21 - DANCE AS PHYSICAL THERAPY RESOURCES IN THE REEDUCATION PSYCHOMOTOR AT PATIENT WITH SPECIAL NEEDS

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INTRODUCTION

After birth, the motor goes through a transition process, where free movements that were experienced within the uterus, come to be restricted by gravity, added to the CNS development and myelination of nerve bundles, provides progressive achievement of specific motor and intellectual (ZANINI ET AL., 2002).

According to some health professionals, psychomotor disturbances are due to disruption of the biological, neurological, intellectual, psychological, socioeconomic or educational environment beyond the influence. Children with biological hazards, conditions are usually related to pregnancy and birth, such as neurological and neuropsychological.In addition to prematurity, brain injury, low birth weight, respiratory impairment at birth, socio-economic constraints and difficult access to health and education (SAPIENZA & PEDROMÔNICO 2005; LATZINA et al. 2007; OLNESS, 2003, BRADLEY & CORWYN, 2002).

Dance is an excellent vehicle for the acquisition of knowledge and capabilities, useful for the harmonious and balanced development. The educational value and its mainstreaming in the educational curricula result in large part on the relationships that facilitated this activity are established among the cognitive, affective and psychomotor (AVILA et al., 2005).

Dancing involves rhythmic and coordinated movements of the body musculature, and enables the development and a fast and logical reasoning for the execution of these movements in the individual (COSTA et al., 2004).

Given this context, this study aims to determine the effects of dance as a physical therapy resource in psychomotor reeducation in patients with special needs

METHODOLOGY

This study was approved by the Ethics Committee in Research of the Universidade do Oeste do Estado do Paraná - UNIOESTE for later achievement in APAE Cascavel / PR.

The study sample had 32 student volunteers from the Young and Adult Education APAE Cascavel / PR, of both sexes, aged between 17 and 35.

First, the sample was selected randomly divided into two groups, one group served as control and one experimental group called Dance Group. The experimental group was composed of 18 students submitted through the intervention of psychomotor activities with dance. The control group consisted of 14 participants were assessed at the beginning and end of the experiment, without any intervention during this period.

Then, history was made with the purpose of screening, which consisted in raising the personal data of participants, information that could derail its inclusion in the study that meet the following criteria: patients with diagnosed mental syndrome, meandering, spontaneous individuals who have demonstrated adherence to protocol and signed a consent form. Exclusion criteria were presence of acute trauma or patients with signs and symptoms that contraindicate a physical activity.

After the interview and selection of participants, they passed the tests before assessing psychomotor (initial evaluation) and after (end evaluation) of 20 activity sessions with dance. The control group underwent evaluations at the same time interval. It is noteworthy that after the experiment, the control group was invited to the dance therapy such as the experimental group.

Data collection was carried out individually by assessing psychomotor called Motor Development Scale (EDM) proposed by Rosa Neto (2002), which consists of applying evidence easy to handle and graduated difficulty for assessing psychomotor skills such as motor fine (MF), overall motility (MG), the body schema (EC), the spatial organization (SO), the temporal (OT), equilibrium (EQ).

The classification results of the EDM is obtained from the ratio of general motor score, being classified as "very low" values 69 or less, "lower" 70 to 79; "low normal" 80 to 89; "average normal "90 to 109," high-normal "110 to 119;" superior "120 to 129, and" much higher "than 130 or more.

Sessions with dance activities were often twice a week, with an average of 70 minutes each session. The therapy was based on the principles of dance therapy and psychomotor reeducation, choreography associated with training, and relaxation dynamics, movements and music made with adequate exercise and stimulation playful.

After the 20 sessions was reapplied psychomotor assessment in both groups. To analyze the results using simple descriptive statistics with the presentation of the measures of central tendency, measures of dispersion and distribution of absolute and relative frequency.

For statistical analysis we used the analytical hypothesis test called the "t" Student test with a significance level of 5% with $p < 0.05$.

RESULTS

Comparison of average obtained by the control group, between assessments, not statistically significant (Figure 1).

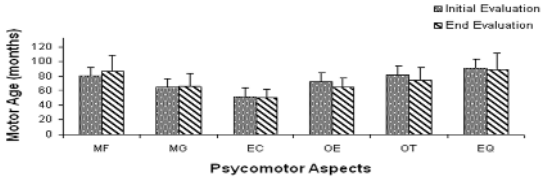


Chart 01: presentation of the measure of central tendency and dispersion measure, aspects of psychomotor obtained

at baseline and final evaluation in the control group.

In Dance Group, the results indicate that the averages of the psychomotor aspects, MF, MG, CE, OE, EO and EQ were 100.7 months, 83.3 months, 68 months, 78.7 months, 84.7 months and 82.7 months, respectively, during the initial evaluation.

