

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT
DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

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

Master Degree

2015

Author	:	Ahmed Maher Saad El-Den Helal
Title	:	Effect of Whole Body Vibration on Bone Density in Children with Spastic Diplegia
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negmy
	2.	Manar Hussein Abd Al-Sattar
	3.	Mohammed Fawzy El-Bana
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of this study was to evaluate the effect of standing on vibrating platform on bone density in spastic diplegic cerebral palsied children. Thirty spastic diplegic children participated in this study. They were classified randomly into two groups of equal numbers, control and study groups. DEXA used to evaluate bone density in the two groups before and after three successive months of application of the treatment programs. The control group received a specially designed physical therapy program. The study group received the same specially designed physical therapy program given to the control group in addition to standing on vibrating platform. The pre-treatment results revealed non significant difference in all measuring variables between the two groups. In comparing the pre and post-treatment results for the control and study groups revealed non significant improvement in all variables. Post treatment result revealed non-significant difference between the lumber spine bone density of the two groups, but a significant increase in the median values of GMFM.</p>		
Key words	1.	Cerebral palsy
	2.	Diplegia
	3.	bone density
	4.	Children
		Spastic Diplegia
Classification number	:	000.000.
Pagination	:	109 p.
Arabic Title Page	:	تأثير اهتزاز الجسم بالكامل علي كثافة العظام في الأطفال المصابين بالشلل المخي التقليصي المزدوج
Library register number	:	4521-4522.

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Author	:	Amal Abdelwahab Youssef Abdelwahab
Title	:	Kinematic analysis of kicking movement in pre term and full term infants
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El Tohamy
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Infants born preterm are at increased risk of developing motor, cognitive and behavioral impairments compared with infants born at full term. Purpose: To assess if there is a difference in kicking movement between pre term and full term infants using the kinematic analysis of hip, knee and ankle excursion angles. Subjects and Method: forty three infants enrolled in that study, selected from the public health offices and out_ clinics of El SALAB hospital incubators They were assigned into two groups: Group (A): consisted of 30 full term infants with gestational age (38-42 weeks). Group (B): consisted of 13 preterm infants with gestational age (less than 37 weeks). Both groups underwent measurement procedures at 2 months corrected age and four months corrected age using AUTOCAD program for photographic analysis of hip, knee and ankle excursion angles during kicking movement. Result: Statistical analysis revealed no significant difference of the hip, knee and ankle excursion angles between the full term and preterm groups. Conclusion: It was concluded that there was no difference in the kinematic analysis of hip, knee and ankle excursion angles during kicking movement between the full term and preterm group.</p>		
Key words	1.	Kinematic analysis
	2.	kicking movement
	3.	full term infants
	4.	pre term infants
	5.	infants
Classification number	:	000.000.
Pagination	:	106 p.
Arabic Title Page	:	التحليل الكينماتيكي للحركة التبادلية للطرفين السفليين في الأطفال المبتسرين وحديثي الولادة
Library register number	:	4031-4032.

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NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Amal Mohamed Ali Mater
Title	:	Kinematic Analysis of Head Movement Relating to Eye-Head Coordination in Preterm and Fullterm Infants
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El-Tohamy
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Infants born preterm are at increased risk of developing motor, cognitive and behavioral impairments compared with infants born at term as they are subjected to factors as prematurity and extrauterine growth which leads to higher risk of developing motor delay. Purpose: To assess if there is a difference in head movement between preterm and full term infants using the kinematic analysis of flexion and extension angles. Subjects and Method: Twenty five infants enrolled and completed the study, selected from the public health clinics and out-clinics of El SALAB hospital and hospital of pediatrics ABO EL REESH. They were assigned into two groups: Group (A): consisted of 17 full term infants with gestational age (38-42 weeks). Group (B): consisted of 8 preterm infants with gestational age (less than 37 weeks). Both groups underwent measurement procedures at 2 months and 4 months corrected age, using AUTOCAD program for photographic analysis of head movement related to eye head coordination. Three landmarks were places on the infant's anatomical head points and a visual stimulation card was used to facilitate the head flexion and extension movement. Result: Statistical analysis revealed no significant difference of flexion and extension angles between the full term and preterm groups. Also the analysis reveals a significant increase at 4 month compared to 2 month within both groups in flexion and extension angle. Conclusion: It was concluded that analysis of head movements as the earliest motor skills will emerge a new era in detection of head developmental delay.</p>		
Key words	1.	Kinematic analysis
	2.	head movement
	3.	eye-head coordination
	4.	Full term Infants
	5.	Infants
Classification number	:	000.000.
Pagination	:	79 p.
Arabic Title Page	:	التحليل الحركي لحركة الرأس إستنادا على توافق حركة العين و الرأس في الأطفال ناقصي النمو وكاملي النمو
Library register number	:	4417-4418.

