# Physical Therapy Department for Growth and

**Development Disorder in children and Its Surgery** 

Master Degree

2010

Author	:	Ahmed Hussien Mustafa Mashaal
Title	:	Effect of active physical therapy program on bone mineral
		denisty in children receiving antiepileptic drugs.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negmy.
	2.	Ehab Ragaa Abd El-Raouf.
Degree	••	Master.
Year	:	2010.
Abstract	••	

The aim of this work was to investigate the effect of selected active physical therapy program on improving bone mineral density in children receiving antiepileptic drugs more than 6 months and suffering from osteopenia or osteoporosis. Subject and Methods: thirty epileptic children were assigned randomly into two groups of equal numbers; their age ranged from five to ten years. The study group received selected active physical therapy program (faradic current and weight bearing exercise) in addition to medical treatment. Control group received medical treatment only. Study group received three sessions per week for three successive months. The data were collected pre- and post- the same period of treatment for both groups. Evaluation procedures were carried out to evaluate the bone mineral density using biochemical marker of bone turn over (CICP, OC and DPD) and DEXA. Dynamometer was used to evaluate hip and knee extensor muscles strength. Balance master system (Biodex) was also used to evaluate balance and functional ability. Results: Post treatment both groups showed significant improvement in clinical investigations including all biochemical markers, DEXA, all functional examinations and balance assessments. A significant difference was also recorded between the two groups in favor of the study group. Conclusion: selected active physical therapy program has to be considered as an effective modality for improving bone mineral density in children receiving antiepileptic drugs.

1.	Epilepsy.
2.	Osteoporosis.
3.	faradic current.
4.	weight bearing exercise.
5.	Children.
6.	bone mineral density. in receiving
7.	physical therapy program.
8.	antiepileptic drugs.
:	تأثير برنامج العلاج الطبيعي الإرادي على كثافة العظام في الأطفال تحت العلاج
	بالعقاقير المقاومة للتشنج.
	1.         2.         3.         4.         5.         6.         7.         8.         :

# ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Library register number : 2265-2266.

Author	:	Ahmed Mohmed Saeed Ali Elewa.
Title	:	Measurement of Carrying Angle in Normal Child in Early
		Childhood.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Amera Mohamed El Tohamy.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of the study was to determine the mean value of carrying angle in normal subjects (boys and girls) in early childhood. Two hundred children one hundred boys and one hundred girls with age ranged from 6 to 9 years old. Their carrying angle were measured by both electronic goniometer and X-ray .The results of this study revealed that the mean value of carrying angle in boys aging from six to nine years is6.7 degrees while it is 11.6 degrees in girls aging from six to nine years. It can be concluded that there is a significant increase in girls carrying angle if compared to boys carrying angle.

It can be concluded that there is an interrelation between age and increased value of carrying angle. It can be concluded also that there is non significant difference between measuring carrying angle by goniometer or by x-ray.

Key words	1.	carrying angle.	
	2.	Measurement.	
ITRRA	3.	normal child	
	4.	early childhood.	
THECEC	5.	Children.	
Arabic Title Page	÷	العضد الساعدية في مرحلة الطفولة المبكرة.	قياس زاوية ا
Library register number	:	2069-2070.	

Author	••	Amany Rashid Tawfiq Masood.
Title	••	Treadmill versus Bicycle Ergometer Exercise Program On
		Aerobic Capacity For Down Syndrome.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Elham El-Sayed Salem.
	2.	Mohamed Tawfiq.
	3.	Ehab Abd El-Raoof Ragaa.
Degree	:	Master.
Year	••	2010.
Abstract	:	

The purpose of this study was to compare between the effect of treadmill and bicycle ergometer exercises on the aerobic capacity ( $Vo_2$  max) in Down children. The study was conducted on twenty children with Down syndrome, of both sexes; ranging in age from 7 to 10 years old (8.4  $\pm$  1.17). They were classified randomly into two equal study groups (A and B). Both groups participated in a selected training program for successive 3-months, 3-times weekly. Group A carried out treadmill training while group B carried out bicycle ergometer training. The duration of sessions increased gradually. All children were assessed and evaluated before and at the end of study. The results of study revealed statistically significant improvement up on comparing the pre and post training the post training results for both groups. It is concluded from results of this study that both treadmill and bicycle ergometer were equally effective. The training procedures could be more effective when added to strengthening and endurance exercises.

Key words	1.	Down syndrome.
	2.	aerobic capacity.
THESES	3.	Treadmill.
THESES	4.	bicycle ergometer.
	5.	Children.
Arabic Title Page	:	التدريب علي سير المشي ا <mark>لمتحرك مقارنة بالتدريب علي العجلة الثابتة بإستخدام</mark>
		قياس السعة الهوانية في الأطفال المصابين بمتلازمة داون.
Library register number	:	2081-2082.

Author	:	Dalia Youssef Mohammed.
Title	:	Gluteus maximus electricalstimulation and modulation of gait
		pattern in spastic diplegic children.
Dept.		Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negamy.
	2.	Abd El Aziz Ali Sherif.
	3.	Sherif Naseef Girguis.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to investigate the effect of gluteus maximus electrical stimulation combined with a selected exercise program on modulation of gait pattern in spastic diplegic children. Thirty spastic diplegic children ranging from five to eight years participated in this study. They were divided randomly into two groups of equal number (control and study). The control group was treated by specially designed exercise program, while the study group received the same program given to the control group in addition to the gluteus maximus electrical stimulation. Evaluation was carried out for each child individually before and after three months of application of different treatment programs using motion analysis (3 dimention camera system). No statistically significant differents was recorded between the two groups before treatment. The results of the study after the suggested period of treatment revealed significant difference was recorded between the two groups after treatment in favor of the study group.

		interior in factor of the stary groups	
Key words	1.	Electrical Stimulation.	
	2.	Motion Analysis.	
THESES	3.	Spastic Diplegia.	
	4.	Gluteus maximus electrical stimulation.	
	5.	Children.	
	6.	modulation of gait.	
	7.	Gait in spastic diplegic children.	
Arabic Title Page	:	للات الآليتين علي أنموذج المشي عند الأطفال المصابين	تأثير التنبيه الكهربائي لعض
		يدوج.	بالشلل المخي ألتقلصي المز
Library register number	:	2093-2094.	