In the final evaluation, the results indicate that the averages of the psychomotor aspects in Group Dance, MF, MG, CE, OE, EO and EQ were 116.7 months, 91.3 months, 92.7 months, 98 months, 105 3 months and 92 months respectively.

When comparing the mean psychomotor aspects of the dance group demonstrated, there is increasing age in all motor, which was statistically significant (p = 0.03) in EC and OT (Chart 02).

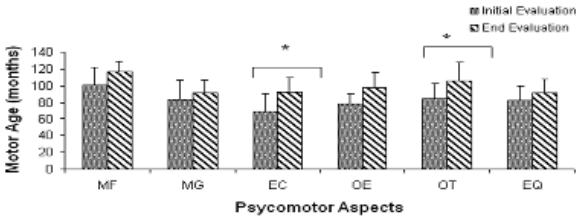


Chart 02: presentation of the measure of central tendency and dispersion measure, aspects of psychomotor obtained at baseline and final evaluation at the dance group. The bar and asterisk indicate statistically significant differences were observed between the mean, p <0.05.

According to results of the Scale of Motor Development (EDM), the index found in 22% of the volunteers pointed motor development than chronological age, while in 78% to the motor age scores revealed much lower than the beginning of the experiments in Group dance. After finishing the dance sessions, the contents of this scale showed 22% had low normal development, 11% normal development average 33% lower and 33% much lower.

In the control group during the initial evaluation and final, 100% of the volunteers had much lower rate of EDM. The results indicate that a statistically significant difference between the scores of IMG (p = 0.003) and MGQ (p = 0.014) between the beginning of the end of the experiment in the dance group (Table 1).

TABLE 01: Values for the Ages General Motor (IMG) and General Motor Quotient (MGQ), classification under Scale Motor Development (EDM) in the initial assessment (1) and end evaluation (2) Dance Group and Control Group. The asterisk indicates that a statistically significant difference.

	INITIAL EVALUATION			END EVALUATION		
GROUPS	IMG	QMG	EDM	IMG	QMG	EDM
Dance Group	82 ± 12,63	62 ± 17,67	Very Low	99,33 ± 12,36*	75,2 ± 15,55*	Lower
Control Group	72 ± 10,58	54,54 ± 8,03	Very Low	71,14± 10,35	53,88 ± 7,85	Very Low

DISCUSSION

After the dance sessions there was that dance group showed statistically significant improvement in mean General Motor Age. The results of this study confirm the benefits of psychomotor intervention on motor development, also reported by Rosa Neto (2004) in their study involving 10 children with learning disorders, that after 30 sessions with psychomotor activities, Also Showed Improvements in motor development significant.

The results obtained by Majorek, Tuchekmann and Heusser (2004), who studied five cases of children with learning difficulties, which had participated in movement therapy with musical activity by weekly sessions of 30 minutes, which were assessed balance, rhythm and coordination, also show improvement in the evaluated areas and social behavior.

Both groups in this study initially had the General Motor Quotient rated much lower. However, the final evaluation found statistically significant evolution in the experimental group, featuring the profile of the group as “lower.”

Similar data were observed in a study by Rosa Neto et al. (2004), involving children with learning difficulties undergoing psychomotor intervention with play activities, where the authors reported the evolution of the sample and considered the results of the study stable.

Among all the concepts, the scheme was the body which had a higher deficit in both groups. Similar data were reported in a study by Rao et al. (2003), where the profile was evaluated psychomotor Psychomotor Battery by Fonseca in nine children with mental disabilities.

Rosa Neto et al. (2004) studied children 4-12 years of age assessed in a program of psychomotor learning disabled, they found classified as lower motor profile, where the coefficients of all areas being evaluated showed that the large deficits major impairments were observed in the balance, the body schema, the spatial and temporal organization.These results seen against the findings in this research, where the largest deficits were also found body image, space-time organization and balance, as shown in the initial assessment of the Dance Group.

Regarding the second evaluation, can be seen that the interventions promoted through dance evolution of driving age in all aspects evaluated in the experimental group, especially the body schema and temporal organization, which showed statistically significant improvement.

These data are corroborated by Vargas (2000), which reports that the practice of dance improves motor functions such as large and fine motor skills, balance, body image, the space-time organization, and the coordination, endurance, agility, elasticity and contribution to the development of the functions of attention, memory, reasoning, creativity and exploitation. The authors suggest that dance through choreography, provided participants in the experimental group improved this aspect.

In a study by Adams (2004) found positive developments in the motor development of children with Down syndrome after being subjected to the intervention of 30 sessions. In this study, the highest values were found to temporal organization, and the largest deficits were observed in the global motor, and the results are consistent with this study. TIBEAU et al. (2006) reports that the dance is associated with visual perception, tactile and auditory.

