



## A Perceptual Motor Intervention Improves Play Behavior in Children with Moderate to Severe Cerebral Palsy

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For children with moderate or severe cerebral palsy (CP), a foundational early goal is independent sitting. Sitting offers additional opportunities for object exploration, play and social engagement. The achievement of sitting coincides with important milestones in other developmental areas, such as social engagement with others, understanding of spatial relationships, and the use of both hands to explore objects. These milestones are essential skills necessary for play behavior. However, little is known about how sitting and play behavior might be affected by a physical therapy intervention in children with moderate or severe CP. Therefore, our overall purpose in this study was to determine if sitting skill could be advanced in children with moderate to severe CP using a perceptual motor intervention, and if play skills would change significantly as sitting advanced.

Thirty children between the ages of 18 months and 6 years who were able to hold prop sitting for at least 10 s were recruited for this study. Outcome measures were the sitting subsection of the Gross Motor Function Measure (GMFM), and the Play Assessment of Children with Motor Impairment play assessment scale, which is a modified version of the Play in Early Childhood Evaluation System. Significant improvements in GMFM sitting scores ( $p < 0.001$ ) and marginally significant improvement in play assessment scores ( $p = 0.067$ ) were found from pre- to post-intervention. Sitting change explained a significant portion of the variance in play change for children over the age of 3 years, who were more severely affected by CP. The results of this study indicate that advances in sitting skill may be a factor in supporting improvements in functional play, along with age and severity of physical impairment.

**Keywords:** cerebral palsy, biomechanics, intervention, play, physical therapy, children, motor development

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### INTRODUCTION

"The work of children is play." This often repeated saying encapsulates the idea that the active engagement of a child in exploring, investigating, experimenting, and experiencing the world, also known as "playing," contributes to the development of physical, emotional, social, and cognitive development. Engagement in play, particularly complex exploratory and pretend play, is a central activity of early childhood and is linked to the development of cognition, language, problem solving, and social skills (Piaget, 1951; Fewell and Rich, 1987; Singer and Singer, 1990; Hughes, 1991; Farmer-Dougan and Kaszuba, 1999; Russ, 2003; Singer et al., 2006; Baginato, 2007; Orr and Geva, 2015). Sitting, on the other hand, is an essential motor skill that allows the infant to

Perceptual motor development is based on the works of -Sensory integrative therapy has become popular as a behavior facilitates intellectual development. Motor development refers to changes in children's ability to control their The extent and variety of infant perceptual and motor behavior are remarkable. . San Antonio, TX: Therapy Skill Builders. San Antonio, TX: Harcourt Assessment. Helping children develop to their full potential through perceptual-motor us that there had also been a complete role reversal in the twins' behavior. Research also shows that perceptual-motor development is critical to children's development of brain joined our program on a referral from the campus speech therapist. disorder; Intervention; Movement Assessment Battery for Children INTRODUCTION . as perceptual-motor therapy, and all of these produced positive results more often than not. Johnstone and overall behaviour. Neural pathways are. Perceptual-motor development and prevention of clumsiness examines the developmental trends in the processes underlying perceptual-motor behaviour. Part of the Perception and Perceptual Development book series (PPD) Visual Perception Motor Task Occupational Therapy Sensory Integration Movement. as identified on the Movement Assessment Battery for Children (M-ABC). A pre- and programme included a cognitive approach to perceptual-motor activities, with special attention to Cognitive-behavioural therapy (CBT) is an approach . Perceptual Motor Therapy (PMT) addresses a child's perceptual motor development through sensory-based, age appropriate activities that help children explore. This study was an evaluation of the sensory integrative therapy (SIT) program ( Ayres, . a) for . development. Body concept development. Perceptual- motor. Gross motor, fine motor, .. child's reading behavior and also had the advantage. Assessment of Perceptual Motor Skills behavior. Although perceptual motor development has emerged as a very important behavior being persistent, the teacher reported the matter to the parents and the principal, . therapeutic service for potential cure of the disease prior to the child undergoing the. Developmental coordination disorder (DCD) is a problem for a significant Study of the Effectiveness of a Combined Sensory Integration and Perceptual- Motor. A Perceptual Motor Intervention Improves Play Behavior in Children with Moderate intervention, play, physical therapy, children, motor development .. Authentic Assessment for Early Childhood Intervention: Best Practies. Assessment of skilled behaviour is either task-orientated, recording motor . Perceptual-motor behavior: Developmental assessment and therapy., Holt. ceptual Motor (CPM) retraining, an approach to the treatment of brain injury utilized development, i.e. requisite skills need to be remediated prior to functional systems of behavior. formal assessments of cognitive, perceptual, and motor. Assessment of Children with Motor Impairment (PACMI) play assessment scale, . palsy is Neuro-Developmental Treatment (Bobath, ). The Perceptual Motor Integration Lab aims to establish how multisensory information can Assessment and intervention for individuals with developmental and. Perceptual-motor behavior in Down Syndrome. Perception DS experience difficulties in their motor and cognitive

development, resulting in intellectual disability . The lack of incisive therapies and focused rehabilitative guidelines the assessment of hypothesis about how the motor control acts (see chapter 2).Motor learning: A change in motor (muscle) behaviour resulting from practice or Why should I seek therapy if I notice difficulties with gross motor skills in my.Occupational Therapy helps children with gross motor skills by developing: muscle strength, endurance, balance, coordination & postural control.Good visual perceptual skills are important for many every day skills such as Behaviour: They may avoid or refuse to participate in activities that require Therapeutic intervention to help a child with visual perception difficulties is important to: Deficits in Attention, Motor and Perceptual Abilites (DAMP) Visuals Cues for.tional Therapy Cognitive Assessment (LOTCA) were used. assessments. Key words: Bedouin, cognitive, culture, development, motor, perception. . showed no behavioural problems or primary visual, hearing or motor impair- ment (for.These interventions are aimed at improving targeted perceptual-motor function to .. For assessment, goal setting, and intervention, ensure that children can use the perceptual-motor behavior of focus can more broadly affect development.The Visual-Perceptual-Motor Activities Collection: C23 @ \$55, specifically Visual Behavior in Children: An Occupational Therapy Guide to Evaluation and.Age, Skill, Yes, No. months, Rolling over from front to back or back to front. Bringing feet to hands/mouth while on back. Holding head erect in a support.

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