Author	:	Doaa Ahmed Mahmoud.
Title	:	Motion Analysis of Rising Reaction in Normal Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El Tohamy.
	2.	Manal Salah El-Din.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to provide an evaluative analysis of rising reaction from sitting, supine and prone position to standing position and reveal the variation of rising movement among age levels from 9-12 months in normal children. Upright locomotor ability is acquired until the end of the human life span, standing up from the floor is a skill important to a person's physical independence. This study was designed: 1) to determine whether within the rising task the movement patterns of different regions of the body vary with age, and 2) to describe movements used by children to perform this task. One hundred and twenty normal infant of both sexes, their ages were from nine to twelve months, divided into three age levels of equal numbers. Age levels I including children of age from 9 to 10 months, age levels II, including children of age from 10 to 11 and age levels III, including children of age from 11 to 12 months. All infants were filmed while rising from a supine, sitting and prone position to standing position. Auto CAD was used to record joint motion of the shoulder, hip, knee, and ankle during movement using anatomical landmarks as the children rose to a standing position. The results of this study revealed no significant difference between the different age levels but indicated that there were little variations in movement pattern of the three body segments: upper extremity, lower extremity and axial region between age levels. So little variations could be detected during 1st year of life while more marked variations were obvious in late infancy and childhood.

Key words	1.	normal development.
	2.	rising reaction.
	3.	motion analysis.
	4.	Infants.
	5.	Children.
Arabic Title Page	:	التحليل الحركي للوقوف من أوضاع مختلفة لدى الأطفال الطبيعيين.
Library register number	:	2055-2056.

Author	:	Enas Hamdy Aly.
Title	:	Systematic Review: Strengthening Exercises for Cerebral
		Palsy.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abdel Azim.
	2.	Eman Abd El-Roaf.
	3.	Manal Salah El-Din.
Degree	:	Master.
Year	:	2010.
Abstract	:	

Objective: The aim of this review was to know the effectiveness of strengthening exercises in children with cerebral palsy. Methods: Systematic review of randomized controlled trials. A search was made in Medline and Ovid; all studies were after 2000. Intervention: strengthening exercises that involved repetitive, strong, or effortful muscle contractions and progressed as ability changed as progressive resistive exercises in children diagnosed as cerebral palsy with age between birth to eighteen years. Outcome measures: Strength was measured as continuous measures of voluntary force or torque production. Spasticity was measured as velocity dependant resistance to passive stretch using modified Ashwer scale. Gross motor activity was measured by gross motor function measure. Walking speed was measured by 10-m walk test. Results: Seven studies selected from twenty seven articles. Four studies were included in a Meta analysis, while three studies were subjected to descriptive analysis. Strengthening exercises improved gross motor function ,have no effect on walking speed and tends to increase strength of muscles but statistically significant. Only two studies measured spasticity outcome and descriptive not analysis was performed and show no significant increase but remained unchanged .Conclusions: There is evidence that strengthening exercises improve motor activities, no effect on walking speed spasticity and tends to increase strength of muscles but needs further research.

Key words	1.	Systematic review.
	2.	Motor skills.
	3.	Strength of muscles.
	4.	Spasticity.
	5.	Children.
	6.	Cerebral palsy.
	7.	Strengthening Exercises.
Arabic Title Page	:	فحص منهجي لتمرينات التقوية في حالات الشلل الدماغي.
Library register number	:	2095-2096.

Author	:	Hazem Ateya Ali Ali Hussein.		
Title	:	Relation between foot pressure distribution and gait		
		development in normal children.		
Dept.	:	Physical Therapy Department for Growth and Developmental		
		Disorder in Children and its Surgery.		
Supervisors	1.	Amira Mohamed El Tohamy.		
Degree	:	Master.		
Year	••	2010.		
Abstract	:			

Purpose: The purpose of this study was to evaluate the relation between foot pressure distributions and gait development in normal children. Methods: 60 children ranged in age from five to eight years participated in this study, group (A) contains 30 normal children from both sexes with age ranged from five to six years and group (B) include 30 normal children from both sexes with age ranged from seven to eight. The evaluation had been done through two procedures; foot scan plat using system from MateScan ersa Tek configuration, to evaluate the maximum foot pressure at five selective points (heel, midfoot, metatarsal heads, halux, and lateral four toes). On the otherhand evaluation of gait was performed by three dimention motion analysis to measure the tempro-spatial parameters of gait. Results: revealed significant difference in all the measured variables between the both groups A and B. Also there was correlation between gait development and foot pressure in favour for group B. Conclusion: It can be concluded that, there is a relation between foot pressure distribution and gait development in normal children. Also there is correlation between foot pressure distribution and gait development in and gait development.

1.	Foot pressure.	
2.	gait development.	
3.	normal children.	
4.	Children.	
:	دم وتطور المشي في الأطفال الأصحاء.	العلاقة بين توزيع ضغط الق
:	2307-2308.	
	1. 2. 3. 4. :	<ol> <li>Foot pressure.</li> <li>gait development.</li> <li>normal children.</li> <li>Children.</li> <li>Children.</li> <li>2307-2308.</li> </ol>

Author	:	Heba Gaber Abd-Elaziz.
Title	:	Hand Function Abilities Via Strengthening of Triceps Brachii
		Muscle in Hemiparetic Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Khaled Ahmed Olama.
	2.	Sherif Naseef Girgis.
	3.	Naheed Shukri Thabet.
Degree	••	Master.
Year	:	2010.
Abstract	:	

This study is to determine the effect of strengthening exercises of triceps brachii muscle on hand functions in hemiparetic cerebral palsied children. This study was carried out on thirty hemiparetic children of both sexes (fifteen girls and fifteen boys) divided into equal groups A and **B.** Their age ranged from five to seven years old, chosen from outpatient clinic of Faculty of Physical Therapy, Cairo University. The strength of triceps brachii muscle was evaluated by using the biodex isokinetic dynamometer. Their wrist extension was evaluated by using digital electro-goniometer and their hand functions were evaluated by using Peabody Developmental Motor Scale (PDMS-2) prior and after six weeks of treatment program. Group (A) received designed physical therapy program for 60 minutes while group (B) received the same designed physical therapy program in addition to strengthening exercises program for triceps brachii muscle for six weeks in form of three sessions per week. The results of this study revealed statistically significant improvement in all measuring variables of the control and study groups when comparing their pre and post treatment mean values. However, more improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group. It is concluded that, the program of strengthening triceps brachii muscle can be used in addition to the traditional physical and occupational therapy programs to improve hand function in the affected upper limb in spastic hemiparetic cerebral palsy children.

