11 - THE KTK AS A METHOD FOR EVALUATION OF CHILDREN WITH MENTAL DISABILITIES IN PHYSICAL EDUCATION CLASSES

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1 INTRODUCTION

The Motor Coordination is related to the execution of basic movements. The lack of these can interfere with the performance of daily activities for some children, such as write, draw, manipulate and build, while others have difficulties in recreation games, running, hopping, jumping, throwing, balance, laterality, and spatial orientation in time, in sports and even limited mobility (Wright and Sugden, 1996 apud GORLA and Araújo, 2007).

Authors such as Krebs (1997), Pereira et al (1997), Gallahue (2001), cited by Gorla and Araujo (2007), concerned with the current lifestyle of the people, whether normal or handicapped, and the consequences that the lack of opportunity for exploitation of natural movements can cause.

As part of the educational system, the Physical Education is to meet the individual basic premise of a global in their capabilities, potentials, constraints and limitations of a physical, mental and social (FERREIRA, 1997).

The Adapted Physical Education is a part of Physical Education, no difference from its contents, but including techniques, methods and forms of organizations that can be applied to disabled individuals, whose objectives are the study and professional intervention (Oliveira and Perim, 2008), however, adapted physical education teacher should be able to develop the prescription of activities and understand a more complete routine evaluation attesting to the effectiveness of their lessons.

Evaluation of Adapted Physical Education classes can occur from the application of a test, it is important to verify its practicality (GORLA and Araujo, 2007). The KTK is a test where your application is quite feasible in schools, taking into account the action of the teacher, the low cost and easy manufacture of the material. This test has been used frequently in both children with and without mental retardation (GORLA, 2001).

Thus, this study is to give a damn what the contribution of Physical Education A adapted to improve the coordination of the mentally handicapped and thus promote studies and necessary knowledge that professionals need to have to work and is looking to evaluate and structure the contents of their lessons.

1.1 Objective

Analyze the benefits that adapted physical education classes can bring to the improvement of motor coordination in children and adolescents with mental disabilities.

1.2 Justification

The Physical Education classes enable the formulation of objectives and concepts of health professionals on the skills and more discerning, so that a class meets the needs of each student.

The assessment of motor development, particularly through the coordination of testing, has served as a working tool for many adapted physical education teachers. From the tests is a diagnosis, thus, easier to intervene in the classroom and a more effective customer service to students' needs, providing improved quality of life and daily activities.

2 LITERATURE REVISION

2.1 Mental deficiency

When one tries to define the concept of mental deficiency, there are numerous concepts, and there is no freedom of criticism. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TRTM, 2002) Mental Deficiency is characterized by intellectual functioning significantly below average, with an IQ of 70 or less, with onset before 18 years of age and concurrent deficits or impairments in adaptive functioning. It becomes possible to classify the disability levels of intellectual disability, Mental Retardation and mild, moderate, severe, profound and may also present an unspecified severity, whose diagnosis is difficult to determine, for various reasons.

2.2 Motor Coordination

The Motor Coordination is one aspect of motor behavior, which can be analyzed according to three viewpoints. The first is the biomechanical concerns the sort of impulse of force in a motor action and the ordering of events in relation to two or more perpendicular axes. The second is that is linking the physiological laws governing the processes of muscle contraction and the third, pedagogical, referring to the bond ordered phases of a movement or partial actions and learning new skills (Martinek, CHEFFERS and Zaichkowsky, 1997 apud LOPES, MAIA, SILVA, SEABRA and Morais, 2003).

2.3 Adapted Physical Education

Physical education is a basic, fundamental education. In the area of special education it becomes essential element, therefore, Physical Education has an important role in the development of students, especially those with disabilities, both in motor development, and in the intellectual, social and affective (Strapasson and Carniel, 2007).

Often, the discipline does not adequately contemplate the peculiar characteristics of each individual and unique, however, requires some modifications and adjustments to the education proposals that involve physical activity and sport, providing a service that considers the individual differences (FERREIRA, 1997).

