Comparison between the effects of Neurodevelopmental treatment and Sensory integration therapy on Gross motor function in children with Cerebral palsy

Alireza Shamsoddini,
Student of Ph.D, Exercise Physiology Research Center, Baqiyatallah University of Medical Sciences, alirezaot@bmsu.ac.ir
Mohammad Taghi Hollisaz,
Dept. of Physical Medicine and Rehabilitation, School of Medicine, Baqiyatallah University of Medical sciences

Objective: This study was planned to compare the effects of neurodevelopmental treatment and sensory integration therapy on gross motor function in children with cerebral palsy.

Materials & Methods: Twenty two children with spastic CP were randomly divided into two groups. Sensory integrative therapy was given to the first group (n=11), and neurodevelopmental treatment was given to the second group (n=11). All children were evaluated with GMFM-88. Treatment was scheduled for three - one hour sessions per week for 3 months.

Results: Twenty two children with spastic CP (11 diplegia and 11 quadriplegia) participated in this study. When two groups were compared, a significant difference was found in lying and rolling (P=0.003), sitting (0.009), crawling and kneeling (0.02) and standing ability (P=0.04). But there was no significant difference in walking, running, and jumping abilities between the two groups (0.417). Paired t-tests revealed a significant difference between pre and post test results, with increases in scores of lying and rolling, sitting, crawling and kneeling, standing in sensory integration therapy (SIT) and neurodevelopmental treatment (NDT) approaches.

Conclusion: Neurodevelopmental treatment and sensory integration therapy improved gross motor function in children with cerebral palsy in four dimensions (lying and rolling, sitting, crawling and