Key words	1.	Strengthening exercises.
	2.	Triceps Brachii Muscle.
	3.	Hand functions.
	4.	Hemiplegic children.
	5.	Children.
Arabic Title Page	:	قدرات وظائف اليد عن طريق تقوية العضلة ثلاثية الرؤوس للعضد عند الاطفال
		المصابين بالخدل الشقى.
Library register number	:	2315-2316.

8

Author	:	Hoda Mohammed Abd El-Fattah.
Title	:	Influnce of cognitive training on balance in attention deficit
		hyperactivity disorder.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd-Elazeim.
	2.	Khaled Ahmed Olama.
	3.	Reda Mosaad El-Gammal.
Degree	:	Master.
Year	••	2010.
Abstract	:	

Attention deficit hyperactivity disorders (ADHD) is one of the most common behavior disorders of childhood. The purpose of this study was to investigate the influence of cognitive training on balance in attention deficit hyperactivity disorders of children. Forty children their age ranged from 6-10years participated in this study. They were divided into two equal groups study group which received treatment program for three months and control group which did not receive treatment program. The training program was conducted at the Faculty of Physical Therapy at the Rehacom unit, in the form of cognitive training on the attention and concentration battery. The two groups were evaluated at the beginning and after the three months by DSM-IV-TR diagnostic criteria for ADHD Rehacom to evaluate attention and concentration parameters and Biodex Balance System to evaluate balance. The results of this study revealed significant reduction in symptoms severity and account for inattention items and improvements for attention and concentration levels and reduce its minimum and maximum reaction time. Also significant improvement in overall balance stability, antro-posterior stability and medio-latral stability indices when comparing study and control group. From the previous data it could be concluded that cognitive training is a beneficial therapeutic modality that can be used to improve attention in ADHD children and assist in improving balance for this children.

Key words	1.	Cognitive.	
	2.	Attention Deficit Hyperactivity Disorder	
	3.	Balance.	
	4.	Children.	
Arabic Title Page	:	الاتزان في حالات متلازمة فرط الحركة ونقص الانتباه.	تأثير التدريب المعرفي على
Library register number	:	2277-2278.	

Author	:	Ibrahim Abdelrahman Ali Amin.
Title	:	Effect of trunk angulation in sitting position on head control in
		spastic diaplegic cerebral palsy.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Khaled Ahmed Olama.
	2.	Ehab Ragaa.
	3.	Abd El aziz Ali Sherief.
Degree	:	Master.
Year	:	2010.
Abstract	:	

**OBJECTIVE:** The purpose of this study is to evaluate the effect of tilting angles of chair back on head control and to evaluate which angle (30 & 45) has the greatest effect on head control. **METHODS:** Forty five children participated in this study; they were assigned into three groups of equal number, one control group and two study groups. There ages ranged from fourteen to eighteen months. Group (A) (10 males and 5 females) with mean age of 15.6 ± 1.5 months, received only selected physical therapy program for 60 minutes. The program includes a reflex inhibiting pattern, facilitation of righting and equilibrium reactions, sensory stimulation, and faradic stimulation aiming for modulation of spasticity for 2 months. Group (B) (11 males and 4 females) with mean age of 15.86 ± 1.5 months. They received selected physical therapy program for 30 minutes as in group (A) combined with positioning in the tilting chair at 30 degree posterior tilting for 30 minutes for 2 months. Group (C) (9 males and 6 females) with mean age of 15.6 ±1.64 months, received selected physical therapy program for 30 minutes as in group (A) combined with positioning in the tilting chair at 45 degree posterior tilting for 30 minutes for 2 months. Children were evaluated pre and post treatment for their head control. RESULTS: The results revealed that there were statistically significant differences in group C regarding the improvement in head control as compared to group A and B. While there were no statistically significant differences in group A regarding improvement in head control as compared to group **B** and **C**. CONCLUSION: Adding positioning in posterior tilting chair back at 45 degree to physical therapy exercises significantly improved head control. The selected physical therapy program alone was not sufficient to improve head control.

Key words	1.	Cerebral palsy.
	2.	Postural control.
	3.	Head control.
	4.	Tilting chair back.
	5.	Children.
	6.	trunk angulation.
	7.	spastic diaplegic.
Arabic Title Page	:	تأثير ميل الجذع في وضع الجلوس على التحكم في الرأس في الشلل المخي التقلصي
		المزدوج.
Library register number	:	2271-2272.

Author	:	Mai Elsayed Abbass Mohamed.
Title	:	Specific Functional change In-Relation To Power In Spastic
		Hemiplegic Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal El-Sayed Shoukry.
	2.	Mostafa El Sherpeny.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of the study was to evaluate power changes in the upper limbs muscles of spastic hemiplegic children as a result of strengthening, also to evaluate functional improvement as a result of strength training and to clarify the relation between power and function improvement in spastic hemiplegic children. Thirty children 7 to 9 years old participated in the study, classified randomly into 2 groups control group received traditional physical therapy program and study group; received traditional physical therapy program and specially designed strengthening exercise program using arm ergometer machine. Both groups were assessed by Jacob's prevocational skill assessment and Isokinetic dynamometer before and after 3 successive months. Comparing the pre and post-treatment mean values using peak torque parameter of the shoulder flexors and extensors of the two groups revealed significant improvement in strength but the improvement in function occurs only in the study group.