The adapted physical education, according Pedrinelli (2005, p.4) apud Oliveira and Perim (2008, p. 127), is'' a part of Physical Education, whose objectives are the study and professional intervention in the universe of people who have different and conditions peculiar to the practice of physical activities.''

2.4 Valuation

Between 1980 to 2000, there was a large growth of adapted physical education, thus, the need for systematic assessment procedures and intervention programs (GORLA, ARAÚJO, CAMPANA and Calegari, 2009).

According to Gorla and Araujo (2007, p. 79) "The assessment can be defined in a book collection and educational intervention as relevant information about an individual to help make decisions valid, reliable and non-discriminatory." Even for the same authors, the measure to assess the movement capacity of a child can be formal test of the informal observation of children in their natural environment.

There are few tests disseminated by the Brazilian literature difficult to measure motor coordination, especially when it comes to parameters of Brazilian children, particularly with mental retardation (Silva and Ross, 1980 apud LIFANTE, 2009).

In educational evaluation must take a decisive role, is more than a simple collection of information is the collection of goals is central to specify and verify problems and make decisions about students (and YSSELDYKE SALVIA, 1991 apud GORLA, 2001).

2.5 KTK

The KTK is a test of coordination body for children. According Ballestero (2008) was designed by Kiphard and Schilling (1974) in order to evaluate the gross motor coordination and identify children with impaired coordinative. The test allows to investigate and classify the level of motor coordination in children and adolescents 5-14 years of age, identifying possible disruptions or failures according to age (GORLA AND ARAÚJO, 2007).

The KTK arose from a joint effort of the Institut für Westfälischen Jugendpsychiatrie und Heilpädagogik Hamm and the Institut für Ärztl. Päd. Philippe-Jugendhilfe der Universidad, due to need to diagnose more subtle motor disabilities in children with deviant and celebrate lesions (GORLA AND ARAÚJO, 2007).

According to Araújo and Gorla (2007), currently the application of the test takes about 10 to 15 minutes, involving rhythm, balance, laterality, speed and agility, which are distributed in the four tasks described below.

Task 1: Lock of balance, with the objective of stability of equilibrium in the march back over the crossbar. Material: Three beams 3 m long and 3 cm in height, with widths of 6, 4.5 and 3 cm. At the bottom are trapped small indents 15 x 1.5 x 5 cm spaced 50 by 50 cm. Thus, the beams reach a total height of 5cm. The implementation consists of walking backwards on the wooden beams with three different thicknesses.

Task 2: jumps on one leg, whose goal is the coordination of lower limbs, dynamic energy and power. Material: 12 are used foam blocks, each measuring 50 x 20 x 5 cm. The implementation consists of jumping with your right leg and left one or more stacked foam blocks, 12 pieces of 5 cm each, there is the possible amount that the individual can jump with one leg, and the initial height is related to age.

Task 3: Jumping Side, the goal is to speed on alternate jumps.

Material: A wooden platform (offset) 60 x 50 x 0.8 cm, with a dividing slat 60 x 4 x 2 cm and a stopwatch. The task execution is to jump from one side to another, with both feet together at the same time, as soon as possible for 15 seconds.

Task 4: Transfer of platforms, the goal is to Laterality; space-time structure. Material: A timer and two wooden platforms with 25 x 1.5 cm, whose corners are fastened with four feet in height 3.5cm. In the direction of travel, you need a free area of 5 to 6 m. The implementation consists of two platforms, the individual is about one and must move to the other, take the first and put it across with an area of about 12.5 cm apart, and so on for 20 seconds, the soon as possible by taking two attempts to perform the task, with an interval of at least 10 seconds.

3 METHODOLOGY

This study uses the reference of literature, understood as the act of asking and seeks information about a subject through a survey based on scientific articles, books and other literary sources.

