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

Master Degree
2009

Author	**:**	**Badriyah Khalil Al Abbad.**
Title	**:**	**Treadmill Training Versus Endurance Exercises in Improving Muscle Strength and Functional Activity in Down's syndrome Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Amira EL-Tohammy,**
	2.	**Gehan El-Meniawy**
	3.	**Ali Mustafa.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	
The purpose of this study was to investigate the effect of treadmill training on muscle strengthening of the quadriceps femoris and hamstring muscles in Down's syndrome children. Thirty Down's syndrome children, their age ranged from 12-15 years, participated in this study, the sample was divided randomly in two groups of equal number, group I and group II. Group I received a specialized treadmill training program. Group II received Endurance exercise in the form of Delorme resistance exercise. Evaluation was carried out for the two groups, before and after the application of the treatment program by using Biodex dynamometer system and Bruininks-Oseretsty test of motor proficiency. The results of this study revealed that there was a significant improvement in muscle strength in the two groups after treatment when compared with their pre-treatment results. Also, highly significant difference was noticed between the post-treatment results of the two groups in favor of group I.		
Key words	**1.**	**Down's syndrome.**
	2.	**Treadmill training.**
	3.	**Quadriceps femoris.**
	4.	**Children.**
	5.	**Hamstring muscles strength.**
Arabic Title Page	**:**	**مقارنة بين استخدام سير المشى المتحرك وتمرينات التحمل فى زيادة القوة العضلية والوظائف الحركية لدي الاطفال المصابين بمتلازمة دوان.**
Library register number	**:**	**1903-1904.**

Author	**:**	**Doaa Tammam Atia.**
Title	**:**	**Effect of static versus dynamic hand splint on grasping in spastic hemiparetic children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Faten Hassan Abd El-Azim.**
	2.	**Hatem Abd El-Rahman.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of this study was to compare the effect of using static and dynamic splint on grasping in spastic hemiparetic children. The study was conducted on thirty spastic hemiparetic children ranging in age from five to seven years from both sexes. They were classified into two groups of equal numbers group (A) and group (B). Both groups received the same exercise program for one and half hour, three sessions per week for three successive months while using static splint in group A and the dynamic one in group B. In all patients the hand grip was evaluated by JAMAR hand held dynamometer while the Peabody Developmental Motor Scale in the form of fine motor quotient (grasping and visual motor integration items) was used to evaluate hand function before and after three months. The mean values showed significant improvement of both groups when comparing their pre and post treatment results in all measuring variables. But upon comparing the post treatment results of both groups there were non significant difference. The results also showed a significant correlation between fine motor quotient and grip strength. This confirms the importance of using either static or dynamic hand splint with the exercise program to improve grasping in hemiparetic children.

Key words	**1.**	**Hemiparesis.**
	2.	**static hand splint.**
	3.	**dynamic hand splint.**
	4.	**Children.**
	5.	**Grasping.**
	6.	**Peabody Developmental Motor Scale.**
Arabic Title Page	**:**	**تأثير جبيرة اليد الثابتة مقارنة بالجبيرة المتحركة على قدرة قبضة اليد لدى الأطفال المصابين بالخدل الشقي.**
Library register number	**:**	**1963-1964.**

Author	**:**	**Hamada El-Sayed Abd Allah.**
Title	**:**	**Effect of Unweighing System Therapy Using Treadmill on Balance in Spastic Diplegic Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Amira Mohamed El Tohamy.**
	2.	**Khaled Ahmed Olama.**
	3.	**Ali Mustafa Abd El-Monem.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of this study was to evaluate balance in spastic diplegic cerebral palsied children following physical therapy program including, treadmill training with partial body weight support using the un weighing system in addition to regular exercise program. Thirty spastic diaplegic children participated in this study. They were classified into two groups of equal number, (control and study); the control group received the therapeutic exercise program based on neurodevelopmental technique whereas the study group received treadmill training with the suspension system using partial body weight bearing 30% relief of total body weight in addition to the same therapeutic exercise program. The treatment program was conducted for both groups three days per week, day after day over a period of three successive months. Balance parameters were assessed using the Biodex stability system for both groups before and after three months of the application of the treatment program. The measuring variables were overall balance index, mediolateral stability index and anteroposterior stability index. The results of this study revealed statistically significant improvement (P<0.05) in the measuring variables for both the control and study groups in favor to study group. So treadmill training with partial body weight bearing suspension can be added as an additional therapeutic modality to improve balance during locomotion and functional abilities of diplegic children.