Key words	1.	Cerebral palsy.	
	2.	Hemiplegia.	
THESES	3.	Isokinetic testing.	
	4.	Dressing function.	
	5.	Children.	
	6.	Strengthening.	
	7.	Spastic Hemiplegic Children.	
Arabic Title Page	:	ِ القوة العضلية في الأطفال المصابين بالشلل النصفى	علاقة التغير الوظيفي بتغير
			التقلصى.
Library register number	:	2091-2092.	

Author	:	Manal Helmy Mohamed Koura.
Title	:	Efficacy of Gravity Force Stimulation Program on Improving
		Dynamic Balance in Children with Spastic Diplegia.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal El Sayed Shoukry.
	2.	Ihab Ragaa Abd Al Raof.
	3.	Nahed Shukri Thabet.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to evaluate dynamic balance in spastic diplegic cerebral palsied children following participation in a physical therapy program which included designed physical therapy program and Gravity Force Stimulation program; Three times per week for thirty six sessions. Thirty spastic diplegic children of both sexes (15 boys and 15 girls), their age ranged from six to eight years old, chosen from the outpatient clinic of Faculty of Physical Therapy, Cairo University. They were classified randomly into two groups of equal number (Study and Control). Dynamic balance parameters were assessed by using the Biodex Balance System before and after the application of the treatment program. The results of this study revealed statistically significant improvement in the measured variables of the study and control groups when comparing their pre and post treatment mean values. In conclusion, more improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group.

Key words	1.	Cerebral Palsy.	
	2.	Diplegia.	
THESES	3.	Dynamic balance.	
	4.	Gravity Force Stimulation.	
	5.	Children.	
Arabic Title Page	:	اذبية على الإتزان الديناميكي عند الأطفال المصابين بالشلل	تأثير برنامج تنبيه بقوة الج
			التقلصى المزدوج.
Library register number	:	2339-2340.	

Author	:	Mariam Nashaat Habib.
Title	:	Effect of Suggested Unipedal Exercise Program on Static
		Balance in Cerebral Palsy Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Mohammed Tawfic.
	2.	Gehan El-Meniawy.
	3.	Bothina Abd El-Aziz.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to investigate the effect of unipedal standing exercise on static balance in spastic diplegic cerebral palsied children. Thirty spastic diplegic children, their age ranged from 6-9 years, participated in this study; every child received a unipedal exercise program three times per week for three successive months. Evaluation was carried out for every child, before and after the treatment program by using Biodex Balance System. The results of this study revealed that there was a significant improvement in the static balance in the study group after treatment when compared with their pre-treatment results.

8 I I I I I I I I I I I I I I I I I I I			
Key words	1.	Spastic diplegia.	
VETCAL T	2.	Unipedal standing.	
I SICAL I	3.	Biodex Balance System.	
	4.	Static Balance.	
LIBRA	5.	Children.	
	6.	Balance.	
THESES	7.	Cerebral Palsy Children.	
Arabic Title Page	:	م بالوقوف على قدم على الاتزان الثابت في حالات الشلل	تأثير برنامج تمرين مقتر
			الدماغي للأطفال.
Library register number	:	2083-2084.	
	•		

Author	:	Marian Magdy Shafeek.
Title	:	Modulation of humeral mineral density by electromagnetic
		field in children with Erb's palsy.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan Elnegmy.
	2.	Rokaya Abd Elshafy Soliman.
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of the study was to investigate the role of electromagnetic field in modulation of humeral mineral density in children with Erb's palsy. Subjects: Thirty children with age ranged from 2 to 5 years participated in this study, divided randomly into two groups of equal numbers (control & study). Methods: The control group (G1) received a specially designed exercise program, while the study group (G2) received low intensity low frequency pulsed electromagnetic field in addition to same exercise program given to (G1). Assessment applied before and after three successive months of treatment for both groups. Assessment of bone mineral density was done by Dual Energy X-ray Absorptiometry device and assessment of function improvement was done by Mallet system. Result: Revealed significant improvement in the bone mineral density in both groups following treatment, also significant difference between the two groups (post treatment) was recorded in favor of the study group. Conclusion: According to the results of this study supported by the relevant literature low intensity and low frequency pulsed electromagnetic field can be added to the Erb's palsy physical therapy program to help in improvement of the humerus mineral density.

Key words	1.	Low Intensity.	
THESES	2.	humeral mineral density.	
IIILSLS	3.	Bone Density.	
	4.	Erb's Palsy.	
	5.	Children.	
	6.	electromagnetic field.	
	7.	Low Frequency.	
	8.	Pulsed Electromagnetic Field.	
Arabic Title Page	:	بواسطة المجال الكهر ومغناطيسي في الأطفال ذوي شلل	تعديل كثافة عظمة العضد ب
			ارب.
Library register number	:	2289-2290.	

Author	••	Mashael Abd El-Salam Mohamed.
Title	:	Influence of visual stimulation program on the posture pattern
		of standing in spastic diplegic children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal El- Sayed Shoukry.
	2.	Manal Salah El- Dien.
	3.	Marian Yousry Fahmy Guirgis.
Degree	••	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to evaluate the posture pattern of standing in spastic diplegic children following the participation in visual stimulation program in addition to the designed therapeutic exercise program. Thirty spastic diplegic children, ranged in age from three to five years participated in this study. They were classified randomly into two groups of equal number, (control and study). The control group received a selected therapeutic exercise program. The study group received visual stimulation program in addition to the same exercise program. Standing dimension was assessed using gross motor function measure (GMFM), before and after 3 months of the application of the treatment program. Results showed statistically significant difference (P< 0.05) in both control and study groups upon comparing pre and post treatment values and there was also statistically significant difference among both groups upon comparing their post treatment results in favor of study group.

Key words	1.	spastic diplegia.
LIDKA	2.	posture pattern.
THEORO	3.	visual stimulation program.
THESES	4.	sta <mark>nding in spastic diplegic children.</mark>
	5.	Children.
Arabic Title Page	:	تأثير برنامج التنبيه البصر <mark>ي علي أنموذج الوقوف عند الأطفال المصابين بالشلل</mark>
		الدماغي التقلصي المزدوج <mark>.</mark>
Library register number	:	2135-2136.