4 RESULTS AND QUESTIONS TO BE DISCUSSED

Through studies by Silva and Ferreira (2001), in APAE Maringá, there was an application of the test KTK in 9 children aged six to ten years with Down syndrome, all showing moderate Mental Retardation. After four months of physical education classes, we applied the post-test, with a significant improvement in motor coordination, especially in developing 78% of the jumps on one leg, which consist of stacked foam jump and is directly related to the balance.

The results indicated that application of a unique program of physical activity, showed benefit for Motor Coordination.

Using the test KTK, Santos et al. (1999) apud Ballestero (2008) evaluated the level of development of Motor Coordination in seven children, age 5-9 years, of both sexes all with Intellectual Disabilities, moderate and severe. In the first evaluation, the group earned a regular motor coefficient, after an intervention, had the application of the post-test, where the coefficient engine showed normal levels. It was demonstrated that the practice of gymnastics within the proposed work, influenced the development of improved motor coordination of the participants.

In a study by Silva (2007), School City Council Umuarama-Parana, had a sample of 17 children with chronological ages varying between 07 and 12 years of both sexes with Intellectual Disabilities who have been separated into two groups (experiment and control). The experimental group received a perceptual motor activities program as an intervention and the control group received normal activities of planning for physical education. Was used as a means of evaluating the battery Motor Coordination Test KTK, and the same applied as pre and post-test. After the intervention period it was concluded that both programs have had positive influences of activities in relation to Motor Coordination, with a predominance in the results of the control group who had the intervention, physical education classes, contrary to expectations that study.

According to Gorla, and Carminato Araújo (2004), in a study of the Apae Ronlâdia located in the state of Parana, 9 individuals mentally handicapped in part without the syndrome, aged between 6 and 11 years for both sexes. Was applied to the jump monopedal task, which consisted of jumping foam stacked with left foot and right. The results of the post-test after an intervention, showed significant differences. All had progress on the test, except for one subject, aged 6 years because I could not keep in balance with one leg, making the execution of the jump.

Teles (2004) cited in Ribeiro (2009) evaluated the effects of targeted classes of motor activities to develop motor skills, applied in 30 individuals with Mental Deficiency, in both sexes, including 13 with mild mental retardation without Down syndrome and 17 with severe Mental Retardation (6 with Down Syndrome), from 17 to 39 years. We applied three tests including the balance that the rear parts of KTK, consisting of walking without falling back on three wooden beams, each of a different width. Found that, in applying the pre-test the females have better performance, for males, and individuals with mild mental retardation showed superior performance, for individuals with severe mental disabilities, the mentally disabled still relatively serious, individuals with Down syndrome have better outcomes. After applying the post-test showed that with increasing age there is a tendency to be a decrease in performance and found that all subjects had an improvement in motor coordination.

Gorla (2001) conducted a study in APAE Rolândia-Paraná with 9 individuals from 6 to 11 years old chronologically, but only one female, all with Intellectual Disabilities in part without the syndrome. Having as a tool for assessing the KTK, developed an Adapted Physical Education for 10 weeks, totaling 23 sessions. The contents used are common in physical education classes,

following the lines involving the variables relevant to the test being: balance, laterality, spatial and temporal orientation, speed, agility, rhythm and concentration tasks. The students' evaluation was made from some interventions, made up of task-oriented. He noted that all had improvement in motor coordination, but some individual characteristics such as attention deficit, anxiety, distraction and shyness, contributed to an unsatisfactory performance on some tasks.

In a study Gorla, Linfante and Souza (2007), evaluated the motor coordination in children and adolescents with Mental Retardation nonsyndromic between 6 and 11 years of APAE Rolândia. Jumping through the test side, which is part of the test battery KTK, this is to alternate the side jump, run in speed and two sets of 15 seconds. First evaluated the pre-test, followed by an intervention of a sequential practice of Adapted Physical Education, was soon after the end of the interventions was applied post-test, results revealed a satisfactory growth in the group, the study subjects exercised an improvement in motor coordination.