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Author	:	Amal Youssef El-Saeed Wahba
Title	:	Systematic Review: Effect of Virtual reality on balance in children with cerebral palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Azim
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>This study was conducted to obtain evidence that virtual reality has an effect on balance in children with cerebral palsy and to provide physical therapists with guidelines therefore they can improve balance in children with cerebral palsy using virtual reality. Method: Systematic review methodology was used to systematically and comprehensively search the web literature according to criteria included in Cochrane Handbook for Systematic Reviews of Interventions, Electronic searches were done using PubMed, Cochrane Central Register of Controlled Trials, Pedro and Google scholar. Consensus was achieved following two reviewers' independent inclusion screening, data extraction and appraisal. Subjects: This systematic review concerned children with cerebral palsy (hemiplegia or diplegia), aged between 7 and 18 years, had according to Gross Motor Functional Classification System (GMFCS) level of I or II, could walk unaided for a period of ten minutes and had not previously used virtual reality. Results: This systematic review includes four studies that fulfilled inclusive criteria, studying the effect of virtual reality on balance (as primary outcome) in cerebral palsy children and on secondary outcomes ; Gross motor functions, functional mobility, upper limb function and control and synchronization of movement. The whole number of participants included in this review was 52 participants, with age ranged from 7 to 18 years. All four studies included in the descriptive analysis due to heterogeneity of the primary and secondary outcomes. Conclusion: The current level of evidence to support the effectiveness of virtual reality on promoting balance in children with cerebral palsy remains weak. The main limitations are the heterogeneity between included studies in the review and the small number of the studies involved.</p>		
Key words	1.	Systematic Review
	2.	Virtual Reality
	3.	Cerebral palsy
	4.	Balance
	5.	Children
Classification number	:	000.000.
Pagination	:	111 p.
Arabic Title Page	:	فحص منهجي: تأثير استخدام الواقع الافتراضي على الاتزان لدى الأطفال المصابين بالشلل الدماغي.
Library register number	:	4515-4516.

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Author	:	Amira Farag Hamed El-Sheikh
Title	:	Correlation Between Ventilatory Functions and Functional Capacity in Passive and Non Passive Smoker Hemiplegic Cerebral Palsied Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed Etohamy
	2.	Manal Salah El Din Abdel-Wahab
	3.	Sahar Mohamed Nour El-Din
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>Objective The aim of the study was to investigate the effect of respiratory training in ventilatory functions in passive and non-passive cigarette smokers hemiplegic cerebral palsy and their function capacity. Thirty children diagnosed as hemiparetic cerebral palsy degree of spasticity ranged from 1 to +1 according to the Modified Ashworth Scale spastic. Children participated in this study were selected according to their parents smoking behaviors as children of passive smokers and non passive smokers in age from four to eight years. weight, height, ventilator functions (MVV, FVC, PIF, PEF) and six minutes walking test were detected for each children before and after 3months of starting treatment. Both groups were treated by incentive spirometer (IS) in addition to traditional physical therapy. Results the collected data was processed and statistically analysed using paired, unpaired test and Pearson correlation coefficient or Spreaman's rank. the results showed statistically significant improvement in post treatment FVC, MVV, PIF, PEF, Functional capacity. but there was no correlation between ventilatory function and functional capacity. Conclusion It is possible to conclude that incentive spirometer can be considered an effective modality in improving ventilatory functions and functional capacity in passive and non-passive smoker hemiplegic cerebral palsied children</p>
Key words	1.	Passive smokers
	2.	ventilatory functions
	3.	6 Minutes walking test
	4.	Incentive spirometer
	5.	Functional Capacity
	6.	Children
	7.	Non Passive Smoker
	8.	Hemiplegic Cerebral Palsied
Classification number	:	
Pagination	:	111 p.
Arabic Title Page	:	الوظائف التنفسية وعلاقتها بالقدرة الوظيفية في الأطفال المعرضين للتدخين السلبي وغير المعرضين من الأطفال المصابين بالفالج الشقي
Library register number	:	4375-4376.