Author	:	Maya Galal Abd El Wahab.
Title	:	A Systematic Review: Effects of Ankle-Foot Orthoses on Gait
		in Spastic Cerebral palsy.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Elham El Sayed Salem.
	2.	Shereen Abdel-Ghaffar.
	3.	Naglaa Ahmed Zaky.
Degree	:	Master.
Year	:	2010.
Abstract	:	

Purpose: To evaluate the efficacy of ankle-foot orthoses (AFOs) on gait in children with spastic cerebral palsy (CP). Methods: Systematic review of randomized controlled trials (RCTs). Databases searched included PubMed, Ovid Medline, and Cochrane Library. Intervention: Studies which evaluated the effect of any type of AFO on the gait of children with spastic CP were incorporated in this review. Outcome measures: outcomes related to gait, including gait analysis (kinetic, kinematic, and temporal-spatial parameters), energy expenditure during gait, and gross motor function. Results: Twelve studies met the inclusion criteria. They showed moderate risk of bias indicating moderate degree of quality evidence. The included studies were dissimilar with regards to populations, interventions and ways of outcome assessment. Because of this heterogeneity meta-analysis could not be done and findings were presented qualitatively as narrative summaries. This systematic review suggests that AFOs may lead to improvements in gait parameters in spastic hemiplegic and diplegic children. Conclusion: There is poor evidence from RCTs on the effects of AFOs on gait in children with spastic CP. More well-designed and adequately powered randomized controlled trials are still needed.

Key words	1.	Systematic review.	
ILSLS	2.	cerebral palsy.	
	3.	ankle-foot orthoses.	
	4.	Gait in Spastic Cerebral palsy.	
	5.	Children.	
Arabic Title Page	:	الكاحل والقدم على المشي في حالات الشلل الدماغي	فحص منهجي لتأثير جبيرة
			التقلصي.
Library register number	:	2149-2150.	

Author	••	Mohamed Abd El-Aziz El-Bagoury.
Title	:	The effect of Supramalleolar Orthoses on standing balance in
		spastic hemiplegic cerebral palsied children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal El-Sayed Shoukry.
	2.	Shorouk El-Shennawy.
	3.	Moustafa El-Sherbiny.
Degree	••	Master.
Year	••	2010.
Abstract	:	

This study was done to detect the effect of Supramalleolar Orthoses on standing balance in spastic hemiplegic cerebral palsy children. Thirty spastic hemiplegic children ranging in age from 6 to 8 years old were participated in this study. They were distributed into two equal groups; control and study groups. The control group have received the selected physiotherapy program of balance training, while the study group have received the same physiotherapy program of balance training during wearing the Supramalleolar Orthoses and they were asked to wear the supramalleolar orthoses for 10 hours everyday at home. The frequency of patients in both study and control groups was 3 sessions/ week for 3 months. Balance parameters (overall, anteroposterior, and mediolateral stability indices) were assessed using the Biodex stability system for both groups, the assessment was done before and after the period of treatment. The results of this study revealed statistically highly significant improvements in all variables of the control and study groups when comparisons were done between the pre and the post treatment results inside the same group, except the anteroposterior stability index of the control group at stability level 8 which had revealed non significant improvement. When comparisons were done between the post treatment results of the control and study groups, it had revealed highly significant improvements in all variables with an improvement percentage in the favor of the study group. From these results, it can be concluded that the use of Supramalleolar Orthoses for spastic hemiplegic Cerebral Palsied children is beneficial for improvement of standing balance.

Key words	1.	Supramalleolar Orthoses.
	2.	standing balance.
	3.	Hemiplegia.
	4.	cerebral palsy.
	5.	Children.
	6.	spastic hemiplegic.
Arabic Title Page	:	تأثير جبيرة فوق العظمة المطرقية على الاتزان في الوقوف في حالات الفالج الشقي
		التشنجي عند الأطفال ذوي الشلل الدماغي.
Library register number	:	2247-2248.

Author	:	Mohammed Hany Taher Ata.
Title	:	Effect of Taping On Hand Functions in Spastic Hemiplegic
		Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negmy
	2.	Tarek El Said Omar
	3.	Mohamed Bedair Ibrahim
Degree	:	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to investigate the effect of taping on the hand functions in hemiplegic children. The study was conducted on thirty spastic hemiplegic children of both sexes ranging in age from 3 to 6 years. They were randomly classified into two groups of equal number group A, (Control group) and group B (Study group). The control group received neuro-develpmental exercise program for three successive months while the study group used taping in addition to the same neuro-develpmental exercise program for three successive months. In all patient the Peabody developmental motor scale (in the form of the fine motor quotient (grasping and visual motor integration) was used to evaluate hand functions before and after three months. The results showed that before treatment there was no significant difference between the two groups while after treatment there was significant difference in both groups, also there was a significant difference after treatment between the two groups in favour of the study group. In conclusion the use of taping can be helpful as an additional modality for improving the hand functions in hemiplegic children.

Key words	1.	Hemiplegia.	
INESES.	2.	Taping.	
	3.	Grasping.	
	4.	Visual motor integration.	
	5.	Children.	
	6.	Hand Functions	
	7.	Spastic Hemiplegic Children.	
Arabic Title Page	:	متخدام الشريط اللاصق على وظائف اليد لدى الأطفال المصابين بالفالج الشقى.	تأثير ا
Library register number	:	2181-2182.	

Author	:	Mona Nabil Mohamed Ayad.	
Title	:	Constraint induced movement therapy and postural control	
		during reaching in children with hemiplegia.	
Dept.	:	<b>Physical Therapy Department for Growth and Developmental</b>	
		Disorder in Children and its Surgery.	
Supervisors	1.	Amira Mohamed El Tohamy.	
	2.	Ehab Ragaa Abdel Raouf.	
Degree	:	Master.	
Year	:	2010.	
Abstract	:		

The purpose of the study was to evaluate the effect of Constraint Induced Movement Therapy (CIMT) on postural control (PC) and trunk contribution during reaching with the affected arm in seated children with hemiplegia. 40 children with age range from 4 to 7 years participated in this study, 20 normal children representing group A, to use their data as reference to compare with and 20 Hemiplegic children, classified into 2 equal study groups, group B received designed physical therapy program (1 hour, 3 times per week), group C received the same designed physical therapy program and CIMT which was conducted daily for 6 hours. Both groups were assessed by Qualysis motion analysis system before and after 6 weeks of treatment. Comparing the pre and post treatment mean values of head, pelvic, trunk and elbow angles of the two groups before and during the reaching movement revealed more improvement in postural control and trunk contribution in group C as they showed more stable head and pelvis, better trunk contribution and less joint freezing.