5 CONCLUSION

This study aimed to examine, through literature review, the benefits of Adapted Physical Education classes can bring to the improvement of motor coordination in children and adolescents with Mental Retardation.

The physical education teacher, with good planning, knowing its content to select and adapt a way that meets the needs of each student, they will more easily be a good exercise intervention program. For this, the assessment instruments Motor Coordination serve as a working tool, when applied in the pre-test, can give a thorough diagnosis of the difficulties presented by the students, making it more easy for the physical education teacher planning their activities. In the reassessment and the post-test, the teacher angry whether classes benefited in improving students' Motor Coordination, if the intervention program was positive or negative.

Taking into account the studies and considerations of the authors, we observe that by applying the KTK allows the students to understand the difficulties and promote further interventions, thus, easier for the Physical Education teacher to plan and evaluate their lessons. We conclude that the Adapted Physical Education classes are beneficial to the improvement of motor coordination in children and adolescents with Mental Retardation.

There was still little material is produced in Brazil about the Adapted Physical Education when it comes to Mental Deficiency. There are few published studies, with few participants in each subject. In any case, find some already indicates that it is an emerging concern, since the present study confirmed the benefit of the practice of Adapted Physical Education in improving motor coordination in case of the mentally handicapped.

There is, therefore, the finding of the need to proceed with studies directed at this population, with regard to assessments of Motor Coordination.

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THE KTK AS A METHOD FOR EVALUATION OF CHILDREN WITH MENTAL DISABILITIES IN PHYSICAL EDUCATION CLASSES

ABSTRACT

It is known that adequate stimulation of motor coordination in children with intellectual disabilities is an important component of development best suited. Moreover, it is known that this stimulation could and should be implemented in schools by teachers of Physical Education after proper assessment of motor function. Still, few scientific studies specifically address the benefits and strategies for the practice. This study aims to examine the benefits that the adapted physical education classes can bring to the improvement of motor coordination in children and adolescents with mental disabilities. For this, we researched the test KTK (Körperkoordination Test für Kinder), which consists of four events: balance beam, one leg jumps, lateral jumps and transfer platform. Its application becomes feasible in schools due to easy implementation and low cost of materials. Taking into account the studies and considerations of the authors, the results indicate that applications of different programs of physical activity showed benefits for the coordination, by applying the test KTK. It succeeded a careful diagnosis, leading to decisions on the problems presented by the students, making it easier for an intervention and planning activities on the basis of these difficulties. It found that classes in Adapted Physical Education provide improved motor coordination in children and adolescents with mental disabilities.

KEYWORDS: Mental Retardation; Motor Coordination; Evaluation; Test KTK.

LE KTK COMME UNE MÉTHODE D'ÉVALUATION DES ENFANTS HANDICAPÉS MENTAUX DANS LES CLASSES D'ÉDUCATION PHYSIQUE

SOMMAIRE

Il est connu que la stimulation adéquate de la coordination motrice chez les enfants ayant un handicap physique est une composante important de leur développement. En outre, il est connu que cette stimulation pourrait et devrait être mis en œuvre dans les écoles par les enseignants de l'éducation physique, après une évaluation appropriée de la fonction motrice. Pourtant, peu d'articles scientifiques en particulier sur les avantages et les stratégies de cette pratique. Cette étude vise à examiner les avantages que les classes d'éducation physique adaptée peut apporter à l'amélioration de la coordination motrice chez les enfant et les adolescents présentant un retard mental. Pour cela, nous avons cherché le test KTK qui se compose de quatre essais. Poutre, des sauts sur une jambe, le saut et le déplacement latéral de la plate-forme, votre candidature pour devenir viables dans les écoles en raison de la mise en œuvre facile et à faible coût des matériaux. Tenant compte des études et des considérations des auteurs, les résultats indiquent que les demandes des différents programmes d'activités physiques a montré les avantages de la coordination motrice, par l'application de la KTK test a été réalisé par un diagnostic rigoureux, menant à des décisions sur problèmes présentés par les étudiants ce qui rend plus facile pour les activités d'évaluation et de planification sur la base de ces difficultés. Il a constaté que les classes d'éducation physique adaptée contribué à l'amélioration de la coordination motrice chez les enfants et les adolescents présentant un retard mental.

