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Activity Measures and International Classifications for Childhood Disability

The introduction of the International Classification of Functioning, Disability and Health (ICF) Framework has placed an emphasis on portraying health behavior as a multidimensional construct. In relation to childhood physical activity, this framework includes dimensions of functional performance, activity attendance, and subjective perceptions of involvement and enjoyment in activity settings. Current literature, however, primarily investigates physical activity (PA) in terms of performance and activity levels. The resulting misalignment of theory and measurement practice challenges the development of a comprehensive understanding of childhood physical activity behavior. For children with disabilities, there may be a greater need to examine additional dimensions of physical activity (e.g., participation). In an effort to support meaningful interpretations of physical activity behavior measures among children with disabilities, the purpose of this paper is twofold: to conceptualize childhood physical activity within the ICF Framework and to provide guidance on aligning measurement tools with physical activity dimensions. The conclusions presented in this paper may be of interest to *APAQ* readers, as it offers further insight on the emerging need to align physical activity measurement selection with contemporary, multidimensional models of health and disability.

Ross, S.M., Case, L., & Leung, W. (2016). Aligning physical activity measures with the International Classification of Functioning, Disability and Health Framework for childhood disability. *Quest, 68*(4), 521–535.

Fatigue in Persons With Multiple Sclerosis

The American College of Sports Medicine recently published an article about fatigue and fatigability in persons with multiple sclerosis (MS), based on a review of other published articles. Studies have found that the force decline during muscle contractions induced by electrical nerve stimulation is greater for individuals with MS than with individuals without MS, suggesting that MS-related changes are present in the muscle fibers. Greater decline in voluntary activation during prolonged muscle contractions is also observed in individuals with MS. Moreover, individuals with MS need increased levels of ipsilateral cortical activation to be able to provide the same amount of output to the motor-neuron pool during submaximal motor tasks than individuals without MS. Practitioners should understand that fatigue in individuals with MS could be explained by functional changes in the central nervous system and perceived fatigability, including depression scores.

Zijdewind, I., Prak, R.F., & Wolkorte, R. (2016). Fatigue and fatigability in persons with multiple sclerosis. *Exercise and Sport Sciences Reviews, 44*(4), 123–128.

Self-Reported Vision Impairment in Older Adults: Health Outcomes

Research suggests that associations between vision impairment and various health outcomes are common and seem to reflect the relevance of vision as an indicator of the general health status of adults as they age. As part of their Vision Health Initiative, the Centers for Disease Control and Prevention (CDC) have identified as an objective the description and characterization of the public health significance of vision loss and the relationship it has on one's quality of life, health disparities, and comorbid conditions. In the spirit of that goal, the aim of this paper is to describe how health outcomes differ by self-reported vision status using specific health dimensions described on a disability framework. Findings suggest that fair and poor vision status were associated with negative health outcomes across the health dimensions identified. The conclusions presented in this article may be of interest to *APAQ* readers, as it offers additional insight on the potential to identify points in the disability framework where older adults with and without vision impairments differ and to develop interventions at those points to prevent further issues later in life.

Steinman, B.A. (2016). Health outcomes associated with self-reported vision impairment in older adults. *Journal of Visual Impairment & Blindness, 110*(6), 385–398.

Improving Gait in Adults With Cerebral Palsy

In this study, Kirk et al. discovered that there could be a link between progressive resistance training and gait function in adults with cerebral palsy. The design of the study compared two groups, an explosive progressive resistance-training group and a nontraining control group. The progressive resistance-training group participated in a program of resistance training 3 days/week over a 12-week period. The study found improvement in the rate of force development in the ankle dorsiflexors, which resulted in an increased toe lift that contributed to improved gait. It was also noted that reflex-mediated stiffness and passive muscle stiffness were not negatively affected by explosive resistance training. Attempting to use explosive progressive resistance training in adults with cerebral palsy may benefit their gait improvement, and being aware of this can empower practitioners.

Kirk, H., Geertsen, S.S., Lorentzen, J., Krarup, K.B., Bandholm, T., & Nielsen, J.B. (2016) Explosive resistance training increases rate of force development in ankle dorsiflexors and gait function in adults with cerebral palsy. *Journal of Strength and Conditioning Research, 30(*10), 2749–2760.

Physical Activity and Nutrition for Youth at Risk

The Kick and Cook-a-Palooza program was developed to support self-efficacy in youth at risk related to nutrition and physical activity. The purpose of the study was to implement the program to teach healthy habits. Public health and therapeutic recreation worked for youth at risk in Grand Rapids, MI, USA. The physical activity program met for 6 weeks in fall 2014 (Part 1) and again in spring 2015 (Part 2). Youth (N =16) ranging in age from 5 to 14 years were recruited to participate in