Key words	1.	Hemiplegia.
LIDKA	2.	Postural control.
THEORO	3.	Reaching.
THESES	4.	Motion analysis.
	5.	Children.
	6.	<b>Constraint induced movement therapy (CIMT).</b>
Arabic Title Page	:	العلاج الحركي الناتج عن ا <mark>لقيد والتحكم بوضع الجسم أثناء الوصول للهدف بالذراع</mark>
		لدى الأطفال المصابين بالشلل النصفي.
Library register number	:	2317-2318.

Author	:	Norhan Bhnasi Ali Karkora.	
Title	:	<b>Functional Activities In Relation To Motor Abilities In Spastic</b>	
		Cerebral Palsy Children.	
Dept.	••	Physical Therapy Department for Growth and Developmental	
		Disorder in Children and its Surgery.	
Supervisors	1.	Amira Mohamed El-Tohamy	
	2.	Tarek El-Said Omar	
	3.	Shorouk Ahmed Wagdi El-Shennawy	
Degree	••	Master.	
Year	:	2010.	
Abstract	:		

Background and Purpose: The purpose of this study was to evaluate the effect of functional physical therapy training on motor abilities of children with spastic cerebral palsy. Subjects: Thirty children with spastic diplegic cerebral palsy, their ages ranged from three to five years old were participated in the study. They were divided into two groups of equal number (control and study). Methods: The control group received selected physical therapy program concentrated on improving their standing abilities. The study group received especially designed physical therapy program concentrated on improving performance of the children on functional situations. GMFM scale was used to evaluate the standing abilities of the children on both groups, before and after three months of receiving the treatment programs. Results: The results of the study revealed statistically significant improvement in standing abilities of children on both groups when comparing their pre and post treatment results and when comparing post treatment results for both groups it revealed significant difference in favor to control group. Conclusion: From the obtained results of this study, it can be concluded that, physical therapy which concentrated on functional activities training can be considered a beneficial program that may be used integrative with other programs to improve standing abilities in children with spastic diplegic cerebral palsy.

Key words	1.	Cerebral palsy.
	2.	Spastic diplegia.
	3.	standing abilities.
	4.	GMFM scale.
	5.	Children.
	6.	Functional physical therapy.
Arabic Title Page	:	الأنشطة الوظائفية وعلاقتها بالقدرات الحركية لدى الأطفال المصابون بالشلل الدماغي
		التقلصى.
Library register number	:	2327-2328.

Author	:	Ola Hamdy Mostafa.	
Title	:	The effect of theratogs wrist and thumb positioning system on	
		grasping for hemiparetic children.	
Dept.	:	Physical Therapy Department for Growth and Developmental	
		Disorder in Children and its Surgery.	
Supervisors	1.	Kamal El-Sayed Shoukry.	
	2.	Fatma Moustafa Abdel-Aty.	
	3.	Mostafa El-Sherbini.	
Degree	:	Master.	
Year	:	2010.	
Abstract	:		

The purpose of this study was to determine the effect of Theratogs wrist and thumb positioning system on grasping for hemiparetic children. Thirty hemiparetic children from both sexes. Their ages ranged from four to six years from both sexes participated in this study. They were classified randomly into two groups of equal number study group A and control group; B. Both groups received the same traditional physical therapy program and the same specially designed program for facilitation of hand function while in group A patients wear Theratogs wrist and thumb positioning system. 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 of treatment. The pre treatment results revealed no significant differences between group A and B. Comparing the pre and post treatment mean values of the measuring variables of the two groups revealed significant improvement. Moreover; comparing the post treatment results of two groups revealed highly significant improvement in favor to group A.

Key words	1.	Hemiparesis.	
	2.	Theratogs wrist.	
THESES	3.	thumb positioning system.	
	4.	Grasping.	
	5.	Children.	
	6.	Peabody Developmental Motor Scale.	
	7.	Fine motor quotient.	
Arabic Title Page	:	فاصة باليد على قدرة القبض عند الأطفال المصابين بالخدل	تأثير منظومة الثيراتوج الخ
			الشىقى.
Library register number	:	2243-2244.	

Author	:	Rania Galal El-Deen Abdou.
Title	:	Effect of Pulsed Electromagnetic Field in Healing of
		Supracondylar Fracture in Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassal El-Negamy
	2.	Mohamed Tawfik Mahmoud
	3.	Rokaia Abd El-Shafy Soliman El-Banaa
Degree	••	Master.
Year	:	2010.
Abstract	:	

The purpose of this study was to evaluate bone healing in supracondylar fractured children following physical therapy program including, low intensity and low frequency pulsed electromagnetic fields in addition to regular exercise program. Thirty supracondylar fractured children participated in this study. They were classified randomly into two groups, (A&B); Group (A) represents the control group; they were immobilized by plaster cast & were treated by using traditional physical therapy program only (ROM exercise and manual strengthening exercise). Group (B) represents the study group; they were also immobilized by plaster cast & received the same program designed to control group in addition to low intensity and low frequency pulsed electromagnetic field therapy. The treatment program was conducted for both groups day after day over a period of six successive weeks. Bone healing was assessed by using Dual Energy X-ray Absorpiometry (DEXA) for both groups at three different times during investigation, the first immediately after fracture and before starting physical therapy program, the second after 3 weeks of treatment and the third after 6 weeks of treatment. The result of this study revealed no statistically significant difference between the two groups before treatment, while after 3 and 6 weeks there was significant improvement in both groups. The results also showed significant difference between the two groups after treatment in favor of the study group. It can be suggested that adding low intensity and low frequency pulsed electromagnetic fields to the physiotherapy program improve healing of supracondylar fracture in children.

