

## 45 - COMPARATIVE STUDY ON PRACTICING AND NOT PRACTICING DANCE IN INDIVIDUALS WITH DOWN SYNDROME

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### INTRODUCTION

According to the National Curriculum Parameters (PCN), 1997, "the art of dance is part of the cultures and always integrated the work, the religions leisure activities." Dancing is an activity inherent in the nature of man, being a privilege of all peoples, a cultural individual and collective.

In education, it should be focused on the overall development of children and adolescents, encouraging all kinds of learning they need. The dance reveals the joy of discovering through exploration of his own body and qualities of movement and motor development. (Achcar, 2001).

When one seeks to educate through dance, it is necessary first, a clear understanding of the objectives to pursue, ie, the teacher should be careful in the selection and control of techniques that will help you in your task, because their values are on bases allow developing creative potential through discovery and exploration of new forms of body movement. (Cunha, 1992).

In this way, the objective of this study was to identify the benefits of dance for motor coordination in children with Down syndrome. This is a case study, descriptive exploratory quantitative field research in which two subjects were selected with SD mild to moderate and evaluating the implementation of the test motor evaluation according Rosa Neto (2002), and as the application of a model of qualitative semi-structured interview with the mother applied practitioner student of dance and a form of quantitative research for the teacher.

### REFERENTIAL THEORETICAL

By exploring the child develops motor awareness of the world around him, and herself. The motor control allows the child to concrete experiences, which will serve as a basis for building basics for their intellectual development (PINK NETO, 2002).

As movement education can understand the performance of motor activities that focus on developing skills (running, jumping, hopping, throwing, pushing, pulling, swinging, climbing, descending, walking) physical capacity (agility, dexterity, speed, speed reaction) and physical qualities (strength, muscular endurance, aerobic endurance and anaerobic endurance). So the movement education prioritizes the motor aspect in elementary education. In the educational setting this work may be distributed throughout the school term, the emphasis, however, occurs in the upper grades of elementary school when the psychological and physiological characteristics of the students match the specialties of this proposal (MATTOS, 1999, apud BALBBÉ, et al., 2009).

Dance can be considered a form of rhythmic expression of the body and is beneficial both to the physical aspects as the social and psychological and allows the individual who practices the development of body awareness, besides being a mediator for self-knowledge (TOLOCKA & VERLENGIA, 2006 apud FURLAN et al, 2008).

Thus etall Furlan, 2008, states that dance is an enjoyable way of using the body to meet feelings, express and convey the mood and can be of great value for stimulation and motor development of the individual have a disability or not, because his practice allows experimentation the most varied movements, and thus tends to enrich and assist the development of the body schema. (FURLAN etall, 2008).

Thus, we see that the early stimulation of children with Down syndrome (DS) is very important because of their motor limitations, such as hypoplasia of the frontal lobes and occipital, temporal lobe reduction by up to 50% of cases, that may be unilateral or bilateral. In some brains, there is a decrease of the corpus callosum, anterior commissure and the hippocampus. Limiting the transmission and communication of many neural systems; difficulty keeping eye due to its slowness and low muscle tone, difficulty of auditory perception and distinction; difficulties in cognitive and linguistic development, obesity and premature aging among other disorders. (LIMA & GROVE, 2010).

Many children with Down syndrome have muscle weakness (hypotonia), which can affect their fine and gross motor skills. This can delay the phases of motor development, restricting experiences of the early years, becoming slower cognitive development. In the classroom, the development of writing is especially affected.

