1995), the motor cortex exerts a decisive role in all functions of learning, and the relationship between learning and psychomotricity effectively inter - related in terms of development pschyconeurological.

Thus, Fonseca (2007, p. 37) states that no area of the brain can take as solely responsible for any human behavior voluntary or above, therefore, the performance or execution of duties is based on a systemic and dynamic interaction of many areas of the brain (FONSECA, 2007, p.38).

The cognitive approach to human learning a merger of cognitive psychology and neuropsychology of the trial. Learning involves the simultaneous integration of neurobiological and the presence of a social context facilitator (FONSECA, 2007, p.62).

Le Boucher (1988, p.26) says that the arguments generally used to justify the actions of psychomotricity in elementary school have highlighted their role in the prevention of learning difficulties.

To learn is necessary that the child has control and domination of their muscle tone and she is able to remain in certain positions and carry out the exchange-based and has been in the balance and an attitude, without which means that there is a excessive energy expenditure, that is, we need the tone and balance functions are well established.

The cub then the learning can transcorder in more adjusted, but still not so smooth as to the learning processes occur so full you must come as other psychomotor functions are adjusted.

So if there is a psychomotor stimulation and better exploit the potential of learning is essential that the processes that lead to it pass through the body, because according to Freire (2006, p.134) productions are corporeal physical or mental, " who does the body is, who is also believed the body. "

The psychomotricity will not act in terms of acquisitions, but in the form of acquisition, the process by which the learning takes place, that is, develop the functional possibilities of the child at both the physical and intellectual, so that the becoming an adult, can continue their education (LE BOUCHER, 1988, p.43).

According to Le Boucher (1984, apud OLIVEIRA, 1997, p.35) Psychomotor education should be taken as a base for education in primary school, because it affects all learning pre-school, takes the child to be aware of their own body, the laterality, to be in space, to dominate his time, to coordinate their movements and gestures.

Learning occurs in a satisfactory way when the functions of the CNS, the functions of the SNP and psychological factors are favorable conditions for it to occur. However, it is necessary to take into account that nurture the child has been under suitable conditions regarding the environment and incentives offered, for learning (WAR, 2002, p.37).

According to Mendes and Fonseca (1987 apud FAVERO, 2004) but can not be considered as the main cause of

learning difficulties at school, the area can be psychomotor itself as a factor that aggravates or even prevent learning.

Thus, the school performance could be affected as a result of a learning disability and difficulty of learning may be related to a problem of order hyperactivity, and level of psychomotor development; disorders in one or more subsystems psychomotor, among others.

Purpose

The aim of this study focuses on the comparison between the psychomotor profile of students from low-income schools and good school performance of the 1st cycle of training elementary school.

Methodology

This study is characterized as a field research, the type comparison.

The research involved a sample of n = 40 (forty), children of the 1st cycle of training elementary school, with n1 = 20 children with low school performance and n2 = 20 children with good school performance of both sexes, chosen from intentional manner, forming a group of volunteers, previously authorized by their parents and / or legal responsibility, all residents of the West Zone of the City of Rio de Janeiro and given the "Standards of Conduct of Research in Human Beings", Resolution No. 196/96 of the National Health Council of 10 October 1996 (BRAZIL, 1996) for the recommendations concerning the ethical conduct of research involving human subjects.

It was used as a part of the protocol for assessing Psychomotor Battery of Vitor da Fonseca (1995), which aims to detect and identify various components of psychomotor behavior of the child in a structured way and not stereotypical.

The statistical treatment of this study is divided into two stages. Initially it was used descriptive statistics, attempt to ascertain where the mean and standard deviation of the data collected.

For the second time using the comparative statistics through the statistical method, Student t test as paired. For this, we observed a level of significance 0.05.

Conclusion

To characterize the sample were calculated from the average age of presenting average (7.65 ± 0.93) for the group of MB and average (7.85 ± 1.18) for group A in chronological age. The group was assessed irrespective of sex.

By observing the average age of two groups of the sample note that although there is a difference between the ages [in figures = 0.20], the same can not be considered significant. However it is important to emphasize that this difference has been tending to higher age group of low-income school [GR: R], which reinforces the idea that there are possible psychomotor deficits in this group of children, because, being older, so under normal conditions have already reached the age for a smooth development of the 3 functional units of Lúria, because in terms of motor development in accordance with Gallahue and Ozmun, (2005), the sample is at the stage of basic movements, or as described in the model of Tani (2005) at the stage of basic motor actions and their combinations.