Key words	**1.**	**Balance.**
	2.	**Diplegic.**
	3.	**Treadmill.**
	4.	**Children.**
	5.	**Suspension System.**
Arabic Title Page	**:**	**تأثير المشى على السير المتحرك مع التحميل الجزئى للوزن على الاتزان فى حالات الشلل التقلصى المزدوج.**
Library register number	**:**	**2007-2008.**

Author	**:**	**Heba Saad Abd El Tawab Abu El Azm.**
Title	**:**	**Coordination Assessment for Normal Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Elham El Sayed Salem.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of this study was to evaluate development of coordination for a sample of Egyptian children. Two hundred normal children ranged in age from six to eight years participated in this study. They were classified into two groups of equal numbers (100 aged from 6-7 years and 100 aged from 7-8 years), Quick neurological screening test QNST was used for both groups to assess 15 areas of neurological integration , 15 observed tasks were used for both groups. The evaluation results revealed significant differences between mean values of QNST for children of both groups in favor of group B, However both groups within normal range. Comparing boys and girls mean values of QNST between both groups revealed significant differences in favor of group B. Assessment of development of coordination for a sample of Egyptian children ranging from 6-8 years old was normal.

Key words	**1.**	**Coordination.**
	2.	**Quick Neurological Screening test.**
	3.	**normal children.**
	4.	**Children.**
Arabic Title Page	**:**	**تقييم التوافق العضلي العصبي عند الأطفال الأصحاء.**
Library register number	**:**	**1901-1902.**

Author	**:**	**Manal Mohamed Abd El Mageed.**
Title	**:**	**A systematic review of electrical stimulation in cerebral palsy.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Faten Hassan Abd El-Azim.**
	2.	**Eman Abd El Raouf.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

Objective: The aim of this review was to assess the effectiveness of electrical stimulation (ES) in children with cerebral palsy (CP).Methods: Design: Systematic review. A search was made in Medline and Ovid; all studies were after 2000 except one was in 1997. Only randomized controlled trials (RCTs) on certain types of electrical stimulation (Neuromuscular electrical stimulation, functional electrical stimulation and threshold or therapeutic electrical stimulation) in children with diagnosed CP were included. Ages were between eight months and eighteen years, Outcome measures were: Spasticity and motor skills. Results: 16 trials were identified, five trials were excluded by title and abstracts and another one was excluded after obtaining the full text. We used studies on the effect of ES on spasticity, strength, range of motion, functional abilities, gait, contracture and life style. Conclusions: Due to the heterogeneity of the studies in population, interventions and outcomes; Spasticity and motor skills were found effective in some studies and ineffective in others. Well-designed trials are needed especially for different electrical stimulation interventions.

Key words	**1.**	**Systematic review.**
	2.	**Cerebral palsy.**
	3.	**electrical stimulation.**
	4.	**Children.**
	5.	**spasticity and motor skills.**
Arabic Title Page	**:**	**إجراء فحص منهجي للتنبيه الكهربائي في حالات الشلل الدماغي.**
Library register number	**:**	**1933-1934.**

Author	**:**	**Sherif Ahmed Wagdy El-Shennawy.**
Title	**:**	**Comparative Study between Surgical and Conservative Treatment of Children with Upper Obstetric Brachial Plexus Palsy.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Kamal El-Sayed Shoukry.**
	2.	**Yasser Ahmady El-Safoury.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of this study was to differentiate between the effect of surgery (muscle transfer) and that of conservative treatment (a predetermined physical therapy program) on shoulder abduction and external rotation in obstetric brachial plexus palsy (OBPP) children. To acheive this goal, a modified digital electrogoniometer was used to examine thirty OBPP children (C5, 6, and 7 lesions) aging between 3 and 5 years. All children graded 3 or 4 according to the Mallet scale. Measurements of the degrees of shoulder abduction and external rotation were done before and after treatment; whether surgery (Group A: 15 child) or physical therapy (Group B: 15 child). The results of the study revealed a significant difference between the pre and post treatment mean values of shoulder abduction for group A. Also in group A, there was a high significant difference between the mean values of shoulder external rotation. While for group B, the difference between the mean values of both variables was highly significant. Comparing the post treatment results of both groups, the results revealed a high significant difference, with group B having higher mean values of both abduction and external rotation. It was thus concluded that, it may be more convenient for those patients to undergo a well organized physical therapy program and postpone surgery for a more appropriate time; as decided by the orthopedic surgeon.