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Author	:	Amira Fathy Ibrahim Saeed
Title	:	Correlation between kinematic gait parameters and balance in children with diplegic cerebral palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Prof. Dr. Faten Hassan Abd El-Azim
	2.	Prof. Dr. Ali Mustafa Abd-Elmonem
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>Objective: The purpose of this study was to investigate the correlation between the standing balance and spatiotemporal gait parameters in diplegics and normal children. Subject: Twenty five normally developing children and twenty five children with cerebral palsy spastic diplegia from both sexes with age range 5-9 years old. Methods: Biodex balance system was used for balance assessment, the anteroposterior, mediolateral and overall stability index were measured. Gait was assessed using videography and Corel Draw Graphics Suite (X5) software, the parameters calculated were step length, stride length, velocity, cadence, stance duration and swing duration. Results: There was significant difference between normal children and diplegics in all tested gait parameters and dynamic stability indices. Step length and stride length had direct moderate correlation with velocity and cadence in normal children, while Step length and stride length had direct moderate correlation with only the velocity in diplegics. No correlation was found between the spatiotemporal gait parameters and dynamic stability indices in normal and diplegic children. Conclusion: spatiotemporal gait parameters and standing balance parameters had lower values in children with diplegia than normal children and they were not correlated either in normal or diplegic children.</p>
Key words	1.	Kinematic
	2.	Balance
	3.	Children
	4.	cerebral palsy
	5.	gait parameters
Classification number	:	000.000.
Pagination	:	106 p.
Arabic Title Page	:	تأثير تمارين التقوية الميكانيكية عقب ترقيع الجلد في تشوة حروق إرتفاق الأصابع
Library register number	:	4337-4338.

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Author	:	Christine Adel Aziz Saleh
Title	:	Effect of mechanical vestibular stimulation on balance in spastic diplegic children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Emam H. El-Negemy
	2.	Ibrahim Mohamed Shokry
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of this study was to evaluate balance changes in spastic diaplegic children following participation in a program of therapeutic exercises including mechanical vestibular stimulation. Subject: Thirty children, aged 5 to 8 years participated in this study. They were classified into two groups of equal number 15 patients each. Method: The control group received 1 hour and 15 minutes of selected physical therapy program for such cases, while the study group received 1 hour of selected physical therapy program and 15 minutes of mechanical vestibular stimulation using vestibulator/ swing system. Balance was assessed before and after application of 12 weeks of treatment in the two groups using the Biodex balance system. Results: A statistically significant improvement was recorded after participation in the therapeutic program of mechanical vestibular stimulation. Conclusion: From the obtained results of the study, it can be concluded that, adding vestibular stimulation to the therapeutic exercises program is beneficial therapeutic method to improve balance in spastic diplegic children.</p>		
Key words	1.	spastic diplegia
	2.	Balance
	3.	mechanical vestibular stimulation
	4.	spastic diplegic
	5.	Children
Classification number	:	000.000.
Pagination	:	136 p.
Arabic Title Page	:	تأثير التنبيه الميكانيكي لدهليز الأذن على الإتران لدى أطفال الشلل النصفي التقلصي
Library register number	:	4126--4127.