Coordination visuomanual is the most frequent activity and more common in men, which acts to pick up an object and throw it to write, draw, paint, cut, etc.. It includes a transport phase of the hand, followed by a phase gripping and manipulating, resulting in three parts: the object / eye / hand. The manual activity, guided by sight, does intervene, while all the muscles that assures maintenance of the shoulders and arms, forearms and hands, which is particularly responsible for the act manually or by the act of grabbing motor as well as the oculomotor muscles governing the fixing of the gaze, the shakes and eye movements of persecution. (NETO. 2002.p.14)

According to Cintra, 2002 apud Coelho, 2007, one can enumerate the following benefits of dance for children with Down syndrome:

- a) There is a large complex of activities going on at once during a dance class stimulating the individual mental, psychologically and physically.
- b) The dance provides create, stimulate new situations of group relationship, entertainment, relaxation and excitement.
- c) Prioritize the work engine to perform the choreography and exercise, and mental work, to memorize them.
- d) The person will feel discoverer himself, and the feeling of interacting with the environment, with colleagues and himself is the biggest and best potential to be at the mercy of life and walk with the shackles of prejudice to slow, heavy steps. (CINTRA, 2002 apud COELHO, 2007).

Specifically in the case of children with DS to work the dance, needs attention with regard to its specific characteristics, such as aspects of hypotonia, the cardiopulmonar little resistance, the body posture, the conditions of static and dynamic balance, besides the impaired development of some motor skills involved with coordination, laterality concept of space, time, body

schema and language. (Ditto)

It is noteworthy that even in the case of people with Down syndrome diagnosed with mild to moderate, chronological age can not be comprehended under the same cognitive levels outside of SD. Therefore, this clinical feature is always open to "growth" can be understood that in any phase of the biological subject.

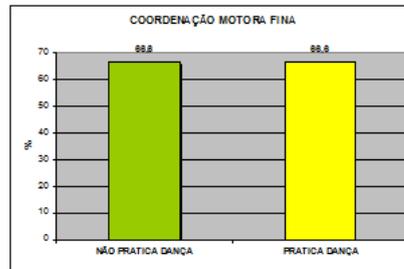
Starting from the assumptions that dance is a didactic pedagogical process scientifically recognized as responsive in SD, it is perfectly possible through its application to improving and developing more interactive and inclusive social interaction. Both aspects in micro-structural and macro structural activities that are developed in the professional physical educator in SD is intellectual investment and technological achievement of high social.No the collective must achieve, especially public policies for health promotion, considering the reflections stemming from the survey data on the benefits of dance and programmatic actions to increase the incentive for psycho bikes in SD, as well as the appreciation of the professional physical educator in the context of SD.

**RESULTS AND DISCUSSION**

With regard to motor aspects parents and teachers identified in the development Posture, Laterality, Notions location, rhythm and musical Notion space. As the social, realized that after dance practice hears a decrease in aggressiveness and improved Creativity, Emotional Balance, Joy, spontaneity, expressiveness and affectivity. And with regard to the cognitive aspects hears a maturing of Logical Reasoning, better use in other disciplines and other activities, however was not seen major developments in improving speech and fine motor coordination.

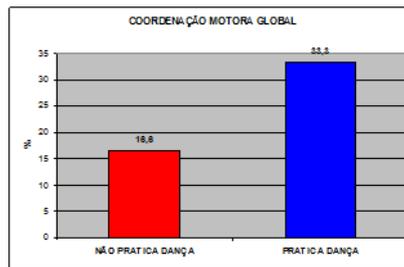
With regard to the SD stands point: their cognitive difficulties, which are consequences of an error in the distribution of chromosomes of cells. The SD has an extra chromosome in pair 21 (in most cases) that causes an imbalance of the regulatory function genes have on protein synthesis, loss of harmony in the development and function of cells. This excess genetic load is present from the intrauterine development and characterize the individual throughout his life. Clearly, if the characteristics differ from person to person (Mustacchi & ROZONE, apud. SILVA & Kleinhans, 2008. Apud LIMA & GROVE, 2010). Therefore the assessment of parents and teachers reinforce the data exposed by the authors above.

The following charts show the results of motor tests through the order of application: Fine Motor Coordination, Global Motor Coordination, Balance, Body and Space Organization Scheme. The data are presented through a comparison between practicing and non-practicing student of dance.



