Mastery Motivation in school-aged children with cerebral palsy

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Background/Objectives: To characterize mastery motivation in children with cerebral palsy (CP), and identify associated with high motivation

Design: Descriptive, historical cohort study.

Participants and setting: School-aged children (6-12 years) with CP, consecutively diagnosed by one neurologist.

Materials/methods: The dimensions of mastery questionnaire (DMQ) was completed by parent report. This tool measures intrinsic motivation (persistence) in mastering challenging task as well as expressive elements of motivation. Children were assessed by blinded evaluators using the Leiter IQ, gross motor function measure and vineland adaptive behavior scale (VABS). Parents also provided demographic information and completed the strengths and difficulties (behavior) and impact on family questionnaires.

Results: Parents of 74 children completed the DMQ. Highest motivation subscale scores were obtained for mastery pleasure (3.84±0.90) and social persistence with adults (3.42±0.87) with lowest motivation noted in gross motor task persistence (2.79±0.85) and persistence with object-oriented/cognitive task (2.58±0.87). Age and gender were not correlated with DMQ, however higher total family income was modestly associated with greater total mastery motivation and total persistence score (r2=0.06 and 0.07, p<0.05). Higher IQ (r=0.41, p=0.003), better gross motor ability (r=0.43, p<0.001), and fewer activity limitation and total persistence scores (r2=0.006 and 0.07, p<0.001), and fewer activity limitation in self-care, communication, socialization and adaptive behavior (r ranging from 0.44 to 0.53, p<0.001) were positively associated with total mastery motivation, and in most cases, with persistence in social, motor and cognitive tasks, but not mastery pleasure. A greater negative impact of the child’s disability on the family was related to a lower mastery motivation (r=-0.44, p=0.0001) in performing cognitive, social and motor activities. Positive social behaviors correlated with high motivation scores (range: 0.38-0.66, p<0.001), whereas hyperactivity and peer problems were associated with low motivation. Mastery pleasure was only correlated with positive social behaviors (r=0.38, p=0.001).

Conclusions/Significance: Children with CP express a high level of mastery pleasure, not related to functional abilities. High motivation was associated with fewer activity limitations and less behavior problems or family burden. Finding may elucidate those potentially at risk for low mastery motivation, which can adversely influence adherence to and effectiveness of rehabilitation interventions. Strategies to enhance family coping and adaptation as well as interventions to optimize appropriate social skills and behavior may possibly increase the child’s motivation to engage in more challenging activities.