In Chart 1 below is easily perceived the difference between the psychomotor performance of the two groups of the sample GR: R and G: MB. There is clearly a first analysis the best performance of the group GR: MB, which reached higher values. While individuals in the group GR: R had the lowest performance in all psychomotor functions.

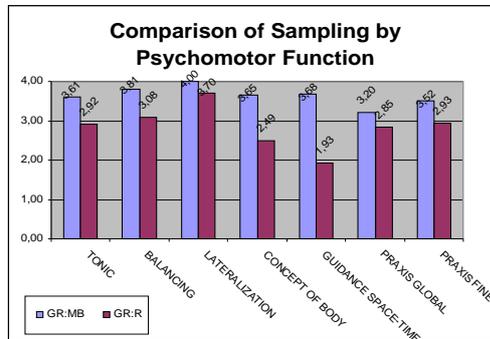


Chart 1: Comparison of Sampling by Psychomotor function. Level of significance by the Student t test P = 0.002115 <0.05.

The parameters of Psychomotor Battery (BPM) from Vitor da Fonseca (1995, p. 287) towards the approximation scores, where the price for the tests can range from 1 to 4 and is classified as:

- 1 - apraxia - conducting incomplete, inadequate and flawed.
- 2 - dyspraxia - cm difficulties of achieving control
- 3 - eupraxia - achieving full, proper and controlled.
- 4 - hiperpraxia - achieving perfect, precise, melodic and accessible facilities of control.

Thus, following this guidance, to examine whether the Table 1 below are notes that the group GR: MB presents psychomotor hiperpraxical profile with regard to most of psychomotor functions, and to quote [4 - hiperpraxy] in six of the seven structures assessed, showing performance eupraxical with quote [3] only in the civil Praxis Global.

Already the group GR: R returned quotation [4 - hiperpraxia] only in the structure lateralization. The score in this group was the dominant [3 - eupraxia] for four structures, and they focus, balance, and Praxis Global Praxis Fina. The functions Concept of Body and Guidance space-time the result obtained by the group in question was listed [2 - dyspraxy].

	GR:MB	GR:R
Tonic	4	3
Balancing	4	3
Lateralization	4	4
Concept of Body	4	2
Guidance Space-Time	4	2
Praxis Global	3	3
Praxis Fine	4	3

Table 1: Distribution of the quotations in figures

This result reveals a significant flaw in the process of psicomotor development of these children as the Concept of Body, according to the authors studied the theoretical basis of this, as Fonseca (2004) and Souza (2005), this function has an important role in the formation of psychomotor child, because it is from her that it will give meaning to their relationship with the environment, with the other and with the object.

The deficit found in Structuring Space-Time can mean failure in thinking and logical-mathematical, and interfere with other learning school, with failures in this task because the child may come to present problems in the perception of the pace of reading, difficulty in organizing the space, so that it occupies as what she uses, example of the terms, structure and difficulties in organizing the thought, having problems with sequences, ordering, simultaneity, perception of past, present and future, among others.

Chart 2 below shows the psychomotor performance of the group GR: R, low school performance. In a mathematical analysis, you can see that this group, low school performance is presented below the score [3 - eupraxya] although the direction of approaching values is important to note that the group did not reach the level of performance considered good in most the functions assessed and found to be below the value Quoting considered good.

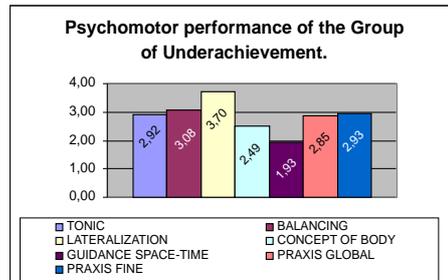


Chart 2: psychomotor performance of the Group of Underachievement.

When analyzing the performance of psychomotor group GR: MB considered good school performance, there is, by examining the chart 3 below, which unlike the previous group, it exceeded the value Quoting [3 - eupraxial] at all psychomotor showing the structures have an excellent level of psychomotor development, even though they make the nearest values driven by Fonseca (1995).

