11 - HOW PHYSICAL EXERCISE CAN HELP THE DEVELOPMENT OF PSYCHOMOTOR AUTISTIC: A CASE STUDY

HUGO LEONARDO BENTO LIMA;
MÔNICA HELENA NEVES PEREIRA PINHEIRO
UNIVERSIDADE DE FORTALEZA, FORTALEZA, CEARÁ, BRASIL
personalab1@gmail.com

doi: 10.16887/85.a2.11

INTRODUCTION

Although Autism is considered a syndrome in our country, it is still treated with prejudice among school that does not accept your registration, and ordinary life (discrimination) of these carriers. The child with autism live in a world of her own, one much larger than your outer world, a very private world and that she can interact in the 'Real World' inner world Physical Education can make this link, despite to be a path full of difficulties. The sport and recreational method can also be therapeutic and this can improve the share of attention and language thereof.

According to the Wikipedia site Autism is considered a global dysfunction of development, a change in communication skills (language and / or writing), socialization and behavior, and these parts of the disorders called Pervasive Developmental Disorder (PDD). In some children can still have an impairment of intelligence and speech. Despite the problems reported are cases of autistic adults who have achieved success in their professional careers.

This study seeks to provoke discussion about the process of inclusion within the pedagogical practices in physical education of students with intellectual disabilities, and to help other students may realize that the inclusion of these individuals may be a gateway to social life the same, and that this may have permanence, access and success in school qualitatively speaking, Chicon (2013).

Also according Chicon (2013) another line of reasoning would be that in most cases any student who has a disability be it physical or intellectual, hardly presents no difficulty in the process of social inclusion due to the fact their interests and difficulties not being heard. According to the Law of Directives and Bases of Education (2006), article 58 tells us that education for people with special needs should preferably be offered in the regular school system.

According to Kern et al (1982) The use of physical activity as an intervention has two important implications:

- Physiological: research has shown that physical activity triggers the release of neurotransmitters that are present in calming.
- Educational: beyond traditional interventions, the physiological effect of physical activity provides an improvement in academic performance or behavior in general.

According McGimsey (1988) A complement to behavioral intervention can be to include physical activities such as, for example, aerobic exercises, running, swimming etc. In the literature there are numerous examples demonstrating the beneficial effects of physical activity in problem behaviors in people with Pervasive Developmental Disorders (PDD) of different ages.

According to Rosa Neto (2010) in the schooling process there is a close relationship between what the child is capable of learning (cognitive) with what is capable of (motor).

For Santos (2008) motor development is in childhood, especially during school hours where there is an increase of motor skills that allow the child a large domain of your own body in various activities such as jumping, skipping, crawling up, kicking, throwing, balance, writing, among others.

To Medina (2006) the acquisition of these motor skills is tied to the cognitive development of these children and the body's own notion of space-time, thus forming a complement to the development of learning skills. There is a close relationship between what the child is capable of learning (cognitive) with what is capable of (motor).

General Purpose: To show how physical education can assist in the treatment of patients with autism.

Specific Objectives:

- Demonstrate how psychomotor may be a satisfactory method of treatment-therapeutic aid in the treatment of people with autism.
- Investigate how physical exercise can help reduce the anxiety and hyperactivity framework in autistic.

METHODOLOGY

This study was a descriptive and diagnostic research which aims to investigate the motor development of a teenager who has chronological age of 190 months and attends the 4th year in a public school in Fortaleza-CE. Classes that occurred twice a week lasting 55 minutes each.

Respecting the principles of Ethics, participant and their parents were informed about the procedures and about the possibility of leaving the study at any time without any prejudice. After parental consent, the child performed the assessment individually in a wide, quiet, airy and lighted sports court, at two different times. The first assessment took place before the onset of motor interventions and the second, after six weeks of intervention (12 sessions).

The instrument was used to evaluate the motor-Scale Development "EDM" created by ROSA NETO (2002), adapted for tests covering different areas of motor development: fine motor skills; global motor; balance; body schema; spatial and temporal organization and laterality. For this study we chose to investigate the child's performance in all the above aspects and comparing the results of the two assessments.

Some preliminary observations of the same are: speech difficulty, stammering, understands commands, obey orders, recognizes objects like balls, pencil and pen for example, recognizes the letters and vowels, but when he moves to the writing always starts with the first letter of your name . His fine motor coordination (when holding a pen) is developed, one can draw "sports court" has the notion that they are team sports, but does not draw more than one person from each side of the court.

