

were made to evaluate gait. Kinematic data were obtained by Foot Switches (Noraxon®) pressure sensors, positioned bilaterally on the calcaneus and at the base of the hallux. The gait variables collected were support time; swing time; stride time; double support time and gait speed. For statistical analysis, the Multivariate Analysis of Covariance test (MANCOVA) was applied, using the co-variable gait speed. A significance level of  $p < 0.05$  was adopted.

**Results:** MANCOVA showed differences ( $p < 0.001$ ) between the group with KOA (KOAG) and the control group (CG). In the KOAG group, the time of support, striding and double support was longer, representing, respectively, 17%, 8% and 33% higher in relation to the CG. The study showed that the KOAG had a shorter swing time and an 11% reduction in gait speed.

**Conclusion:** Women with KOA had an average speed 16% lower than the safe gait speed thresholds indicated in the literature (between 1.2 and 1.4  $\text{ms}^{-1}$ ) and alterations in the kinematic gait parameters, which can be interpreted as a strategy for reducing pain and joint overload on the knee while performing the task.

**Implications:** The study shows that women with KOA present a decrease in gait speed and alterations in the movement pattern that can negatively contribute to the level of functional mobility. Rehabilitation strategies for this population should include, in addition to resistance exercises, sensorimotor exercises to improve the gait pattern of this population.

**Keywords:** Functionality, Walking, Speed

**Conflict of interest:** The authors declare no conflict of interest.

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**Ethics committee approval:** Work approved by the Ethics Committee of Universidade Estadual Paulista, Campus de Marília, opinion number 1.503.496/2015.

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## FUNCTIONING OF WOMEN IN THE POSTOPERATIVE PERIOD AFTER BREAST CANCER SURGERY

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**Background:** Functioning results from complex interactions between different domains of life, such as "health conditions", "body function and structure", "activity and participation", and "personal and environmental factors". Women undergoing surgery for breast cancer are expected to suffer from some degree of functioning impairment, whether due to alterations in structural components of the ipsilateral upper limb or psychological and social harm. In this context, understanding which domains of functioning are most affected and to what extent these changes can impact the lives of these patients is crucial for designing public health policies and effective rehabilitation protocols particularly tailored to this population.

**Objectives:** To assess the functioning/disability of women who underwent surgery as a treatment for breast cancer using the World Health Organization Disability Assessment Schedule (WHODAS 2.0), which is an instrument developed by the World Health Organization that assesses functioning in six domains: cognition, mobility, self-care, interpersonal relationships, participation, and activities of daily living.

**Methods:** We conducted a descriptive observational study in Fortaleza/CE with women between 18 and 80 years old without cognitive impairment and diagnosed with breast cancer, evaluated 3-12 months after surgery. We collected sociodemographic and clinical data and applied the WHODAS 2.0 (36-item version). The scores from WHODAS range from 0 to 100 for each of its six domains and total score — the higher the score, the greater disability.

**Results:** The study included 29 women (average age: 55.97). The mean of the WHODAS scores was 21.53 (with a 14.26 standard deviation). The most affected domains were domestic activities ( $30.34 \pm 21.73$ ) and participation ( $30.60 \pm 20.62$ ), while the least affected were self-care ( $10.34 \pm 12.45$ ) and activities of daily living ( $13.36 \pm 9.18$ ).

**Conclusion:** The rehabilitation process after surgery for breast cancer should especially consider domestic activities and women's social participation as therapeutic goals.

**Implications:** The reported indicators can serve as a basis for outlining care protocols and monitoring the rehabilitation evolution of these patients.

**Keywords:** Breast neoplasms, Disability assessment, Cancer survivors

**Conflict of interest:** The authors declare no conflict of interest.

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## EFFECTS OF DANCE THERAPY ON FUNCTIONALITY AND AUTONOMY IN ACTIVITIES OF DAILY LIFE OF CHILDREN WITH AUTISM SPECTRUM DISORDER

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**Background:** Autism Spectrum Disorder (ASD) is a disorder that encompasses a wide range of behavioral and cognitive disorders. Due to deficits in perceptual-motor skills, these individuals often experience episodes of addiction in various aspects of functionality. In this sense, an integrated therapeutic approach is necessary, which takes into account the sensorimotor nuances appreciated by ASD.

**Objectives:** To analyze the effects of dance on functionality and autonomy, in activities of daily living, of children with Autism Spectrum Disorder.

**Methods:** This is a Blind Follow-up Randomized Clinical Trial, carried out at the Varginhense Foundation for Assistance to the Exceptional, in Varginha/MG. Children aged between 5 and 10 years old, diagnosed with ASD only, excluding comorbidities, were included. Sociodemographic and clinical variables were collected to characterize the sample. Subsequently, the children were assessed using the Childhood Autism Rating Scale and the Pediatric Assessment of Disability Inventory by Adaptive Computerized Testing (PEDI- CAT). Then, the sample was randomized into two groups: the Experimental Group (EG), submitted to dance therapy and multidisciplinary treatment, and the Control Group (CG), accompanied only by multidisciplinary care. There were 14 dance therapy sessions (twice a

week, 40-50 min/), composed of choreographies that explored the movements used during the ADLs. The evaluations were carried out by two independent and trained researchers during the pre-intervention, post-intervention, and one month after the end of the research (follow-up). Comparison analyzes were performed using the SPSS® software, version 22.0 and using the Shapiro wilk test. The significance level adopted for this study was  $p < 0.05$ .