MOTS-CLÉS: retard mental, la coordinacion motrice; évaluation; KTK test.

EL KTK COMO MÉTODO DE EVALUACIÓN DE NIÑOS COM DEFICIENCIA MENTAL EN LAS CLASES DE EDUCACIÓN FÍSICA

RESUMEN

La adecuada estimulación de la habilidad motora en niños con Minusvalía Mental es un importante mecanismo para lograr un desarrollo motor más eficaz. Mecanismo esto que si empleado en las escuelas por los maestros de Educación Física, tras diagnóstico adecuado de los problemas motores del alumnado, resultaría en excelentes beneficios. Entretanto, hay que tener en cuenta que pocos trabajos científicos especifican los beneficios y las estrategias para que se pueda practicarlos. Este estudio propone analizar como las clases adaptadas de Educación Física pueden contribuir para el desarrollo de la Coordinación Motora en los niños y adolescentes con Minusvalía Mental. Para tanto, se utilizó de un análisis basado en la batería de Pruebas KTK (Körperkoordination Test für Kinder), que comprende de cuatro ensayos: equilibrio a la retaguardia, saltos monopedales, saltos laterales y transposición lateral. Así, teniendo en cuenta los estudios y las consideraciones de los autores, se constató que sería viable el uso de la Prueba KTK en las escuelas, a causa de su fácil adaptación y el bajo costo de los materiales; bien como, a través de ella se puede alcanzar un diagnóstico más preciso sobre el grado de deficiencia motora en estos estudiantes; ya que, resultaría más fácil intervenir y planificar las actividades conforme la necesidad de ellos. Se concluyó, entonces, que las clases de Educación Física Adaptadas, que adoptan programas de actividad física diferenciados, contribuyeron para el desarrollo de la Coordinación Motora en los niños y adolescentes con Minusvalía Mental.

PALABRAS CLAVE: Minusvalía Mental; Coordinación Motora; Evaluación; Pruebas KTK.

O KTK COMO MÉTODO DE AVALIAÇÃO DE CRIANÇAS COM DEFICIÊNCIA MENTAL NAS AULAS DE EDUCAÇÃO FÍSICA

RESUMO

Sabe-se que a estimulação adequada da Coordenação Motora em crianças com Deficiência Mental é um componente importante para seu desenvolvimento mais bem adaptado. Além disso, sabe-se que esta estimulação poderia e deveria ser executada nas escolas pelos professores de Educação Física, após avaliação apropriada da função motora. Ainda assim, poucos trabalhos científicos abordam de forma específica os benefícios e as estratégias para esta prática. O presente estudo pretende analisar os benefícios que as aulas de Educação Física Adaptada podem trazer para a melhoria da Coordenação Motora de crianças e adolescentes com Deficiência Mental. Para isso, foi pesquisado o teste KTK (Körperkoordination Test für Kinder) que é composto por quatro provas: Trave de equilíbrio, saltos monopedais, saltos laterais e transferência de plataforma, sua aplicação se torna viável em escolas devido a fácil aplicação e o baixo custo dos materiais. Levando em conta os estudos e as considerações dos autores, os resultados indicaram que as aplicações de programas diferenciados das atividades físicas mostraram os benefícios para a Coordenação Motora, através da aplicação do teste KTK, conseguiu-se um diagnóstico criterioso, dando origem às decisões sobre os problemas apresentados pelos alunos, ficando assim, mais fácil para uma intervenção e planejamento das atividades com base nas dificuldades destes. Constatou-se que as aulas de Educação Física Adaptada contribuíram para a melhoria da Coordenação Motora de crianças e adolescentes com Deficiência Mental.

PALAVRAS-CHAVE: Deficiência Mental; Coordenação Motora; Avaliação; Teste KTK.