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A Study on Domain Identification for Physical Performance Assessment Tools in Children with Developmental Disorders

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ABSTRACT

Introduction: Children with developmental disorders, such as Cerebral Palsy (CP), Attention-Deficit Hyperactivity Disorder (ADHD), and Autism Spectrum Disorder (ASD), may struggle with physical performance, including strength, balance, and motor coordination. The diagnosis, monitoring, and development of customised therapeutic programmes, depend on a thorough Physical Performance Assessment Instrument (PPAT). Nevertheless, it is unclear which domains ought to be covered by these technologies.

Aim: The purpose of this study is to describe and identify the major areas of physical performance that are pertinent to children with developmental disorders and to create a framework for incorporating these domains into assessment instruments.

Materials and Methods: The study used a mixed-methods approach, consulting paediatric specialists, clinicians, and therapists in addition to conducting a systematic evaluation of the assessment instruments currently in use. Clinical observations were also made in order to assess the functional and motor difficulties that children with different developmental problems encounter. The most relevant and consistent domains across various settings were found by analysing the data.

Results: The study found that motor coordination, balance, strength, endurance, and flexibility are the five main domains that are crucial for evaluating physical performance in children with developmental problems. These domains were found to be extremely relevant to the needs of children with ASD, ADHD, and CP and crucial for comprehending general physical function. There are currently very few instruments that target strength, endurance, and flexibility in this population; instead, they primarily concentrate on motor coordination and balance.

Conclusion: The key dimensions of physical performance for children with developmental problems are clearly defined by the study's findings. To ensure thorough and useful assessments, these domains must be included in the next physical performance evaluation instruments. The foundation for creating a standardised assessment Tool that can direct intervention tactics and monitor developmental progress is laid by this framework.

Keywords: Attention-deficit hyperactivity disorder, Autism spectrum disorder, Motor skills