In the fine motor aspects of motor and global spatial organization and balance, the experimental group obtained higher average in the final evaluation. In this research, the dance was associated with activities of handling objects and toys, which provided greater fine motor work.These findings are similar to Ferreira (1997), Which through a program consisting of sequential Recreational Activities in a consistent manner from simple to more complex Activities, found improvement in fine

motor skills and overall, in children with Down syndrome. GORLA et al. (2004) also relaram general improvements in motor function in children with Learning Disabilities, 10 weeks after program.

In this context, the Dance as physical therapy resource is an important means for the rehabilitation of individuals with special needs, which enables you to develop the physical capabilities and helps expand the universe of body experiences and exploring, expanding your body language, improving the relationship has with his own body and society.

CONCLUSION

With this research, the results showed the effectiveness of treatment with dancing on the viewpoints assessed, it can be concluded that participants demonstrated improvement on the motor development.

REFERENCES

ALMEIDA, G. M. F. ROSA NETO, F. Motor evoluation and intervention in Down Syndrome. **Fiep Bulletin**, Special Edition – article II, v.76, p. 413-416, , 2006.

ÁVILA, L.; ARAÚJO, C.; NUNOMURA, L. A dança educativa como base para um aumento do repertório motor da criança. **Cinergis**, Santa Cruz do Sul, v.6, n.1, p. 69-79, jan./jun. 2005.

BRADLEY, R. H.; CORWYN, R. F.Socioeconomic status and child development. **Annu Ver Psychol**, v.53, p.371–99, 2002.

COSTA, A. G. M.; MONTEIRO, E. M. L. M.; VIEIRA, N. F. C.; BARROSO, M. G. T. A dança como meio de conhecimento do corpo para promoção da saúde dos adolescentes. **DST Jornal Brasileiro Doenças Sexualmente Transmissíveis**, v.16, n.3, p. 43-49, 2004.

GORLA, J. I.; ARAÚJO, P. F.; CARMINATO, R. A. Desempenho psicomotor em portadores de deficiência mental: avaliação e intervenção. **Revista Brasileira de Ciências do Esporte**, v.25, n.3, p. 133-147, 2004.

FERREIRA, M. E. C. Desenvolvimento perceptivo motor de crianças com Síndrome de Down e paralisia cerebral. **Revista da Sobama**, v.2, n.2, p. 17-22, 1997.

HOLLATZ, K.; SARRO, K. J. O uso da dança como aspecto lúdico no tratamento fisiotterapêutico para criança portadora de paralisia cerebral. **Fisioterapia Brasil**, v.6, n.3, p. 223-225, 2005.

Latzin P, Frey U, Roiha HL, Baldwin DN, Regamey N, Strippoli MPF, et al. Prospectively assessed incidence, severity, and determinants of respiratory symptoms in the first year of life. **Pediatric Pulmonology**, v. 42, p.41-50, 2007.

MAJOREK, M.; TUCHELMANN, T.; HEUSSER, P. Therapeutic Eurythamy – movement therapy for children with attention deficit hyperactivity disorder (ADHD): pilot study. **Complementary Therapies in Nursing & Midwifery,** v. 10, p. 46-53, 2004.

OLNESS, K. Effects on brain development leading to cognitive impairments: a worldwide pandemic. **J Dev Behav Pediatr**, v.24, p.120–30, 2003.

REZENDE, J. C. G.; GORLA, J. I.; ARAÚJO, P. F.; CARMINATO, R. A. Bateria psicomotora: uma análise com o portador de deficiência mental. **Revista Digital**, Buenos Aires, n.62, jul. 2003.

ROSA NETO, F. **Manual de Avaliação Psicomotora.** Porto Alegre: Artmed, 2002.

ROSA NETO, F. ; POETA, L. S. ; COQUEREL, P.R. S.; SILVA, J. C. Perfil motor em crianças avaliadas em um Programa de Psicomotricidade. **Temas sobre Desenvolvimento**, São Paulo, v. 13, n. 74, p. 19-24, 2004.

SAPIENZA, G.; PEDROMÔNICO, M. R. M. Riscos, proteção e resiliência no desenvolvimento da criança e do adolescente. **Psicologia em estudo,** Maringá, v.10, n.2, p. 209-216, 2005

VARGAS, L. A. A Dança na Educação Física. **Textura**, Canoas, n.3, p. 1-135, 2002.

TIBEAU, C. C. P. M. Motricidade e musica: aspectos relevantes das atividades rítmicas como conteúdo da Educação Física. **Revista Brasileira de Educação Física, Esporte, Lazer e Dança**, v. 1, n. 2, p. 53-62, 2006.