**Results:** 99 participants were screened for eligibility and 28 were selected (EG  $n=14$ ; GC  $n=14$ ). During the intervention, there were no significant differences for the intergroup comparison, in all PEDICAT domains ( $p > 0.05$ ). However, there were significant differences during the intragroup comparison in the pre/post-intervention for the EG, in the Activity of Daily Living domain:  $p=0.00$ ;  $CI= -4.57$  to  $-2.13$ . And in the pre-intervention/follow-up comparison:  $p= 0.00$ ,  $CI=-3.87$  to  $-1.27$ .

**Conclusion:** Therefore, it is concluded that dance therapy can positively impact the performance of children with autism in carrying out activities of daily living. However, there were no effects on other aspects of functionality. Thus, future research with a higher number of sessions are suggested, since these were considered limiting factors for the work.

**Implications:** The study of therapies focused on the participation and creativity of children with ASD can contribute to the improvement of integrated, inclusive, and multidisciplinary interventions for this public that is rarely addressed in the physiotherapeutic field.

**Keywords:** Personal Autonomy, Dance Therapy, Autism Spectrum Disorder

**Conflict of interest:** The authors declare no conflict of interest.

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**Ethics committee approval:** Research Ethics Committee of the Federal University of Alfenas, no: 5.538.805.

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## FACTORS ASSOCIATED WITH THE FREQUENCY AND INVOLVEMENT IN THE PARTICIPATION OF YOUNG CHILDREN WITH MYELOMENINGOCELE – PRELIMINARY DATA

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**Background:** Participation is defined as frequency (measured by attendance and/or variety or diversity of activities) and involvement (participation experience including engagement, motivation, persistence, social connection and affection) in all life situations, and is seen as an essential condition for the development of the child. Children with myelomeningocele have several functional limitations that can lead to restriction of participation. Improving these children's participation requires knowledge about what factors may influence a child's ability to participate in activities of their choice.

**Objective:** To verify whether factors such as age, mobility performance, access to assistive technology equipment and the presence of environmental facilitators are associated with the frequency and involvement of young children with myelomeningocele participation at home, daycare/preschool and in the community.

**Methods:** A cross-sectional observational study was carried out with children diagnosed with myelomeningocele, between 6 months and 5 years of age. The dependent variables were Frequency and involvement in participation at home, day care/preschool and in the community, as measured by The Young Children's Participation Environment Measure - YC-PEM. The independent variables were age and access to assistive technology equipment collected through interviews with parents and caregivers, mobility performance measured by the questionnaire: Pediatric Assessment of Disability Inventory – Computerized Adaptive Testing (PEDICAT), and environmental facilitators measured by YC-PEM. Data were analyzed using SPSS version 22.0. To verify the associations between age, mobility performance, access to assistive technology equipment and the presence of environmental facilitators with the frequency and involvement of participation, Spearman's correlation was performed, with a significance level of 5%.

**Results:** Sixty-five children and their families (mean age 27.91 ( $\pm 17.36$ ) months) participated in the study. The presence of environmental facilitators at home increased the child's involvement at home ( $r=0.30$ ,  $p=0.01$ ). In the daycare/preschool setting, a significant positive association was found between age ( $r=0.50$ ,  $p<0.0001$ ;  $r=0.55$ ,  $p<0.0001$ ), mobility performance ( $r= 0.35$ ,  $p=0.003$ ;  $r=0.37$ ,  $p=0.002$ ) and the presence of environmental facilitators in daycare/preschool ( $r=0.95$ ,  $p<0.0001$ ;  $r=0.98$ ,  $p <0.0001$ ), with frequency and involvement, respectively. However, there was a negative association between having access to assistive technology equipment and attendance ( $r=-0.32$ ,  $p=0.008$ ) and participation involvement ( $r=-0.36$ ,  $p=0.03$ ) in daycare/preschool. In relation to the community environment, factors such as age ( $r=0.40$ ,  $p=0.001$ ), mobility performance ( $r=0.26$ ,  $p=0.03$ ), and the presence of environmental facilitators ( $r=0.35$ ,  $p=0.003$ ) correlated positively with community engagement.

**Conclusion:** Preliminary results indicated that the presence of environmental facilitators increases the participation involvement of children with myelomeningocele in all environments. Older and more mobile children are more involved in daycare/preschool and in the community. However, having access to assistive technology equipment that facilitates mobility worsens the frequency and involvement of participation in the daycare/preschool environment.

**Implications:** These findings highlight the role of the environment for the participation of children with myelomeningocele in different contexts, pointing to the need for more facilitators and environmental changes.

**Keywords:** Spina bifida, Participation, Mobility

**Conflict of interest:** The authors declare no conflict of interest.

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## PARTICIPATION OF YOUNG CHILDREN WITH MYELOMENINGOCELE

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**Background:** Myelomeningocele is the most frequent malformation of spina bifida and is characterized by muscle weakness or paralysis