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Author	:	Ebtehal Ahmed Mahmoud Taha
Title	:	Influence of Different Elbow Angles on the Grip Strength and Fine Hand Skills in Spastic Cerebral Palsy Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Kamal El Sayed Shoukry
	2.	Samah Attia Tolba El Shemy
	3.	Hisham Abd El Ghani
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Purpose of the study was to investigate the influence of the selected elbow angles (0, 30, 90 degree elbow flexion) on the power of hand grip and the fine hand skills in spastic diplegic cerebral palsied children and compare them with normal healthy children. Subjects: Fifty spastic cerebral palsy children of both sexes, from six to eight years old. Another group of fifty normal healthy children of same age were chosen for the control group. They were recruited from out clinic of Faculty of Physical Therapy-Cairo University and out clinic of Physical Therapy department of Pediatric Hospital of Cairo University-Abu Al Resh-. Methods: Baseline Pneumatic Bulb Hand Dynamometer was used for measuring hand grip strength, while the fine hand skills was evaluated by using the Peabody developmental Motor Scales (visual-motor integration subtest). The different elbow angles were fixed by using special design of static elbow splint at 0, 30, 90 degree elbow flexion. Results: The results of this study showed that there was a significant increase in hand power grip strength at 0° elbow flexion compared with 30° and 90° elbow flexion in both cerebral palsy and normal children group (p=0.0001) and a significant increase in median value of standard score of the visual motor integration subtest of the Peabody Developmental Motor Scale at 30° and 90° elbow flexion compared with 0° elbow flexion in both groups of the study (p=0.0001). Moreover, there is moderate positive significant correlation between hand power and standard score at 0, 30 and 90 degree elbow flexion in both groups of the study. Conclusion: It was concluded that full elbow extension is the optimum angle to measure and improve the hand grip strength, while elbow flexion at 90° is appropriate to improve the fine hand skills.</p>		
Key words	1.	Grip Strength
	2.	Fine Hand Skills
	3.	Spastic Cerebral Palsy Children
	4.	Different Elbow Angles
	5.	Children
Classification number	:	000.000.
Pagination	:	139 p.
Arabic Title Page	:	أثر زاوية مفصل الكوع على قوة قبضة اليد و المهارات الدقيقة لليد عند الأطفال المصابين بالشلل الدماغي التقلصي
Library register number	:	4275-4276.

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Author	:	Hend Abd El-Azeem Hassan Abd El-Fattah Wahsh
Title	:	Effect of proprioceptive training of the trunk on sitting and standing pattern in children with spastic diplegic cerebral palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Prof. Dr. Kamal El- Sayed Shoukry
	2.	Prof. Dr. Mostafa Hassan Abo El-Fotoh El-Sherbiny
	3.	Dr. Nanees Essam Mohamed Salm
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Background: There are many questions about the influence of proprioceptive training on postural control and dynamic balance in spastic diplegic cerebral palsy (CP) children. Purpose: This study was conducted to determine the effect of proprioceptive training of the trunk using a modified belt on both sitting and standing pattern and dynamic balance in children with spastic diplegic CP. Subjects, Materials, and, Methods: Thirty children with spastic diplegic CP participated in this study. The control group received the physical therapy exercise program; while the study group received proprioceptive training program for the trunk using a modified trunk belt with the same program given to the control group. The Gross Motor Function Measure and the Pediatric Balance Scale was used to assess sitting, standing, and dynamic balance. Results: A significant difference was observed when comparing the post treatment results of the two groups in favor of the study group. Conclusion: Proprioceptive training of the trunk using modified belt could be used as an effective method for improving both sitting and standing pattern and dynamic balance for spastic diplegic CP children.</p>		
Key words	1.	Cerebral palsy
	2.	Diplegia
	3.	Proprioceptive training
	4.	Sitting and Standing pattern
	5.	Dynamic balance
	6.	Children
Classification number	:	000.000.
Pagination	:	IX,129,4 p.
Arabic Title Page	:	تأثير التدريب على استقبال الحس العميق من الجذع على التحكم في نموذج الجلوس والوقوف عند الأطفال المصابين بالشلل الدماغي التقلصي المزدوج
Library register number	:	4121-4122.

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Author	:	Hesham Safwat Kamal
Title	:	Impact of Selected Physical Therapy Program on Motor Development in Phenylketonuric children
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Elham El Sayed Salem
	2.	Asmaa Abd El Star Abo Nour
	3.	Heba Salah Abd El Khalek
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>Background: Phenylketonuria is a genetic metabolic disorder associated with progressive motor developmental delay. Purpose: The purpose of this study was to investigate the impact of a selected physical therapy program, early diagnosis, starting diet and medical treatment on the gross motor development particularly standing and walking milestones in phenylketonuric children. Subjects: Thirty children with Phenylketonuria disorder from 1 to 4 years old participated in the study. They were assigned into two groups with equal numbers, 15 children in each group and subdivided within each group into 2 subgroups according to diagnosis, starting diet and medication. Control Group (GA) received diet and medication while study Group (GB) received diet and medication in addition to a selected physical therapy program to facilitate standing and walking. Gross motor development (standing and walking) were measured before and after 3 successive months of the study by using GMFM-88. Results: The results of the study revealed statistically significant improvement in measuring variables of the study group when comparing its pre and post study results and when comparing the post study results of control group while the results of the study of subgroups G(A1) and G(A2) revealed statistically significant improvement in measuring variables of G(A1) when comparing its pre and post study results and when comparing the post study results of G(A2) in addition to the results of the study of subgroups G(B1) and G(B2) revealed statistically significant improvement in measuring variables of G(B1) when comparing pre and post study results and when comparing the post study results of G(B2) (P<0.05). Conclusions: The selected physical therapy program, early diagnosis, starting diet and medical treatment were effective on the improvement of gross motor development particularly standing and walking milestones in phenylketonuric children.</p>
Key words	1.	Phenylketonuria
	2.	gross motor function measure
	3.	Motor Development
	4.	children
Classification number	:	000.000.
Pagination	:	113 p.
Arabic Title Page	:	تأثير برنامج علاج طبيعى مختار على التطور الحركى في مرضى الفينيل كيتونيوريا.
Library register number	:	4477-4478.