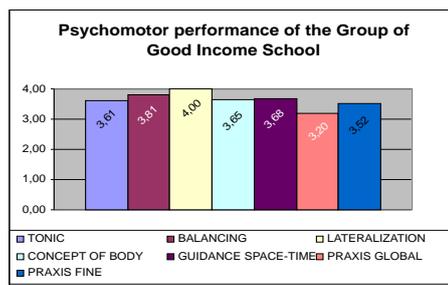


Chart 3: psychomotor performance of the Group of Good Income School

Comparing the level of general psychomotor development among groups of the sample population was a difference in those values, and the group of low-income school [GR: R] showing average (2.84 ± 0.20) and group of good yield school has obtained an average of (3.66 ± 0.19). This result is better observed in graph 4 below where we find a big difference in the final results. However, after the inferential statistical analysis for comparison purposes from the Student t test, there was no significant difference in the value of this rule, different from the comparison made by psychomotor structures

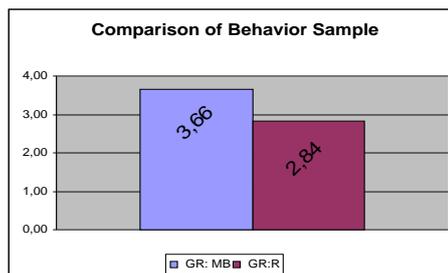


Chart 4: Comparison of Behavior Sample. Level of significance $p = 0.43 > 0.05$

After analysis and evaluation of results, it was possible to conclude that the school has much to do with the performance of psychomotor functions, becoming clear that children with low income and / or learning disabilities may fail psychomotor development, or a function of isolation, Or the combination of these functions.

Another point noted was the general characteristic of children with good academic achievement for low-income, particularly in regard to families. In one of the steps of selecting the sample was held a meeting with those responsible for children participating in the research and such meeting in informal conversation with parents could notice that the families of children with good incomes are better structured and organized, with its well-defined roles and functions, which reinforces the studies to some of the subsystems psychomotor studied from Fonseca (2004), which are the basis for a full psychomotor development.

The conclusion of this study generates around the importance of an education-based psychomotor, and a efficient psychomotor rehabilitation and real within the schools, allied to the work of the classroom teacher in order to soften, or perhaps eliminate the psychomotor deficits that can lead to school failure.

It is finally suggested that this study must be expanded, applying the intervention in the form of psychomotor sessions with the children of low academic achievement, and psychomotor ratings [pre-and post-test] in order to assert ownership over the importance Education and Reeducation Psychomotor at School.

References

- ANDRADE, A.; LUFT, C. e ROLIM, M. O desenvolvimento motor, a maturação das áreas corticais e a atenção na aprendizagem motora **Lecturas: Educacions Física y Deportes - Revista Digital** Buenos Aires - Ano 10 - N° 78 - Nov de 2004. Disponível em <<http://www.efdeportes.com>> Acessado em 14/10/2007.
- BRASIL. Resolução CNS nº 196, de 10 de outubro de 1996 de diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos, nos termos do Decreto de Delegação de Competência de 12 de novembro de 1991 e pela Lei nº 8.142, de 28 de dezembro de 1990. **Diário Oficial [da] República Federativa do Brasil**, Conselho Nacional de Saúde, Brasília, DF, 14 de outubro de 1996.
- FAVERO, Maria Teresa Martins. Desenvolvimento Motor e Aprendizagem da Escrita. **Seminário de Pesquisa do PPE** Universidade Estadual de Maringá. Outubro de 2004. disponível em <www.ppe.uem.br/publicacao/sem_ppe> Acessado em 14/10/2007.
- FONSECA, Vitor da. **Cognição, Neuropsicologia e Aprendizagem**. Vozes. Rio de Janeiro, 2007.
- FONSECA, Vitor da. **Manual de Observação Psicomotora: Significação Psiconeurológica dos Fatores Psicomotores**. Porto Alegre. Artmed, 1995
- FONSECA, Vitor da. **Psicomotricidade - Perspectivas Multidisciplinares**. Vozes. Petrópolis, 2004.
- FREIRE, J.B. **Educação de Corpo Inteiro**. 4ª edição, 12ª impressão. São Paulo/SP. Scipione, 2006.
- GALLAHUE, David L. e OZMUN, John C. **Compreendendo o Desenvolvimento Motor: bebês, crianças, adolescentes e adultos**. São Paulo Phorte, 2005.
- GUERRA, Leila Boni. **A Criança com Dificuldade de Aprendizagem**. Rio de Janeiro: Enelivros, 2002.
- LE BOUCH, Jean. **Educação Psicomotora**. Artmed, Porto Alegre, 1988.
- LENT, Roberto. **Cem Bilhões de Neurônios: conceitos fundamentais**. São Paulo, Ateneu, 2004.
- OLIVEIRA, G.de C. **Psicomotricidade**. Vozes, Petrópolis, 1997.
- REZENDE, J. C. G; GORLA, J. I.; ARAÚJO, P. F. e CARMINATO, R. A. Bateria psicomotora de Fonseca: uma análise com o portador de deficiência mental. **Lecturas: Educacions Física y Deportes - Revista Digital** Buenos Aires. Ano 9, n 62. jul, 2003. Disponível em <www.efdeportes.com> acessado em 15/set/2007.
- SANCHES, Sabrina de Oliveira; GUERRA, Luciana Aparecida; LUFT, Caroline di Bernardi e ANDRADE, Alexandre. Perfil Psicomotor Associado a Aprendizagem Escolar. Fundação Municipal de Educação e Cultura de Santa Fé do Sul /FUNEC. São Paulo. 2004. **Lecturas: Educacions Física y Deportes Revista Digital** Buenos Aires, ano 10, n79. Dez/2004. Disponível em <www.efdeportes.com>. Acessado em 03/mar/2005.
- SOUZA, Thaisa Fernanda Queiroz. **Caracterização do Perfil Psicomotor em Crianças Portadoras do Transtorno no Déficit de Atenção/Hiperatividade TODA/H (Desatenção)**. 2005. Dissertação (Mestrado em Saúde) Universidade de Franca, 2005. Disponível em : <www.unifran.br/mestrado/promocaoSaude> Acesso em 25 nov 2007.
- TANI, Go. **Aprendizagem Motora: Tendências, Perspectivas e Problemas de Investigação**. Rio de Janeiro. Guanabara Koogan, 2005.