Graph 1 - Fine Motor Coordination

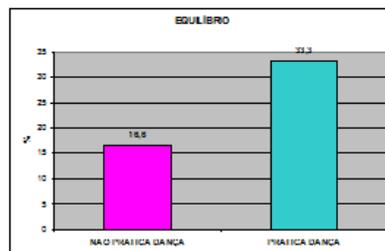
The graph shows that both the young participants showed a level of 66.6% of success in motor tests. This equality is justified by the fact that the young practitioner would dance has a visual impairment, an essential element for success on tests of fine motor coordination.As the literature referenda subjects with SD somehow are under neurophysiological limits that condition for development and processing of fine motor coordination is limited if you make the analogy with non SD.Por it say that whatever the possibilities conquered represent SD for patients with a significant advance in the face of demands and pressures and demands of literacies in contemporary society.



Graph 2 - Global Motor Coordination

It is observed that the young non-practicing dance was successful in 16.6% of the global tests of motor coordination and the young practitioner dance was successful in 33.3% of tests. In this way confirms the large contribution that dance back to the overall development of the young independent be defective or not.

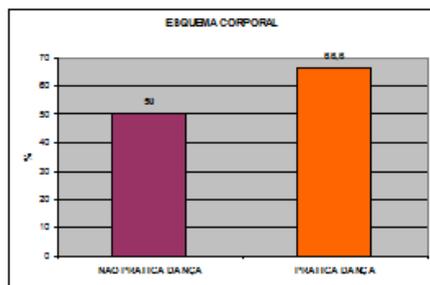
The global motor movement, be it the simplest, is a movement kinesthetic, tactile, labyrinthine, visual, spatial, temporal, and so on. The dynamic bodily movements play an important role in the improvement of controls and thinning of the nerve sensations and perceptions. (ROSE GRANDSON, 2002, p. 16)



Graph 3 – Balance

As the graph shows, the young non-practicing dance was successful in 16.6% of the balance tests and the young practitioner dance was successful in 33.3% of tests, justified by the fact dance provide an essential control of muscle tension for the state of equilibrium.

The primary balance is the basis of all the action of different body segments. The more defective the movement is more energy consuming; such energy expenditure could be catalyzed to other neuromuscular work. (PINK NETO, 2002).



Graph 4 - Body Scheme

According to the chart the young non-practicing dance was successful in 50% of tests of body schema and the young practitioner dance was successful in 66.6% of tests.

The body image as a result of the entire complex kinetic activity, and body image synthesis of all the messages, all stimuli and all actions that allow the child to differentiate themselves from the outside world, and to make the "I" the subject of his own existence. The body schema can be defined with regard to education, as the key to the whole personality organization. (BALBÉ et al, 2010).



Graph 5 - Space Organization

Through the above chart we can see that the young non-practicing dance was successful in 66.6% of tests of spatial organization and the young practitioner dance was successful in 83.3% of tests. Thus justifying the fact that dance in the spatial aspects are worked through the activities that are performed in directions vertical, horizontal and diagonal, where they are exploited all plans, directions, direction and trajectory through his body. (NANNI, 2001).

All sensory modalities involved to some extent in spatial perception: sight, hearing, touch, smell and proprioception. Information received are not always in agreement and imply even contradictory perceptions, particularly in the determination of verticality. Spatial orientation refers to our ability to accurately assess the relationship between the physical body and the environment, and to make modifications in the course of our shifts. (PINK NETO, 2002).

## CONCLUSION

Disability often isolates the child's world both in its participation, as in the understanding of the facts about, however it is believed that the dance this case can play an important role as a facilitator of communication, offering your child new ways of expression their ideas and feelings, as well as the acquisition of new concepts.

From these points we see that educational methods should allow the child to create, express and produce and not only watch so that she can develop their intelligence and build knowledge about the shapes, sounds, movements, time and space.