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Author	:	Maha Hamed Abd Elwadood El-Gharib
Title	:	Effect of Asymmetry Weight Bearing on Quadriceps Angle in Children with Hemiparesis
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El Tohamy
	2.	Mohamed Salah EIDin Mohamed Abdelkader
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Background: children with hemiparesis tend to bear more weight over the non-paretic than on the paretic that may impact normal biomechanical alignment of joints. Quadriceps (Q) angle has been shown as an indicator of the biomechanical alignment of knee joint. Purpose: purposes of the study were to 1) provide normative data about Q-angle values in normal children and compare it to children with hemiparesis. 2) Investigate effect of asymmetry weight bearing (ASWB) on Q-angle in children with hemiparesis. Methods: 50 normal children assigned as (GA) and 20 children with hemiparesis assigned as (GB) participated in this study. Children age ranged from 6 to 10 years. Computerized photogrammetry was used to evaluate Q-angle values, digital weighting scales were used to evaluate ASWB. Findings: findings revealed that significant difference exist between GA and GB, and a direct correlation between ASWB and changes in the Q-angle values. Conclusion: from obtained results of the study, it is concluded that there is a deviation from normal values of Q-angle in children with hemiparesis and that deviation is related to ASWB presented in children with hemiparesis.</p>		
Key words	1.	Hemiparesis
	2.	Quadriceps Angle
	3.	asymmetry weight bearing
	4.	Children
Classification number	:	000.000.
Pagination	:	79 p.
Arabic Title Page	:	تأثير عدم التماثل في تحميل الوزن على زاوية العضلة رباعية الرؤوس في الأطفال الذين يعانون من فالج نصفي خفيف
Library register number	:	4237-4238.

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Author	:	Mai Mohamed Husein Khalaf
Title	:	Correlation Between Hand Positions And Cortical Sensation In Normal Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Azim
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>Objective: The study was conducted to correlate and compare between two different hand positions and cortical sensation in the form of stereognosis scoring in both dominant and non dominant hands of normal children in order to determine the effect of altered hand position on stereognosis. Subjects: Two hundred normal developing children aged from 6 to 8 years participated in the study. They didn't have any palmer injury or recent wound. Methods: Stereognosis was tested using Nottingham Sensory Assessment Scale. Children were instructed to identify ten different familiar objects while being blind folded in a maximum 15 seconds for each object. The assessment procedures were done from two different hand positions (4 times); the first position represented the normal functional free hand position while the second was the flexion hand position which simulating the hemiplegic pattern. Both dominant and non dominant hands were included in the assessment process. Results: There were statistically significant correlation between stereognosis scoring of dominant hand and non dominant one in both flexion and functional hand position and there were statistically significant difference between scoring of functional hand position and hemiplegic flexion one in both dominant and non dominant hands. While there was no statistically significant difference between functional position of dominant hand and non dominant one, there was statistically significant difference between flexion position of dominant hand and non dominant one. Conclusion: From the obtained results of this study, it can be concluded that altered hand position and decreased its mobility affect stereognosis even if there is no problem in the cortical parietal lobe area.</p>
Key words	1.	Hand skills
	2.	Cortical sensation
	3.	Nottingham Sensory Assessment Scale.
	4.	Children
	5.	Stereo gnosis
Classification number	:	000.000.
Pagination	:	111 p.
Arabic Title Page	:	العلاقة بين وضع اليد واحساس القشرة المخية في الأطفال الأسوياء
Library register number	:	4513-4514.

