

support and involvement ( $r = 0.327$ ;  $p < 0.001$ ), as well as between involvement and barriers ( $r = 0.282$ ;  $p < 0.001$ ). Several environmental variables, such as Physical Layout, Physical Demands, Cognitive Demands, Social Attitudes and Actions, Atmospheric Conditions, Climate, Programs and Services, Information, Sufficient Money and Sufficient Time, showed an association with the frequency of participation. Regarding involvement, it was associated with Physical Demands, Cognitive Demands, Social Attitudes and Actions, Personal Transportation, Public Transportation, Information and Financial Resources.

**Conclusion:** Most parents or guardians do not consider related aspects such as access to personal transportation; public transportation; available time; available money; safety in the community and the child's relationship with peers as barriers. On the other hand, related aspects such as the way furniture, objects and physical structures are organized; physical aspects of usual activities in the community; access to programs and services in the community; information about participation in the community and equipment and materials were the greatest environmental barriers found that restrict the participation of children and adolescents in the community.

**Implications:** The results allow us to identify where greater interventions are needed to support the community participation of children and adolescents with CP.

**Keywords:** Cerebral Palsy, Participation, Barriers

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# IMPACT OF A 2024 GUIDELINE-BASED PROGRAM ON CERVICAL RANGE OF MOTION IN INFANTS WITH CONGENITAL MUSCULAR TORTICOLLIS: A PILOT STUDY

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**Background:** Congenital muscular torticollis (CMT) is a condition characterized by the shortening of the sternocleidomastoid muscle, leading to restricted cervical motion, postural asymmetry, and potential motor development delays. The 2024 Clinical Practice Guideline for CMT highlights the importance of early intervention, including passive stretching, active motor stimulation, postural training, and caregiver education. However, there is a need for structured studies assessing the impact of a combined home and supervised intervention program on active and passive cervical range of motion (ROM).

**Objectives:** To evaluate the feasibility and preliminary effectiveness of a structured physical therapy intervention aimed at improving active and passive cervical lateral flexion ROM in infants with CMT, following the recommendations from the 2024 CMT Clinical Practice Guideline.

**Methods:** A single-group prospective experimental pilot study with repeated measures. Participants: Eight infants aged 3 to 4 months diagnosed with CMT, presenting with restricted passive and/or active cervical lateral flexion. Parental consent was obtained for participation in a home-based program combined with weekly

supervised physical therapy sessions. The intervention consisted of five components: (1) Passive stretching: Low-intensity, sustained stretches of the sternocleidomastoid (SCM) muscle. (2) Active range of motion training: Stimuli for head-righting responses during exercises in various postures. (3) Symmetry-based activities: Encouragement of midline head alignment and equal use of both sides of the body during play. (4) Environmental modifications: Positioning strategies for sleep, feeding, and other activities in the home setting. (5) Caregiver education and adherence monitoring: Weekly supervised sessions (60 minutes) to assess progress, reinforce techniques, and implement an individualized home program for each child based on the criteria of the 2024 Clinical Practice Guideline. Outcome Measures: Passive cervical ROM (lateral flexion) was measured using an arthrodial protractor, while active cervical ROM was assessed through visual/photographic tracking and the Muscle Function Scale (MFS).

**Results:** The intervention period ranged from 3 to 4 months, with a follow-up evaluation conducted 3 months after its completion. All four children who initially presented with more than 5° of asymmetry in passive ROM showed improvement in the final assessment, reducing asymmetry to less than 5°. Similarly, among the five children with more than 5° of asymmetry in active ROM, three (60%) demonstrated improvement, achieving a final asymmetry of less than 5°.

**Conclusion:** A structured physical therapy intervention effectively improved active and passive cervical lateral flexion ROM in infants with CMT. All infants with passive ROM asymmetry showed improvement. Regarding active ROM, 60% (3) of the infants exhibited improvement in the MFS. However, active ROM assessments are more influenced by the infant's cooperation, and evaluating the MFS on different days may provide a more accurate assessment.

**Implications:** This study demonstrates the feasibility and preliminary effectiveness of a structured physical therapy intervention for improving active and passive cervical lateral flexion ROM in infants with CMT in clinical practice.

**Keywords:** Congenital Muscular Torticollis, Range of Motion, Pediatric Physical Therapy

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# HIP SURVEILLANCE OF BRAZILIAN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY: A QUALITATIVE STUDY ON CAREGIVERS' KNOWLEDGE

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**Background:** Children with Cerebral Palsy (CP) are at an increased risk of developing hip displacement. The lateral migration of the femoral head out of the acetabulum is a severe and potentially progressive musculoskeletal complication that may require surgical intervention. Hip surveillance is recommended, a systematic monitoring process to detect early critical signs of displacement. In this context, understanding the experiences of caregivers involved in hip

surveillance can promote a more effective and family-centered approach.