Key words	1.	Electromagnetic fields,.
	2.	Bone healing.
	3.	supracondylar fracture.
	4.	Healing.
	5.	Children.
Arabic Title Page	:	تأثير المجال الكهر ومغناطيسي المتردد في إلتئام كسر أعلى لقمة الكوع العظمية في
		الأطفال.
Library register number	:	2107-2108.

Author	••	Rania salah Ali Swilam.
Title	:	Kinetics analysis of the hip joint in children with clubfoot .
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El Tohamy.
	2.	Mohamed Abd El Monem El Sobky.
Degree	••	Master.
Year	•	2010.
Abstract	:	

The purpose of the study was to evaluate the differences in the moment of the hip joint during walking in children with unilateral clubfoot who's been treated with posteromedial release comparing to the normal children. Thirty children ranged in age from six to nine years participated in this study, group (A) includes ten children with unilateral clubfoot selected from Abo El-Rish Hospital from both sexes (4 males and 6 females) and group (B) includes twenty normal children from both sexes (15 males and 5 females). The evaluation had been done through computerized gait analysis system (Opto-electronic motion analysis system with a force plate unit) to assess the peak extension and internal rotation moments at the hip joint in normal and children with clubfoot (affected and non-affected sides). The results revealed no significant differences between the both sides in normal group (B) in peak extension and internal rotation moments of the hip joint. However there is significant reduction in the affected side than nonaffected side in group (A) and than normal group (B) in peak extension moment. Also, there is significant increase in internal rotation moment in affected than non-affected side of group (A) and than in normal group (B). On the other hand, there is significant increase in internal rotation moment in non-affected side of group (A) than in normal group (B). In conclusion compensatory mechanisms at the hip joint especially in extension and internal rotation moments in children with unilateral clubfoot who's treated with posteromedial release.

Key words	1.	clubfoot.
	2.	posteromedial release.
	3.	kinetic analysis.
	4.	hip joint.
	5.	Children.
Arabic Title Page	:	التحليل الحركي لقياسات مفصل الفخذ في الأطفال ذوي القدم الحنفاء.
Library register number	:	2163-2164.

Author		Rouba Bashar Khair.	
Title	:	Hippotherapy and Balance in Hemiplegic Cerebral Palsied	
		Children.	
Dept.	:	Physical Therapy Department for Growth and Developmental	
		Disorder in Children and its Surgery.	
Supervisors	1.	Gehan Hassan EL-Meniawy.	
	2.	Abo ELMaged Ahmed Abd EL-Rehem.	
	3.	Nahed Shukri Thabet.	
Degree	:	Master.	
Year	:	2010.	
Abstract	:		

The purpose of this study was to evaluate balance in spastic hemiparetic cerebral palsied children following the participation of a physical therapy program including; twelve sessions of hippotherapy once a week in addition to a specially designed exercise program. Thirty spastic hemiparetic children ranged in age from 6 to 8 years old participated in this study. They were classified randomly into two groups of equal number, (control and study).Balance parameters were assessed using the Biodex stability system in study and control groups before and after the application of the treatment program. The results of this study revealed statistically significant improvement in the measuring variables of the control and study groups when comparing their pre and post treatment mean values. However, more improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group.

Key words	1.	Cerebral Palsy.	
ITRDA	2.	Hemiplegia.	
LIDKA	3.	Balance.	
	4.	Hippotherapy.	
	5.	Children.	
Arabic Title Page	:	ل والاتزان لحالات الفالج الشقي عند الاطفال.	العلاج بواسطة ركوب الخيا
Library register number	:	2119-2120.	

Author	:	Samah Mahmoud Ahmed Sheha.		
Title	:	Isokinetic Cross Training and Functional Ability of		
		Hemiplegic Children.		
Dept.	:	Physical Therapy Department for Growth and Developmental		
		Disorder in Children and its Surgery.		
Supervisors	1.	Amira Mohamed El-Tohamy.		
	2.	Samah Attia Tolba El Shemy.		
	3.	Mohamed Salah EL Den Mohamed Abdelkader.		
Degree	:	Master.		
Year	:	2010.		
Abstract	:			

The purpose of the study was to determine the effect of cross education on the activity of the paretic muscles of the upper limb and its implication on function in spastic hemiplegic CP children. Thirty children with spastic hemiplegia, their age were ranged from 5 to 7 years old, were participated in this study. They were classified into 2 groups of equal number, the control group received selected treatment program based mainly on the neurodevelopment technique. whereas the study group received the same program in addition to isokinetic resistance training of the non affected upper limb for shoulder abductors in concentric mode at the angular velocity of 180 degree/ second under full supervision on the Biodex isokinetic dynamometer three times per week for 8 weeks, making a total of 24 training sessions. Both groups were assessed before and after the treatment program using Biodex isokinetic dynamometer and Modified functional scale for reaching. The results of this study revealed statistically significant improvement in the measuring variables of both the control and study groups when comparing their pre and post treatment mean values. However, significant improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group. In **Conclusion:** From the obtained results of this study, it can be concluded that unilateral isokinetic resistance training can be used to improve strength and functional ability of the contralateral affected limb in spastic hemiplegic CP children.

Key words	1.	Cross education.
	2.	Hemiplegia CP.
	3.	Isokinetic dynamometer.
	4.	Functional abilities.
	5.	Children.
Arabic Title Page	:	برنامج التعليم المتبادل الأيزوكينتيكي و القدرة الوظيفية لدي الأطفال المصابين بالفالج
		الشقي.
Library register number	:	2161-2162.