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Author	:	Marina Ishak Sefen Luka
Title	:	Efficacy Of Biofeedback Training Versus Modified Therapy Programme In Children With Cranidmandibular Pain
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abdelazem
	2.	Hamida Refaey Hassanen
	3.	Asmaa Osama Sayed
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Aim: Compare biofeedback technique and modified therapy program in children with myofascial pain of masticatory system. Subjects: thirty children girls with masticatory myofascial pain, from fourteen to eighteen years. Divided into two equal groups. They were recruited from the outpatient clinic of Oral and Maxillofacial Surgery Department, Faculty of Oral and Dental Medicine, Cairo University. Methods: With 15 cases of diagnosed patients with myofascial pain syndrome who were willing to accept the biofeedback treatment, it was to carry out EMG BF for them under the guidance of electromyograph and relaxation treatment, and made a comparison of clinical efficacy grading, the following parameters were taken at one month; visual analogue scale (VAS) scores of present pain, lowest and highest pain over the past period; percentage of pain relief; pain pressure threshold (PPT) by algometer of masseter and temporalis muscles; jaw function while boley gauge was used for measuring maximum mouth opening MMO. The results: pain scores decreased while PPT and MMO increase in both groups, after one month of intervention, significant difference were present the PPT of masseter in group A and group B ($P = 0.36$). Also, the VAS scores of present ($p = 0.003$) pain while the MMO scores ($p = 0.19$) improved. There was no significant difference between two groups. Conclusion: Comparing biofeedback training with modified therapy program as a treatment for myofascial pain in cranio mandibular region, shows that both treatment modalities are effective in relieving cranio mandibular pain in children.</p>		
Key words	1.	Biofeedback
	2.	Modified Therapy Program
	3.	Myofascial pain
	4.	Children With Cranidmandibular Pain
	5.	Cranidmandibular Pain
Classification number	:	000.000.
Pagination	:	110 p.
Arabic Title Page	:	تأثير التغذية المرتجة مقارنة ببرنامج علاج معدل فى الأطفال المصابين بمتلازمة الألم فى منطقة الفك.
Library register number	:	5741-5742.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT
DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Menna Allah Muhammad El-tahan
Title	:	Efficacy of Kinesio Taping In Controlling Genu Recurvatum In Down Syndrome Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abdelazem
	2.	Ehab Ragaa Abdel Raouf
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>Most Down syndrome children develop genu recurvatum due to hypotonia of quadriceps and hamstring with lack of co-contraction of both muscles and laxity of the ligaments around knee that support the joint. Aim: Investigate the effect of kinesio taping of quadriceps and hamstring muscles on controlling genu recurvatum in Down syndrome children. Subjects: Thirty Down syndrome children with chronological age ranged from 2 to 4 years participated in this study; they were classified randomly into 2 groups of equal number. Study group received a specially designed physical therapy program while applying kinesio taping and control group received specially designed physical therapy program only. Methods: They were evaluated using AUTOCAD analysis, screen protractor and gross motor functional measurement scale before and after 6 weeks of treatment programs. The results: The mean difference between pre and post treatment for study group was 5.93 degrees and the percent of improvement was 3.18%. There was a significant decrease in the mean values of knee extension angle measured by AUTO-CAD program post treatment compared with pre treatment ($p = 0.0001$). Conclusion: The kinesio taping was helpful in controlling genu recurvatum in Down syndrome children.</p>
Key words	1.	Down syndrome
	2.	Genu recurvatum
	3.	Kinesio Taping
	4.	Children
Classification number	:	000.000.
Pagination	:	112 p.
Arabic Title Page	:	تأثير شريط الكينيسيو في التحكم بالركبة بالطرقاء عند أطفال متلازمة داون
Library register number	:	4545-4546.