**Objectives:** The objective was to understand the knowledge of caregivers of children and adolescents with CP about hip surveillance in Brazil.

**Methods:** This was a cross-sectional, qualitative study. Participants were selected from across Brazil through convenience sampling, with recruitment via social media, and from the \*PartiCipa Brasil\* Project. The study consisted of an invitation for caregivers to participate in focus groups. Caregivers of individuals with CP, aged 0 to 18 years, of any sex, of all clinical types and Gross Motor Function Classification System (GMFCS) levels. A semi-structured questionnaire was applied, composed of six main questions and 15 secondary questions addressing topics such as knowledge about hip displacement, monitoring procedures, frequency of X-rays, responsibility for remembering periodic X-rays, whether families receive explanations about X-ray results, among other issues. Interviews were conducted through Google Meet with caregivers who agreed to participate in the focus groups, where the semi-structured questionnaire was administered following a script. Finally, the interviews were transcribed and subjected to qualitative content analysis to identify relevant categories related to knowledge and necessary guidance for hip surveillance.

**Results:** A total of nine caregivers of Brazilian children and adolescents with CP participated in the qualitative study. They represented different GMFCS levels and came from various regions of Brazil: four from the Southeast, two from the North, two from the Northeast, and one from the Central-West. Notably, there were no participants from the South region of Brazil. The main themes that emerged from the participants' statements were: "Lack of knowledge about hip displacement," "Access to exams and public healthcare services," "Lack of assistive devices," "Professional misinformation," and "Family coping." Within these themes, sub-themes were also highlighted, including Lack of information, Waiting time, Technical language, Cost, Search for information, and Rights.

**Conclusion:** The qualitative study with caregivers of Brazilian children and adolescents with CP revealed that their knowledge about hip displacement and surveillance is limited. Healthcare professionals should improve their communication with caregivers of children and adolescents with CP to enhance family engagement and adherence to their child's treatment.

**Implications:** The findings from the focus groups have implications for efforts to improve hip care for children and adolescents with CP. Pragmatically, they can contribute to enhancing family-centered practice, making hip surveillance more accessible, better accepted, and better understood by parents. Building partnerships, adopting a proactive approach to coordination, and developing clear, easy-to-interpret reports or feedback for families are crucial considerations for the future of this practice in Brazil. Strengthening communication between professionals and families will ultimately lead to better adherence and improved outcomes in hip surveillance.

**Keywords:** Hip, Cerebral Palsy, Family-centered, Information, Surveillance

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## EXPLORATORY ANALYSIS OF ASPECTS THAT IMPACT CHILD DEVELOPMENT IN AN AQUATIC STIMULATION PROGRAM

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**Background:** In the first instance, child development is marked by various transformations. During this period, psychosocial, motor and cognitive skills undergo various gains, and this process is therefore affected by interacting factors. At a second stage, when development is below expectations, damaging effects related to social and economic aspects can arise. Such a situation contributes to a scenario of scarce resources, which can increase disparities during the life cycle.

**Objectives:** The aim of this study is to verify the relationship between child development and its determinants considering children being admitted to an aquatic stimulation project.

**Methods:** A bivariate logistic linear regression analysis was carried out and the data was analyzed using the PSPP program, version 2.0. As the participants were children from an aquatic stimulation project, the study can be classified as exploratory, quantitative and cross-sectional. Various aspects were analyzed, and in order to characterize socioeconomic status, the Brazilian Economic Classification Criterion (CCEB) was used. In order to assess the opportunities at home to stimulate the baby, the version adapted for Portuguese Affordances in the home Environment Motor Development- infant scale (AHEMD-IS) was used. In addition, a questionnaire was created with the child's identification data, information about the pregnancy and sociodemographic characteristics of the family. Another instrument used was the Well-being of Young Children (SWYC) as a dependent variable. In addition, the infant's head circumference was collected and then these data were entered into the World Health Organization curves.

**Results:** The variables gender and gross motor AHEMD were significantly associated with child development (SWYC developmental milestones). Analysis of data from 49 boys and 52 girls showed that being female and having a greater number of gross motor toys were respectively 0.34 and 5.4 times more likely to have an adequate SWYC developmental milestones category.

**Conclusion:** Based on the aforementioned data, it should be noted that the behavior of infants is directly affected by the environment in which they live, so it is clear that factors such as gender and the number of toys offered to these children have a direct impact on their development.

**Implications:** In short, it can be seen that beyond the individual, child development is a social and economic issue, so studies such as this can act as a guide for states, as guided by scientific estimates they can implement public policies which take into account children's needs. It is therefore essential that more and more studies delve into the various aspects of child development, so the dissemination of research like this can boost new studies on this subject, as well as helping new researchers on this scientific journey.

**Keywords:** Stimulation, Child Development, Opportunities