Encourage people with Down syndrome will experience the dance generates a potential to leverage new sensations cognitive and motor catalyst satisfactory experiences that cannot be measured in the narrow confines of a quantitative approach and mathematics.

Could not see the subject of study dance in addition to their classroom environment, the lenses used are of his mother a teacher. This meeting was not possible, but to identify statistical results referenced in literature can infer that whatever the motor performance of these subjects, their bodies crossing chasms social, and cognitive, which on the other side of the world learned to stabilize and conceptions motor practice called creative, beautiful and perfect.

Other pairs, similar to the subjects in this study were observed in pedagogical activity driven by physical education teacher. Adança ballroom with lots of creative expressions, scenographic that mingled with the murmurs scenario, speeches, cheers, clapping, feet, body meche that ensnares runs, flies, and a magical flight, achieve greatness in the show lighted stage of eyes, faces that society has learned to ignore how beautiful.

Finally, this study allows us to affirm that the physical education teacher may actually be able to promote the professional segments of the population with a large SD service in professional ethics and praxis intellectually supported to respond appropriately to the interests of marginalized groups, that chance, genetically and historically partner could condemn in the basements of invisibility in a society of territories and maps ethical, aesthetic and social under which the "normal" can guarantee dreams and joys.

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## **COMPARATIVE STUDY ON PRACTICING AND NOT PRACTICING DANCE IN INDIVIDUALS WITH DOWN SYNDROME**

### **ABSTRACT**

Studies on the motor behavior of people with Down Syndrome - SD - there are few, presenting modest sources of help and clarification, however the term developmental delay, given the differences that can be noticed in people with motor development with SD compared with children without this syndrome is inappropriate, because it presents really are no detours and delays development. In this way, the objective of this study was to identify the benefits of dance for motor coordination in children with Down syndrome. This is a case study, descriptive exploratory quantitative field research in which two subjects were selected with SD mild to moderate and evaluating the implementation of the test motor evaluation according Rosa Neto (2002), and as the application of a model of qualitative semi-structured interview with the mother applied practitioner student of dance and a form of quantitative research for the teacher. The evaluation showed the following results: on the fine motor coordination, both young obtained 66.6%, as the overall coordination: 16.6% non-practicing and practicing dance 33.3%, as the balance is not practicing 16.6% and practitioner 33.3%, as the body schema 50% non-practicing and practicing dance as 66.6% and the spatial organization of non-practicing practitioner 66.6 and 83.3% of participants were successful in tests.

**KEYWORDS:** dance; Down Syndrome; Motor Evaluation

## **ÉTUDE COMPARATIVE SUR LA PRATIQUE ET NON LA PRATIQUE DE DANSE EN PERSONNES TRISOMIQUES**

### **RÉSUMÉ**

Les études sur le comportement moteur des personnes atteintes du syndrome de Down - SD - il ya peu, la présentation des sources modestes de l'aide et des éclaircissements, mais le retard terme de développement, compte tenu des différences qui peuvent être constatées chez les personnes atteintes développement moteur avec SD par rapport aux enfants sans ce syndrome est inapproprié, car il présente vraiment pas de détours et des retards de développement. De cette façon, l'objectif de cette étude était d'identifier les avantages de la danse de la coordination motrice chez les enfants atteints du syndrome de Down. Il s'agit d'une étude de cas, la recherche exploratoire descriptive quantitative domaine dans lequel deux sujets ont été sélectionnés avec SD légère à modérée et d'évaluer la mise en œuvre de l'évaluation du moteur de test selon Rosa Neto (2002), et que l'application d'un modèle de données qualitatives semi-structurées entrevue avec la mère a demandé étudiant praticien de la danse et une forme de recherche quantitative pour l'enseignant. L'évaluation a montré les résultats suivants: sur la coordination motrice fine, à la fois jeune obtenus 66,6%, que la coordination globale: 16,6% non-pratiquants et la pratique de la danse de 33,3%, le solde n'est pas pratique 16,6% et 33,3% praticien, comme le schéma corporel de 50% non-pratiquants et la pratique de la danse comme 66,6% et l'organisation spatiale des non-pratiquants praticien 66,6 et 83,3% des participants ont réussi les tests.