RESULTS AND DISCUSSION

A1 (pseudonym we use in this study) had chronological age of 190 months for the first assessment and reassessed 192 months when outside. At the beginning of the evaluation it was diagnosed with a motor age of 92 months. After 6 weeks of physical education classes a repeat test showed that the student now has a motor age of 114 months, passing category Medium

Standard for Normal category Alto, as the graph below, thus confirming the need to include these people in physical education classes.



Pan (2006) tells us about the importance of exercise and how to exercise the standard of falls in this population as they arrive in adolescence due particularly to the fall time of school physical education. Pan also reports that adolescents should have access to physical activities and programs that engage in these exercises are determined by social, cognitive and cultural variables.

For Garcia-Villamisar (2010) reported in their study in patients with autism who practiced recreational physical activity had a significant improvement in their levels of quality of life and a significant reduction in stress levels compared to those who did not perform activities Recreational physical.

According to the Autism Speaks website, physical activity can be a challenge for autistic because of functional motor limitations, as it promotes social interaction between them. However, according to the site, if these exercises are implemented in an appropriate way these challenges can have results like increased quality of life for ourselves.

Outside observed according to the tests that even after 6 weeks of classes the student study failed to develop the ability to push a small box straight using just one foot while the other leg met with the knee flexed. Hand (2011) in their study of eight weeks to autistic adults also found no significant differences in their patients by studying their functional gait, but reported that two PE lessons per week during this period could improve functional gait thereof.

During the evaluation period was observed that the student studied could throw a ball from half court to the end of it, that the very movement that had never performed in life. And that after the lessons observed was that his behavior and aggression improved. Lang (2010) in their study also confirmed that after exercise in both behavior and aggression improved. Kern (1982) also reported that after the sections of exercises their autistic students also improved their behavior in the classroom.

In respect of the student manual telescope was also not succeeded in improving, as well as one of completing the maze using a pencil tests. In the drawing simpler labyrinth execution time decreased by 50%, from 18 seconds to 9 seconds, while the more complex design does not decreased even if the result of 25 seconds in the second test. Already in the Speed Test there were significant improvements of 33.3%, from 60 to 40 seconds.

CONCLUSION

According to the data obtained in this study we can see that despite being only 6 weeks of assessment results for improvement in almost all levels of autistic students allow us to emphasize the importance of physical exercise for autism should be encouraged both by school and in society generally. The teacher has to have this critical census on such situations and promote both inclusion as a present to the other students a bit of daily difficulties faced by these children.

BIBLIOGRAFY

1-Self-perceived STUDENTS WITH INTELLECTUAL DISABILITY IN DIFFERENT AREAS OF SCHOOL-TIME. José Francisco Chicon, Mary Grace Chen of Brazilian Sá.Revista of Sport Science, V. 35, N. 2 (2013)

2-LYNN KERN ET AL. THE EFFECTS OF EXERCISE ON Self Stimulation AND RESPOND PROPERLY IN CHILDREN WITH AUTISM. JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS, Vol.12, NO.4, 1982 McGimsey 3, JAMES F., Favel, JUDITH E. EFFECTS OF INCREASED PHYSICAL EXERCISE IN BEHAVIOR-PROBLEM IN PERSONS WITH MENTAL RETARDATION. JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS. VOL. 18, NO 2, 1988 4 LAW OF GUIDELINES AND BASES OF EDUCATION. BRASILIA.SENATE FEDERAL2006

5-SANTOS S, Dantas G, Oliveira ALREADY. MOTOR DEVELOPMENT OF CHILDREN, THE ELDERLY AND PEOPLE WITH DISORDERS OF COORDINATION. SEE PAUL FÍS EDUC 2004, 18: 33-44.

6-J MEDINA, GKB ROSA MARQUES I. DEVELOPMENT OF TEMPORAL ORGANIZATION OF CHILDREN WITH LEARNING DIFFICULTIES. EDUC REV FÍS / UEM 2006, 17 (1): 107-16.

7-PAN CHIEN-YU; FREY GEORGIA PHYSICAL ACTIVITY PATTERNS IN C. YOUTH WITH AUTISM SPECTRUM DISORDERS. J AUTISM DEV Disord (2006) 36: 597-606

8-Effects of a Leisure Programme on quality of life and stress of Individuals with ASD.García-Villamisar DA Dattilo JJ Intellect Disabil Res 2010 Jul, 54 (7):. 611-9.

9-http://www.autismspeaks.org/science/science-news/sports-exercise-and-benefits-physical-activity-individuals-autism. Accessed 09/24/2014.

10-Hand, Brian D .; Mak, Sin H .; Crabtree, Lisa; Bush, Jill A. FACSM. Effect of an 8-Week Exercise Training Program on Gait Function in Young Adults with Autism Spectrum Disorders: 2521: Board # 129 June 3 8:00 AM - 9:30 AM. Medicine & Science in Sports & Exercise: May 2011, Volume 43 (5): 690-91.

