Development and Validation of the Functional Difficulties Questionnaire for Assessing Developmental Coordination Disorder.

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1 Neuroscience, Neuroplasticity and Neurophysiology

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Purpose: The purpose of this study is to describe the development and preliminary psychometric evaluation of the Functional Difficulties Questionnaire (FDQ-9) an instrument designed to aid clinicians in the assessment of developmental coordination disorder (DCD) in adults.

Relevance: There are currently no tools to assess DCD in adults with musculoskeletal pain. DCD is a neurodevelopmental disorder characterised by functional motor impairments described in childhood which, for some persist into adulthood. Skill impairments in those with DCD include impaired perception and biomechanical dysfunction.

Methods: The questionnaire was developed utilising existing questionnaires, the Diagnostic and Statistical Manual for the Diagnosis of Mental Disorders (DSM-IV) criteria for the diagnosis of DCD, International Classification for Diseases (ICD-10) and International Classification of Functioning Disability and Health (ICF). An initial 13-item pool was reviewed by an expert panel for face and content validity. This resulted in a 9-item questionnaire which was piloted on three groups (n=257):- 1) Individuals with joint hypermobility syndrome; 2) convenience samples from a commercial company; 3) staff and students of a university. Exploratory factor analysis was employed to assess the underlying factor structure. Aspects of validity and reliability were assessed.

Results: Factor analysis using principal axis factoring with oblimin rotation yielded two factors relating to fine and gross motor function. Overall internal reliability was high (α=0.81). Preliminary findings suggested satisfactory construct validity and test-retest reliability (ICC 0.96) [95% CI 0.92-0.98].

Conclusions: Psychometric properties of this questionnaire appear promising but further research is required to evaluate the validity of the questionnaire in new samples and audit its application in clinical practice.

Implications: This questionnaire has the potential to aid clinicians in their assessment of DCD and functional impairments in adults and therefore contribute to improved care planning.

Key-words: 1. Developmental coordination disorder 2. Assessment tool 3. Validity
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