Author	:	Mohamed Ali Elsayed Taha
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Title	:	Role of Kinesio Tape Technique on Hip Anteversion and Gait Pattern in Children with Spastic Diaplegia
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Hebatallah Mohamed Kamal
	2.	Nahed Shukri Thabet
	3.	Ashraf Naguib Ettaby
Degree	:	Master.
Year	:	2015.
Abstract	:	<p>The purpose of this study was to evaluate the hip anteversion angle and it's gait pattern in children with spastic diaplegic cerebral palsy following participation in physical therapy program which included selected exercises program and kinesio tape technique; Thirty spastic diaplegic cerebral palsy children of both sexes (23 boys and 7 girls) participated in this study, ages ranged from three to five years, they were selected from the outpatient clinic, Faculty of Physical Therapy, Cairo University and the outpatient clinic, Physical Therapy Department, El Amria General Hospital. They were classified randomly into two groups of equal number. Control group (A) and study group (B). Hip anteversion angle were assessed by using 3D-axial CT scan based on functional axes of the femur and the pattern of gait were assessed by using the physician rating scale pre and post application of the treatment program. The results of this study revealed improvement but not statistically significant difference in all measuring variables of physician rating scale in control group when comparing their pre and post-treatment mean values, while study group showed statistically significant difference in (knee flexion, foot contact, time of heel rise and hind foot at mid stance) and non-significant difference in (initial contact, base of support and the use of gait assistive device). However, there is no significant difference when comparing the pre and post-treatment hip anteversion angle mean values of the study group and control group. It could be concluded that selected physical therapy program in addition to kinesio tape technique may result in positive outcomes in the improvement of abnormal gait pattern of spastic diaplegic cerebral palsy without change in pathological hip anteversion angle.</p>
Key words	1.	Cerebral palsy
	2.	Diaplegia
	3.	Hip anteversion
	4.	Kinesio Tape
	5.	Gait Pattern
	6.	Children
	7.	Spastic Diaplegia
Classification number	:	000.000.
Pagination	:	142 p.
Arabic Title Page	:	تأثير الشريط اللاصق (كينزيوتاب) على الانقلاب الامامي لمفصل الفخذ والنمط الحركي لدى الأطفال المصابين بالشلل التخشبي المزدوج
Library register number	:	4463-4464.