**MOTS-CLÉS:** danse, le syndrome de Down; Évaluation moteur

## **ESTUDIO COMPARATIVO DE PRACTICAR Y PRACTICAR NO DANZA EN LAS PERSONAS CON SÍNDROME DE DOWN**

### **RESUMEN**

Los estudios sobre la conducta motora de las personas con Síndrome de Down - SD - hay pocos, presentando modestas fuentes de ayuda y aclaraciones, sin embargo, el retraso en el desarrollo plazo, dadas las diferencias que se pueden notar en las personas con el desarrollo motor con SD en comparación con los niños sin este síndrome es inapropiado, ya que presenta realmente no hay desvíos y retrasos de desarrollo. De esta manera, el objetivo de este estudio fue identificar los beneficios del baile para la coordinación motora en niños con síndrome de Down. Se trata de un estudio de caso, descriptivo exploratorio investigación de campo cuantitativo en el que dos sujetos fueron seleccionados con SD leve a moderada y evaluar la aplicación de la evaluación del motor de prueba según Rosa Neto (2002), y como la aplicación de un modelo cualitativo de entrevista semi-estructurada con la madre solicitó estudiante practicante de danza y una forma de investigación cuantitativa para la maestra. La evaluación mostró los siguientes resultados: en la coordinación motora fina, tanto jóvenes obtenidas 66,6%, ya que la coordinación general: 16,6% no practicantes y la práctica de la danza del 33,3%, ya que la balanza no está practicando 16,6% y el practicante el 33,3%, ya que el esquema corporal del 50% no practicante y practicar la danza como un 66,6% y la organización espacial de los no practicantes practicante 66,6 y el 83,3% de los participantes tuvieron éxito en las pruebas.

**PALABRAS CLAVE:** danza, síndrome de Down, Evaluación Motor

**ESTUDO COMPARATIVO EM PRATICANTES E NÃO PRATICANTES DE DANÇA EM INDIVÍDUOS COM SÍNDROME DE DOWN****RESUMO**

Os estudos sobre o comportamento motor das pessoas com Síndrome de Down – SD - ainda são poucos, apresentando, portanto modestas fontes de auxílio e esclarecimento, entretanto o termo atraso de desenvolvimento, dado as diferenças que podem ser notadas no desenvolvimento motor com pessoas com SD se comparadas com crianças sem essa síndrome é inadequado, pois o que se apresenta na verdade são desvios de desenvolvimento e não atrasos. Desse forma, o objetivo deste trabalho foi identificar os benefícios da dança para a coordenação motora na criança com Síndrome de Down. Trata-se de um estudo de caso, exploratório descritivo de natureza quantitativa com pesquisa de campo no qual foram selecionados dois sujeitos com SD de grau leve e moderado para uma avaliação da aplicação do teste avaliação motora de acordo com Rosa Neto (2002), bem como a aplicação de um modelo de entrevista qualitativa semi estruturado aplicado com a mãe do aluno praticante de dança e um formulário de pesquisa quantitativa para o professor. A avaliação apontou os seguintes resultados: quanto à coordenação motora fina, ambos os jovens obtiveram 66,6%; quanto a coordenação motora global: não praticante 16,6% e praticante de dança 33,3%; quanto ao equilíbrio não praticante 16,6% e praticante 33,3%; quanto ao esquema corporal não praticante 50% e praticante de dança 66,6% e quanto a organização espacial não praticante 66,6 e praticante 83,3% dos participantes obtiveram sucesso nos testes.

**PALAVRAS CHAVES:** dança; Síndrome de Down; Avaliação Motora