Physical Therapy Department for Growth and Development Disorder in children and Its Surgery

Doctoral Degree
2008

Author	**:**	**Ahmed M. Azzam.**
Title	**:**	**Efficacy of dynamic postural stability on modulation of motor neuron excitability in hemiparetic cerebral palsied children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Emam H. EL-Negmy.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	

Thirty spastic hemiparetic C.P. children were invited in this study. Their age was ranging from 4 to 7 years from both sexes. They were divided randomly into two groups of equal number (study and control).The study group was subjected to physical therapy intervention in the from of balance training program on Biodex stability system and 1euron-developmental techniques 3 times / week for 6 successive months period. The control group was subjected to physical therapy intervention in the form of N.D.T only. Hoffman Reflex / Myogenic Response ratio and hand grip strength parameters were recorded for every patient in the study and control groups before and after treatment. The results showed significant improvement in both groups but also significant difference was recorded in study group as compared with control group in the form of reduction of CNS excitability manifested by reduction in H / M ratio and increased functional abilities which was manifested by hand grip strength improvement.

Key words	**1.**	**Dynamic Postural Stability.**
	2.	**Motor Neuron Excitability.**
	3.	**Hemiparetic Cerebral Palsied Children.**
	4.	**Children.**
Arabic Title Page	**:**	**فاعلية ثبات الوضع الديناميكى فى تنظيم استثارة الوحدات العصبية الحركية لحالات الأطفال المصابين بالفالج الشقى.**
Library register number	**:**	**1689-1690.**

Author	**:**	**Naglaa Ahmed Zaky.**
Title	**:**	**Effect of selected physical therapy program on bone mineral density in myelomeningocele.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Kamal El-Sayed Shoukry.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	

The purpose of this study was to investigate the effect of selected physical therapy program on bone mineral density in children with myelomeningocele. Thirty children from 2 to 4 years participated in this study. They were divided randomly into two groups of equal number (control and study).They were evaluated by Lunar Prodigy Advance apparatus. Control study received the ordinary physical therapy program for one hour, while the study group received the same program in addition to the selected program for one hour. The treatment program was practiced four sessions per week, for six successive months. Post treatment results revealed significant difference in pelvis, spine, legs and total body bone density. Significant improvement of lean component of trunk legs and total body was also recorded for both groups with more improvement in favor of the study group.

Key words	**1.**	**myelomeningocele.**
	2.	**bone mineral density.**
	3.	**Children.**
Arabic Title Page	**:**	**تأثير برنامج علاج طبيعى مختار على الكثافة العظمية فى الأطفال ذوى فتق الحبل الشوكى وسحاياه.**
Library register number	**:**	**1723-1724.**

Author	**:**	**Nahed Shukri Thabet Farag.**
Title	**:**	**Neuromuscular scoliosis modulation via myofeedback training in spastic children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Emam H. El- Negmy.**
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	3.	**Hala Salah El-Din Mohamed.**
Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	

The purpose of this study was to investigate the effect of myofeedback training on neuromuscular scoliotic posture in spastic children. Forty spastic patient 20 hemiplegic and 20 diplegic (23 girls and 17 boys) diagnosed as neuromuscular scoliosis (21 Rt sided and 19 Lt sided) ranged in age from 5 to 7 years. They were divided randomly into two groups of equal number (control and study). Each group composed of twenty children. (Ten hemiplegic and ten diplegic). Control group received specially designed physical therapy exercise program for postural correction, while study group received the same program in addition to auditory and visual EMG myofeedback training. The treatment programs were conducted one hour, three times per week for six successive months. All children back geometry were assessed before and after treatment by using physical evaluation, Cobb's angle and formetric measurement (trunk imbalance, lateral deviation, surface rotation of vertebra, pelvic tilting, pelvic torsion). The results after the suggested period of treatment revealed significant improvement in both groups in (lateral deviation, surface rotation of vertebra, pelvic tilting and Cobb angle variables). There was highly significant difference between study and control group in trunk imbalance in favor of the study group, and non improvement in pelvic torsion.

