Resistance Training and Sleep Quality in Parkinson’s Disease

Poor sleep quality is a common symptom of Parkinson’s disease (PD). The use of progressive resistance training (RT) may be useful to improve sleep quality in persons with PD based on the evidence from older adults and the association between strength improvements and sleep quality. This study examined the effects of a progressive RT program on muscular strength and sleep quality in persons with PD through a randomized control trial including 12 weeks of RT exercises compared with a control group participating in bingo games and educational lectures. Pre–post testing included the Pittsburgh Sleep Quality Index and knee-extensor peak torque test to represent muscular strength. After training, there were significant differences between the training and control groups on both Pittsburgh Sleep Quality Index scores and knee-extensor peak torque ($p < .05$), with training participants exhibiting significant improvements in both muscular strength and sleep quality ($p < .05$). The authors reported 100% adherence to the RT protocol with no adverse events. They recommend that progressive RT can be an effective and safe adjunct therapeutic intervention to improve sleep quality in persons with PD.


Aerobic Exercise Impacts Resting EEG in ADHD

Electroencephalographic readings, a neurobiological measure used to examine cognitive functioning, has previously been shown to differ in children with and without attention deficit/hyperactivity disorder. A study recently published in the Journal of Attention Disorders by Huang et al. (2017) randomly assigned children diagnosed with attention deficit/hyperactivity disorder to a water aerobics intervention program for 8 weeks or a control group that refrained from exercise programs during the same time period. Resting electroencephalography was taken before and after the training sessions. Results found that those who participated in the water aerobics program had changes in aspects of resting electroencephalographic readings (e.g., smaller theta/alpha ratios). These results highlight the role aerobic exercise interventions and programs may provide to improve some cognitive deficiencies that are generally observed in children with attention deficit/hyperactivity disorder and may be related to improvements in certain aspects of executive functioning such as focusing on attention or inhibitory control.

Huang, C.J., Huang, C.W., Tsai, Y.J., Tsai, C.L., Chang, Y.K., & Hung, T.S. (2017). A preliminary examination of aerobic exercise effects on resting EEG in
Youth With Intellectual Disability: Videomodeling and Motor Skills

Fundamental motor skills (FMS) are requisite for healthy development and continual participation in physical activity as children age; however, children with and without intellectual disabilities may acquire such skills differently. The present study explores the effects of using videomodeling on FMS acquisition of youth ($n = 6$; 12–14 years) with moderate intellectual disability. A single-subjects, multiple baselines study design was utilized to explore the effects of videomodeling on individual participants’ FMS acquisition. Baseline skills for performing a standing long jump were assessed using the Test of Gross Motor Development-2. The treatment condition consisted of the participant viewing a video of an individual modeling the standing long jump and then performing the skill with no additional modeling or prompting. Videomodeling appeared to improve standing long jump scores of youth with intellectual disabilities who had higher FMS scores at baseline, not those who demonstrated lower FMS at baseline. This preliminary study demonstrated that videomodeling could aid in FMS instruction; however, additional research is warranted.


Autism Spectrum Disorder: Sensory Environment and Daily Activities

This study examined the factors that affect participation in daily activities of children with autism spectrum disorder aged 3–7 years as identified by their primary caregiver. In semistructured interviews, the 34 participating caregivers identified the child’s response to the environment and caregiver decision-making process as key factors affecting participation as well as strategies to facilitate participation in daily activities. When describing stimulation responses of the child, caregivers identified these responses as the main influencing factor in some situations, yet they were unable to distinguish this influence from other common features of autism spectrum disorder in other situations. This result prompted the authors to suggest multidimensional intervention strategies that facilitate participation. In addition, caregiver decision making about how meaningful or essential the task was influenced participation. Strategies identified to support participation included child autonomy over where or how the task is completed; preparation and anticipatory planning; ensuring the presence of supportive environmental factors through naturally occurring stimuli (e.g., swinging on the playground); adapting...