:	Samah Mohamed Abd El-Azem El-Sadany.		
:	Effect of postoperative chest physiotherapy program for		
	congenital heart disease in pediatric care unit.		
:	Physical Therapy Department for Growth and Developmental		
	Disorder in Children and its Surgery.		
1.	Faten Hassan Abd El-Azem.		
2.	Zeinab Salah Seliem.		
3.	Mohamed Hafad El-Hamadany.		
:	Master.		
:	2010.		
:			
	: : 1. 2. 3. : :		

The purpose of the current study was to investigate the effect of postoperative selected chest physiotherapy program for various types of congenital heart diseases in pediatric care unit. Subject: Thirty infants of both sexes (22 males and 8 females) in the immediate postoperative period following cardiac surgery in Cardio-Pulmonary intensive care unit (ICU) with age ranged from 3 months to 17 months were included in the study. They were classified into two groups of equal number (control group A and study group B) which were matched in age, sex, severity and complexity. Methods: Both groups were assessed in their first day postoperative for arterial blood gases (PH, PaCO2, PaO2, and SaO2), peripheral oxygen saturation by pulse oximetry (SPO2) and chest X-ray; these examinations were repeated by the end of 1<sup>st</sup> week (critical stage), 2<sup>nd</sup> week (weaning stage) and 3<sup>rd</sup> week (last stage), except the chest X-ray that was repeated by the end of 3<sup>rd</sup> week. Control group (A) received medical treatment in addition to traditional postoperative respiratory care in form of (humidification, vibration and suctioning). Study group (B) also received the same as in control group in addition to selected chest physical therapy program which included modified posture drainage, percussion, specialized breathing techniques, and assisted cough techniques. The treatment program was conducted for 6 days per / week for 3 successive weeks. Each session was applied for 30 minutes, three times daily thus offering total physiotherapy program of one hour and half daily for 3 weeks. Results: The post treatment findings of the current study at the end of last stage revealed that there were signs of moderate hypoxemia and respiratory acidosis in the control group when compared to the results of the study group that showed very mild hypoxemia and normal acid-base balance. By comparing pre to post treatment, the control group deteriorated from critical to last stage, while in the study group the deterioration degree was lower than the control group till the weaning stage then study group showed improvement in last stage. The study group had less pulmonary complications in form of pneumonia and atelectasis than in the control group. Conclusion: Selected chest physiotherapy program was very effective in preventing or at least minimizing the incidence of pulmonary complications. Consequently chest physiotherapy program was considered as an integral part of the postoperative management for infants with congenital heart diseases in pediatric care unit.

Key words	1.	Postoperative chest physiotherapy program.
	2.	congenital heart disease.
	3.	pediatric care unit.
	4.	Children.
Arabic Title Page	•	تأثير برنامج العلاج الطبيعي بعد عمليات تصحيح العيوب الخلقية للقلب في وحدة الرعاية للأطفال.
Library register number	:	2269-2270.

Author	:	Shimaa Abd El Rahim Abd El Aty Sheme.	
Title	:	Effect Of Skin Sensory Stimulation On Sitting And Standing	
		Posture Pattern In Diplegic Children.	
Dept.	:	Physical Therapy Department for Growth and Developmental	
		Disorder in Children and its Surgery.	
Supervisors	1.	Kamal El-Sayed Shoukry.	
	2.	Mohamed Tawfik.	
	3.	Marian Yousry Fahmy Guirgigs.	
Degree	••	Master.	
Year	:	2010.	
Abstract	:		

The purpose of this study is to evaluate the sitting and standing posture pattern in children with spastic diplegia following the participation in skin sensory stimulation program in addition to the suggested physical therapy program. Thirty children with spastic diplegia, ranged in age from two to four years old participated in this study. They were classified into two groups of equal number, (control and study). The control group received the suggested physical therapy program. The study group received skin sensory stimulation program in addition to the same suggested program. Sitting and standing dimensions were assessed using Gross Motor Function Measure (GMFM), before and after three months of the application of the treatment program. The results of this study revealed statistically significant improvement in almost of measuring variables of study and control groups when comparing the pre and post-treatment results of the study and control groups.

Key words	1.	cerebral palsy.	
LIDKA	2.	spastic diplegia.	
THESES	3.	sitting posture pattern,.	
	4.	standing posture pattern.	
	5.	Children.	
	6.	skin sensory stimulation.	
	7.	Diplegic Children.	
Arabic Title Page	:	تأثير تنبيه أحاسيس الجلد على أنموذجي الجلوس والوقوف عند الأطفال المصابين	
		بالشلل المخى التقلصي المزدوج.	
Library register number	:	2101-2102.	

Author	••	kamal Al Sayed Shoukry.	
Title	:	Effect of Swedish Knee Cage on Genu Recurvatum during	
		Walking in Spastic Hemiplegic Children.	
Dept.	:	Physical Therapy Department for Growth and Developmental	
		Disorder in Children and its Surgery.	
Supervisors	1.	Wael Mohamed El Tantawi.	
	2.	Hatem Abd El Rahman.	
	3.	Gehan Mosad Abd El-Maksoud.	
Degree	:	Master.	
Year	:	2010.	
Abstract	:		

The purpose of this study was to determine the effect of Swedish knee cage on genu recurvatum in spastic hemiplegic children. The study was conducted in the Out Patient Clinic of Physical **Therapy Faculty**, Cairo University. Thirty spastic hemiplegic children of both sex, age from three to seven years old, participated in this study. They were divided in two groups of equal number; study and control group. The study group received traditional physical therapy while wearing Swedish knee cage during all weight bearing activities for three months. The control group received the same traditional physical therapy program without wearing Swedish knee cage for three months. Both groups were subjected to the same evaluation procedure using three dimensional gait analysis to assess recurvatum angle and some of gait parameters ( stride length, cadence, speed, cycle time and stance phase ratio) before and after the successive three months of treatment. The results of this study show significant improvement in all measuring parameters. however, a significant difference was noticed in post treatment results for both groups in all measuring variable in favor to the study group. In conclusion, the Swedish knee cage is effective in controlling the genu recurvatum in hemiplegic children and improving walking pattern.

Key words	1.	genu recurvatum.	
TILSLS.	2.	hemplegia.	
	3.	Swedish Knee Cage	
	4.	Walking.	
	5.	Children.	
	6.	Spastic Hemiplegic Children.	
Arabic Title Page	:	تأثير الجبيرة السويدية على الركبة الطرقاء أثناء المشي عند الأطفال المصابين	
			بالفالج الشقي.
Library register number	:	2155-2156.	