Endereço: Rua Jabaquara, nº 6 – A. Magalhães Bastos.
Rio de Janeiro – RJ./Brasil.
Cep: 21745-440.
E-mail: lufigmachado@oi.com.br

RELATIONSHIP BETWEEN THE SCHOOL PERFORMANCE AND PSYCHOMOTOR PROFILE**Abstract**

Following the daily life of a public school, you may realize that the problems of children are growing and that, every day, the school suffers falls. Deviations in psychomotor factors are also related to learning. Changes in these factors can highlight important relationship with learning difficulties (SANCHES; WAR; LUFT and ANDRADE, 2004). This study aimed to investigate whether there is relationship between school performance and psychomotor profile, its general objective is to compare the profile of psychomotor school students from low income and good school performance of the 1st cycle of training elementary school. This study is characterized as a field research, the type comparison. The research involved a sample of n = 40 (forty), children of the 1st cycle of training elementary school, with n1 = 20 children with low school performance and n2 = 20 children with good school performance of both sexes, forming a group of volunteers, all residents of the West Zone of the City of Rio de Janeiro. The instrument used was part of the protocol for assessing Psychomotor Battery of Vitor da Fonseca (1995). Comparing the level of general psychomotor development among groups of the sample population was a difference in those values, and the group of low-income school [GR: R] showing average (2.84 ± 0.20) and group of good yield school has obtained an average of (3.66 ± 0.19) it is concluded therefore that in the sample group of children from low-income school there were failures in psychomotor performance, especially in Concept of Body and Space-Time Structure functions, being observed more obvious and more significant differences in these functions.

Key words: Psychomotricity, learning, school income.

RELATION ENTRE L'ÉCOLE ET LE PROFIL DES PERFORMANCES PSYCHOMOTRICES**Résumé**

Voici la vie quotidienne d'une école, vous mai réaliser que les problèmes des enfants sont de plus en plus et que, chaque jour, l'école souffre des chutes. Les écarts dans psychomoteur facteurs sont également liés à l'apprentissage. L'évolution de ces facteurs peut mettre en évidence la relation importante avec des difficultés d'apprentissage (SANCHES, la guerre; LUFT et Andrade, 2004). Cette étude visait à examiner s'il existe des relations entre l'école et les performances psychomotrices profil, son objectif général est de comparer le profil des étudiants psychomoteur de l'école à faible revenu et à la bonne performance de l'école du 1er cycle de formation de l'école élémentaire. Cette étude est considérée comme un domaine de recherche, le type de comparaison. La recherche a impliqué un échantillon de n = 40 (quarante), les enfants du 1er cycle de formation de l'école primaire, avec n1 = 20 enfants ayant un faible rendement scolaire et n2 = 20 enfants avec de bons résultats scolaires des deux sexes, la formation d'un groupe de volontaires, Tous les résidents de la Zone Ouest de la ville de Rio de Janeiro. L'instrument utilisé a été le cadre du protocole d'évaluation de la batterie de Psychomotricité Vitor da Fonseca (1995). Si l'on compare le niveau général de développement psychomoteur chez les groupes de l'échantillon de population a été une différence dans ces

valeurs, et le groupe des pays à faible revenu école [GR: R] montrant la moyenne ($2,84 \pm 0,20$) et du groupe de bon rendement scolaire a obtenu une moyenne de ($3,66 \pm 0,19$), il est conclu dès lors que, dans l'échantillon d'enfants de faible revenu ont des échecs scolaires dans les performances psychomotrices, en particulier dans les fonctions Notion de corps et de l'espace-temps Structure, ces fonctions étant les différences observées plus évidente et plus important.