ZANINI, P.Q.; HAYASHIDA, M; HARA, P.S.; LIMA, A.C.; CASTRO, S.S.; BUENO, C.F. Análise da aquisição do sentar, engatinhar e andar em um grupo de crianças pré-termo. **Revista Fisioterapia**, Universidade de São Paulo, v. 9, n. 2, p. 57-62, 2002.

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DANCE AS PHYSICAL THERAPY RESOURCES IN THE REEDUCATION PSYCHOMOTOR AT PATIENT WITH SPECIAL NEEDS

ABSTRACT

This study aims to verify the effectiveness of dance as a physical therapy resource in psychomotor rehabilitation in individuals with special needs. The sample consisted of people with mental disabilities which was assessed by the Scale of Motor Development (EDM) including fine motor (MF), overall motility (MG), the body schema (EC), the spatial organization (SO), temporal organization (OT) and equilibrium (EQ). Then the subjects were divided into two groups, with 14 in the control group and 18 in group dance, which participated in 20 sessions with dance activities. The results showed statistically significant changes from the general motor age (IMG) and General Motor Quotient (MGQ) of the dance group. It is concluded that the use of dance as a physical therapy resource wich results in improved psychomotor aspects.

LA DANSE COMME MOYENS DE PHYSIOTHERAPIE DANS LA REEDUCATION PSYCHOMOTRICE AYANT DES BESOINS PARTICULIERS

SOMMAIRE

Cette étude vise à vérifier l'efficacité de la danse comme une ressource de physiothérapie de rééducation psychomotrice chez les individus ayant des besoins spéciaux. L'échantillon se composait de personnes ayant une déficience mentale qui a été évaluée par l'échelle de développement moteur (GED), y compris motricité fine (MF), la motilité générale (MG), le schéma corporel (CE), l'organisation spatiale (SO), l'organisation temporelle (OT) et de l'équilibre (QE). Puis les sujets ont été divisés en deux groupes, avec 14 dans le groupe témoin et 18 dans le groupe de danse, qui a participé à 20 séances avec des activités de danse. Les résultats ont montré des modifications statistiquement significatives de l'ancien moteur en général (IMG) et General Motor Quotient (QMG) du groupe de danse. Il est conclu que l'utilisation de la danse comme la physiothérapie ressources avec les résultats des besoins spéciaux dans les aspects psychomoteurs améliorée.

LA DANZA COMO RECURSOS DE LA KINESIOLOGÍA EN LA REEDUCACIÓN PSICOMOTRIZ DE PERSONAS CON NECESIDADES ESPECIALES

RESUMEN

Este estudio tiene como objetivo verificar la eficacia de la danza como un recurso de terapia física de rehabilitación psicomotriz en las personas con necesidades especiales. La muestra estuvo conformada por personas con discapacidad mental que fue evaluado por la Escala de Desarrollo Motor (EDM) como motor fino (MF), la movilidad general (MG), el esquema corporal (CE), la organización espacial (SO), la organización temporal (OT) y el equilibrio (EQ). A continuación, los sujetos fueron divididos en dos grupos, con 14 en el grupo control y 18 en el grupo de danza, que participó en 20 sesiones con actividades de danza. Los resultados mostraron cambios estadísticamente significativos de la edad del motor en general (IMG) y General de Cociente Motor (CMG) del grupo de danza. Se concluye que el uso de la danza como recurso de la kinesiologia en personas con necesidades especiales traduce en aspectos psicomotrices mejorado.

DANÇA COMO RECURSO FISIOTERAPÊUTICO NA REEDUCAÇÃO PSICOMOTORA EM PORTADORES DE NECESSIDADES ESPECIAIS

RESUMO

O presente estudo tem o objetivo de verificar a eficácia da dança como recurso fisioterapêutico na reeducação psicomotora em sujeitos portadores de necessidades especiais. A amostra foi constituída por portadores de deficiências mentais que foi avaliada por meio da Escala de Desenvolvimento Motor (EDM) incluindo motricidade fina (MF), motricidade global (MG), esquema corporal (EC), organização espacial (OE), organização temporal (OT) e equilíbrio (EQ). Em seguida os indivíduos foram divididos em dois grupos, sendo 14 pertencentes ao grupo controle e 18 ao grupo de Dança, o qual participou de 20 sessões de atividades com dança. Os resultados demonstraram evolução estatisticamente significante da idade motora geral (IMG) e quociente motor geral (QMG) do grupo de dança. Conclui-se que o uso da dança como recurso fisioterapêutico em portadores de necessidades especiais resulta em melhora dos aspectos psicomotores.