Key words	**1.**	**Obstetric brachial plexus palsy.**
	2.	**digital electrogoniometer.**
	3.	**Mallet scale.**
	4.	**Children.**
Arabic Title Page	**:**	**دراسة مقارنة بين العلاج الجراحي و التحفظي عند الأطفال المصابين بشلل الضفيرة العضدية العلوي أثناء الولادة.**
Library register number	**:**	**1985-1986.**

Author	**:**	**Sherin Ali Amin.**
Title	**:**	**Effect of Aquatic Therapy on Reaching for Infantile Hemiparesis.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Faten Hassan Abd El-Azim.**
	2.	**Mostafa El Sherbini.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of this study was to demonstrate the effect of using aquatic therapy combined with selected physical therapy exercise program in addition to specially designed exercise program for reaching ability for improvement of reaching kinematics in hemiplegic cerebral palsied children. Method: Thirty spastic hemiparetic children were participated in this study, their age ranged from 4 to 6 years of both sexes. They were classified into two groups of equal numbers, the control group received traditional exercise program in addition to special exercise for reaching abilities for 2 hours with 5 min rest every 30 min. While the study group received the same program in addition to 1 hour aquatic exercise program with 30 min rest in-between, The program of both groups were conducted over three times/week for three months. In all patients, reaching task was evaluated before and after three months by using three dimensional motion analysis (3D) and modified functional scale for reaching Results: The post treatment mean values showed significant improvement of all reaching variables, which indicates significant improvement in all patients in both groups but with a greater significant improvement in the study group. Conclusion: From the obtained results of this study, it could be concluded that, aquatic therapy in addition to specially designed exercise program for reaching ability could be beneficial therapeutic measure for improving reaching ability in spastic hemiparetic children.

Key words	**1.**	**Hemiplegia.**
	2.	**Aquatic therapy.**
	3.	**reaching movement.**
	4.	**Children.**
	5.	**3D (three dimensional motion analysis).**
Arabic Title Page	**:**	**تأثير العلاج المائي على قدرة الوصول عند الأطفال المصابين بالخدل الشقي.**
Library register number	**:**	**2029-2030.**

Author	**:**	**Tayseer Saber Abd El Dayem.**
Title	**:**	**Effect of Constraint Induced Therapy on Hand Function of Erb's palsied Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**1.**	**Elham Elsayed Salem.**
	2.	**Hatem Abd El Rahman Sharaf El Din.**
Degree	**:**	**Master.**
Year	**:**	**2009.**
Abstract	**:**	

The purpose of the study was to determine the efficacy of Constraint Induced Therapy on hand functions (gross &fine motor activities) in children having Erb`s palsy. Thirty children of both sexes having unilateral erb's palsy, their ages ranged from 2.5 to 4 years old participated in this study. They were evaluated using Peabody Developmental Motor Scale before and after the treatment program. The children were classified randomly into two groups of equal number. Group A: received selected physical therapy program, where group B, received Constraint Induced Therapy in addition to the program given to group A. The results of the study revealed statistically high significant improvement in nearly all of the measured 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 applying Constraint Induced Therapy and improvement of hand functions in Erb's palsied children.

Key words	**1.**	**CIT (Constraint Induced Therapy).**
	2.	**Erb's palsy.**
	3.	**Hand functions.**
	4.	**Children.**
Arabic Title Page	**:**	**تأثير العلاج المبنى على الموانع على وظائف اليد لدى الأطفال المصابين بشلل ملخ الولادة.**
Library register number	**:**	**1997-1998.**