P-348 - IMPORTANCE OF MULTIDIMENSIONAL ASSESSMENT TO REFINE SUBTYPES OF DEVELOPMENTAL COORDINATION DISORDER

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Objectives: The DSM-IV-TR criteria for Developmental Coordination Disorder (DCD) involve a marked impairment in the development of motor coordination although visuo-spatial, digital and visuo-motor perception, neuromuscular tone, qualitative and quantitative measures of gross and fine motor coordination related impairments might be used to isolate three main subtypes of DCD/dyspraxia: ideo-motor, visuo-spatial and constructional, and a mix group sharing common impairments with additional comorbidities. This study focus on isolating specific markers of coordination disorder and their interactions in mix vs. pure form of dyspraxia.
Methods: Tree-based bagged classifiers were used to highlight relevant markers among 49 pass/fail tests that best discriminate two clinical subgroups based on a sample (N=63) of 5-15 years old children having IQ in the expected range (40% mix dyspraxia). Model calibration was done on a training sample through nested repeated 5-fold cross-validation while predictive performance were assessed on a held-out validation sample, using a split ratio of 0.7/0.3.
Results: We found that digital praxia, imitation of gestures, manual dexterity, digital perception, lego blocks, and visual motor integration were among the top most important impairments when predicting subtypes. Specific interactions among those predictors and other impairments (motor pathway, visual evoked potential, language) were shown to provide additional insights into DCD subtyping.
Conclusions: Taylored follow-up of patients presenting with DCD should consider the specificity of visuo-spatial, neuromotor and neuropsychological impairments whose co-occurrence allow to define different subtypes of DCD.

https://doi.org/10.1016/S0924-9338(12)74515-7 Published online by Cambridge University Press