11-Russell Lang, Lynn Kern Koegel, Kristen Ashbaugh, April Regester, Whitney Ence, Whitney Smith. Physical exercise and Individuals with autism spectrum disorders: A systematic review.

12-Lynn Kern, Robert L. Koegel, Kathleen Dyer, Priscilla A. Blew, Lisa R. Fenton. The effects of physical exercise on self-stimulation and Appropriate responding in autistic children. Journal of Autism and Developmental Disorders December 1982, Volume 12, Issue 4, pp 399-419.

AVENIDA SARGENTO HERMÍNIO, Nº1415 BLOCO ORQUÍDEA AP. 302-A CEP:60320-105
BAIRRO: MONTE CASTELO, FORTALEZA, CEARÁ.

HOW PHYSICAL EXERCISE CAN HELP THE DEVELOPMENT OF PSYCHOMOTOR AUTISTIC: A CASE STUDY.

ABSTRACT

The purpose of this study was to study how school physical education can work the motor and cognitive development of an autistic student enrolled in public Fortaleza and break down prejudices and barriers on the inclusion of the same. The same protocol was submitted to the Motor Development Scale, created by ROSA NETO (2002), adapted for tests covering different areas of motor development. The duration of study was 6 weeks with the student two weekly classes of 55 minutes each. The results indicated that the student has evolved its Motor Age from 92 to 114 months. With this we conclude that the practice of Physical Education should be performed by teachers and encouraged by the general population.

KEYWORDS: Autism, Exercício Physical, Physical Education.

COMMENT L'EXERCICE PEUT AIDER O DÉVELOPPEMENT DE AUTISTIC PSYCHOMOTEUR. UNE ÉTUDE DE CAS.

RÉSUMÉ

Le but de cette étude était d'étudier comment l'éducation physique à l'école peut travailler le développement moteur et cognitif d'un élève autiste inscrits à Fortaleza public et briser les préjugés et les obstacles à l'inclusion de la même. Le même protocole a été soumis au Développement échelle Motor, créé par ROSA NETO (2002), adapté pour les tests couvrant différents domaines de développement moteur. La durée de l'étude était de 6 semaines, les élèves de deux cours hebdomadaires de 55 minutes chacune. Les résultats ont indiqué que l'étudiant a fait évoluer son âge Motor 92-114 mois. Avec cela, nous concluons que la pratique de l'éducation physique doit être effectué par les enseignants et encouragé par la population en général.

COMO EL EJERCICIO PUEDE AYUDAR AL DESARROLLO DE AUTISTIC PSICOMOTOR. UN ESTUDIO DE CASO.

RESUMEN

El propósito de este estudio fue estudiar cómo la educación física escolar puede trabajar el motor y el desarrollo cognitivo de un estudiante autista inscrito en Fortaleza público y romper con los prejuicios y las barreras a la inclusión de la misma. El mismo protocolo se presentó a la escala de desarrollo motor, creado por ROSA NETO (2002), adaptado para las pruebas que cubren diferentes áreas de desarrollo motor. La duración del estudio fue de 6 semanas, con los estudiantes de dos clases semanales de 55 minutos cada uno. Los resultados indicaron que el estudiante ha desarrollado su Motor Edad 92 a 114 meses. Con esto llegamos a la conclusión de que la práctica de la Educación Física debe ser realizada por los profesores y alentado por la población en general.

COMO O EXERCÍCIO FÍSICO PODE AUXILIAR O DESENVOLVIMENTO PSICOMOTOR DE AUTISTAS. UM ESTUDO DE CASO.

RESUMO

O propósito desse estudo foi estudar como a Educação Física escolar pode trabalhar o desenvolvimento motor e cognitivo de um aluno autista matriculado na rede pública de Fortaleza e quebrar preconceitos e barreiras sobre a inclusão do mesmo. O mesmo fora submetido ao protocolo de Escala de Desenvolvimento Motor, criado por ROSA NETO (2002), adaptado, que abrange testes para diferentes áreas do desenvolvimento motor. A duração da pesquisa foi de 6 semanas tendo o aluno 2 aulas semanais de 55 minutos cada. Os resultados indicaram que o aluno evoluiu sua Idade Motora de 92 para 114 meses. Com isso concluímos que a prática da Educação Física escolar deve ser realizada pelos professores e incentivada pela população em geral.

PALAVRAS CHAVE: Autismo, Exercício Físico, Educação Física Escolar.