Mots clés: Psychomotricité, de l'apprentissage, l'école de revenus.

RELACIÓN ENTRE EL RENDIMIENTO ESCOLAR Y EL PERFIL PSICOMOTOR

Resumen

Lo que sigue es la vida cotidiana de una escuela, usted puede darse cuenta de que los problemas de los niños están creciendo y que, cada día, la escuela sufre caídas. Las desviaciones en psicomotor son también factores relacionados con el aprendizaje. Los cambios en estos factores pueden poner de relieve importante relación con dificultades de aprendizaje (SANCHES; guerra; LUFT y ANDRADE, 2004). El objetivo del estudio fue investigar si existe relación entre el rendimiento escolar y psicomotor perfil, su objetivo general es comparar el perfil psicomotor de los alumnos de las escuelas de bajos ingresos y el buen desempeño de la escuela el 1º ciclo de formación de la escuela primaria. Este estudio se caracteriza como un campo de investigación, el tipo de comparación. La investigación de que se trate de una muestra de $n = 40$ (cuarenta), los niños del 1er ciclo de formación de la escuela elemental, con $n_1 = 20$ niños con bajo rendimiento escolar y $n_2 = 20$ niños con buen rendimiento escolar de ambos sexos, formando un grupo de voluntarios, Todos los residentes de la Zona Oeste de la ciudad de Río de Janeiro. El instrumento utilizado fue parte del protocolo para la evaluación psicomotriz Bateria de Vitor da Fonseca (1995). Comparando el nivel general de desarrollo psicomotor entre grupos de la población muestra una diferencia en esos valores, y el grupo de bajos ingresos [GR: R] mostrando media ($2,84 \pm 0,20$) y el grupo de buen rendimiento escolar ha obtenido una media de ($3,66 \pm 0,19$) se concluye, por tanto, que en la muestra grupo de niños de bajos ingresos la escuela había fallas en el desempeño psicomotor, en especial en concepto de funciones Organo y del Espacio-Tiempo: Estructura, estas funciones se observan diferencias más evidentes y más importantes.

Palabras clave: Psicomotricidade, el aprendizaje, la escuela de ingresos.

RELAÇÃO ENTRE O DESEMPENHO ESCOLAR E O PERFIL PSICOMOTOR

Resumo

Acompanhando-se o cotidiano de uma escola pública pode se perceber que as dificuldades das crianças são crescentes e que, a cada dia, o rendimento escolar sofre quedas. Os desvios em fatores psicomotores também estão relacionados à aprendizagem. Alterações nesses fatores podem evidenciar importante relação com dificuldades de aprendizagem (SANCHES; GUERRA; LUFT e ANDRADE, 2004). Este estudo busca investigar se existe relação entre o desempenho escolar e o Perfil Psicomotor, seu objetivo geral é a comparação entre o Perfil Psicomotor de alunos de baixo rendimento escolar e de bom rendimento escolar do 1º Ciclo de Formação do Ensino Fundamental. Este estudo se caracteriza como uma pesquisa de campo, do tipo comparativa. A pesquisa contou com uma amostra de $n = 40$ (quarenta), crianças do 1º Ciclo de Formação do Ensino Fundamental, sendo $n_1 = 20$ crianças com baixo desempenho escolar e $n_2 = 20$ crianças com bom desempenho escolar, de ambos os sexos, formando um grupo de voluntários, todos moradores da Zona Oeste da Cidade do Rio de Janeiro. O instrumento utilizado foi parte do protocolo de avaliação da Bateria Psicomotora de Vitor da Fonseca (1995). Comparando-se o nível do desenvolvimento psicomotor geral entre os grupos da amostra percebe-se uma diferença nesses valores, tendo o grupo de baixo rendimento escolar [GR:R] apresentando média ($2,84 \pm 0,20$) e o grupo de bom rendimento escolar ter obtido média de ($3,66 \pm 0,19$) conclui-se, portanto, que na amostra pesquisada o grupo das crianças de baixo rendimento escolar apresentam falhas no desempenho psicomotor, principalmente nas funções Noção de Corpo e Estruturação Espaço-Temporal, sendo nestas funções observadas as diferenças mais evidentes e mais significativas.

Palavras Chaves: Psicomotricidade, Aprendizagem, Rendimento escolar.