Key words	**1.**	**spastic children.**
	2.	**neuromuscular scoliosis.**
	3.	**myofeedback.**
	4.	**Children.**
Arabic Title Page	**:**	**تقويم انحناء العمود الفقرى الناتج من الاضطراب العضلى العصبى بالتغذية المرجعية للعضلات فى الاطفال المصابين بالشلل التقلصى.**
Library register number	**:**	**1745-1746.**

Author	**:**	**Rasha Abd El Moneim Mohamed.**
Title	**:**	**Effect of visual versus auditory myofeedback on gait pattern of hemiparetic children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Emam Hassan El-Negmy.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	
The purpose of this study was to compare between effects of visual and auditory myofeedback on gait pattern of hemipartic children. Forty-five hemipartic children, from 6 to 8 years old participated in this study. They were classified randomly into three groups of equal numbers. They received feedback training (visual, auditory; audiovisual for three groups respectively) of tibialis anterior muscle, in addition to the same selected exercise program. Gait parameters were assessed before and after three months of treatment using motion analysis system. The results revealed significant improvement in all measured variables for three groups with greater improvement in the favor of the auditory group.		
Key words	**1.**	**visual.**
	2.	**auditory.**
	3.	**myofeedback.**
	4.	**Children.**
	5.	**gait pattern.**
	6.	**hemiparetic.**
Arabic Title Page	**:**	**مقارنة بين تأثير التغذية العضلية المرتجعة البصرية والسمعية على نموذج المشي لدى الأطفال المصابين بالشلل النصفي الطولي.**
Library register number	**:**	**1721-1722.**

Author	**:**	**Samah Attia Tolba Mohamed El Shemy.**
Title	**:**	**Normative isokinetic values of knee muscles performance in healthy school-age children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Amira Mohamed El Tohamy.**
	2.	**Kamal El-Sayed Shoukry.**
	3.	**Nagui Sobhi Nassif.**
	4.	**Amany Moussa Mohamed Moussa.**
Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	

The purpose of this study was to standardize an isokinetic testing protocol for quadriceps and hamstrings in children who are typically developing, and to establish reference data of isokinetic strength measurement of both muscles by gender and age. Three hundred and sixty child (180 males and 180 females), from 7 to 12 years old participated in this study. They were classified according to their ages into six groups of equal number and were assessed using Biodex isokinetic dynamometer at two angular velocities (60 and 180°/sec.) for dominant and non domoinant sides. The results revealed that there is a significant effect of angular velocity, gender and age on strength measurement in both groups. There is no significant difference between dominant and non dominant sides in most of the measured variables.

Key words	**1.**	**Normative.**
	2.	**Isokinetic.**
	3.	**Knee.**
	4.	**Children.**
Arabic Title Page	**:**	**القيم الطبيعية للأداء الأيزوكينتيكى للركبة عند الأطفال الأصحاء في سن المدرسة.**
Library register number	**:**	**1725-1726.**

Author	**:**	**Shorok Ahmed Wagdi Awad El-Shennawy.**
Title	**:**	**Cognition and standing balance interaction in children with idiopathic epilepsy.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Amira El Tohamy.**
	2.	**Kamal El-Sayed Shoukr.**
	3.	**Lobna Mansour.**
	4.	**Ola Omar Shahine.**
Degree	**:**	**Doctoral.**
Year	**:**	**2008.**
Abstract	**:**	

The purpose of this study was to investigate whether there is an interaction between cognition and balance in children with idiopathic generalized epilepsy. Thirty children with epilepsy, their age ranged from 10 to 12 years participated in this study. They were evaluated using Rehacom System and Biodex Stability System before and after the treatment programs. Subjects were classified randomly into two groups of equal number. Group A; received attention and concentration training on Rehacom System, whereas group B; received standing balance training on Biodex Stability System. The results of this study revealed statistically highly significant improvement in nearly all of the measuring variables of both groups in favor of group B. From the obtained results of this study, it can be concluded that, there is an interaction between cognition and balance in children with idiopathic generalized epilepsy.

Key words	**1.**	**Cognition.**
	2.	**Balance.**
	3.	**Idiopathic generalized epilepsy.**
	4.	**Children.**
Arabic Title Page	**:**	**التداخل بين الأداء المعرفى والاتزان من وضع الوقوف عند الأطفال المصابين بالصرع ذاتي الإعتلال.**
Library register number	**:**	**1727-1728.**