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THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT
DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mohammed Abd El-Alim Kamel Mohammed
Title	:	Influence of congenital clubfoot deformity on postural stability in children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Amira Mohamed El Tohamy
	2.	Nagy Ahmed Zaki Sabet
	3.	Nanees Essam Mohamed Salem
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Background: Balance is not an isolated quality, but underlies our capacity to undertake a wide range of activities that constitute normal daily life. It is vital for all the activities of human performance. The loss of balance and increased incidence of falls is of concern to physical therapists, so we should consider the mechanics of the feet and its influence on postural stability. Purpose: The purposes of this study were to 1) evaluate postural stability in children with clubfoot 2) compare results with normal feet and 3) describe difference between antero-posterior and medio-lateral stability in children with idiopathic clubfoot. Methods: Twenty children with normal feet assigned as a control group (A) and fifteen children with clubfoot assigned as study group (B) participated in this study. All children ranged in age from five to eight years. Biodex balance system and multi-directional reach test were used to evaluate postural stability in both groups. Findings: Regarding the results of biodex, findings revealed that there was a significant difference between control group (A) and study group (B) in over all stability index (OSI), antero/posterior stability index (APSI) and medio/lateral stability index (MLSI) and there was no significant difference between (APSI) and (MLSI) in the study group. Regarding the results of multi-directional reach test, there was a significant difference between both groups in all directions (forward, right forward, right, left forward and left) and there was no significant difference between five directions in the study group. Conclusion: From the obtained results of this study, it can be concluded that there was balance affection in children with clubfoot regarding the results from biodex balance system and multi-directional reach test.</p>		
Key words	1.	Clubfoot
	2.	Postural stability
	3.	Biodex balance system
	4.	Children
Classification number	:	000.000.
Pagination	:	70 p.
Arabic Title Page	:	تأثير القدم الحنفاء الخلقية على ثابت القوام عند الأطفال
Library register number	:	4039-4040.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mohammed Gamal Mohammed Saleh
Title	:	Effect Of Combining Different Visual Feedbacks On Hand Control In Hemiparetic Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negmy
	2.	Amina Hendawy Salem
	3.	Asmaa Abd El-Satar Abo-Nour
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of this study was to determine the effect of combining different visual feedback on hand control in hemiparetic children. Methodology: thirty hemiparetic children divided into two groups (A and B) of equal number, fifteen patients each. Eligibility criteria to our study were age ranged from 4 to 8 years, quality of upper extremity skills test and manual ability classification system, assessment done by baseline hand held dynamometer for hand palmar grasp and pinch grasp strength, Tardieu scale and geniometer for elbow flexors and wrist extensors spasticity before starting the treatment protocol, reassessed at 4 weeks and 8 weeks of the treatment program. The treatment protocol used for the two groups include: Children in study group (A) received an occupational therapy program with modified mirror apparatus while children in control group (B) without modified mirror apparatus. The treatment protocol was conducted for two successive months at frequency of three sessions per week (1.5 hours/session) for the two groups. The results of this study revealed non-statistically significant differences in the palmar, pinch grasp strength, wrist extensors angle of spasticity and elbow flexors angle of spasticity in study group (A) than control group (B) could be due to short duration of application , short duration of home program and (combining of uni-manual and bi-manual rehabilitation improved hand control in 2 groups). Conclusion: From the obtained results of this study, it can be concluded that combining different visual feedbacks could help in improvement of hand control in hemiparetic children.</p>		
Key words	1.	Hemiparesis
	2.	QUEST
	3.	MACs
	4.	Children
	5.	Hand Control
Classification number	:	000.000.
Pagination	:	131 p.
Arabic Title Page	:	تأثير الجمع بين تغذيات بصرية مرتجة مختلفة على تحكم اليد لدى أطفال الخذل النصفى الطولى
Library register number	:	4447-4448.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT
DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mohammed Ismael Elsepae Ismael
Title	:	Effect Of Mirror Visual Feedback On Hand Functions In Children With Hemiparesis
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Eman Ibrahim Elhadidy
	2.	Elham Abd Elghaffar Nawar
	3.	Hatem Abd Elmohsen Emara
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Background: Children with hemiparesis suffer from weak hand muscles, retarded hand use, delayed functional development, and limited functional mobility than normally developed children. Objective: The purpose of this study was to determine the effect of mirror visual feedback on hand functions and grip strength in children with hemiparesis. Subjects and methods: Forty children with hemiparesis from both sexes, ranged in age from five to seven years old participated in this study. They were divided randomly into two groups of equal numbers (control and study). The control group received physical therapy exercises program 5times/week for four successive weeks. The study group received mirror exercises program in addition to the same program of the control group. All subjects were evaluated using hand-held dynamometer, and Peabody Developmental Motor Scale-2 before and after the treatment period. Results: Comparison of pre and post-treatment results revealed significant improvement in all measuring variables in both groups. However, the post-treatment results for the two groups revealed more improvement in all measuring variables in favor of the study group. Conclusion: Using the mirror visual feedback helps in improving hand functions in children with hemiparesis.</p>		
Key words	1.	Mirror Visual Feedback
	2.	Hand Functions
	3.	Hemiparesis
	4.	Children
Classification number	:	000.000.
Pagination	:	117 p.
Arabic Title Page	:	تأثير التغذية البصريه المرتدة بواسطة المرآه على الوظائف اليدوية عند الاطفال المصابين بالخزل الشقى الطولى
Library register number	:	4557-4558.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mona Abd Ali Abu Seada
Title	:	Systematic Review: Effect of Whole Body Vibration in Children with Cerebral Palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Eman Ibrahim El Hadidy
	2.	Samah Attia El Shemy
	3.	Eman Ibrahim El Hadidy
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Back ground: Given the extensive literature on whole body vibration therapy (WBV) in rehabilitation, this systematic review was undertaken to explore the strength, quality, and conclusiveness of evidence supporting the use of WBV in pediatric rehabilitation in cerebral palsy (CP) children. Purpose: The purpose of the study was to systematically review the randomized controlled trials that assessing the effect of whole body vibration therapy on bone mineral density (BMD) and motor functions (balance, mobility, muscle strength) and muscle thickness in children with cerebral palsy. Methods: The data base search included in Pub Med (Medline), the Cochrane Library, Google scholar website, Ovid, Physiotherapy Evidence Database (PEDro), and the library of Faculty of Physical Therapy, Cairo University for randomized controlled trials that using WBV with CP children from 2 years up to 18 years. Research was at any year till the end of 2014 in English language. Studies used BMD and/or motor functions (mobility, balance, and muscle strength) and muscle thickness as outcome measures. Data from the selected studies were extracted according to items of American Academy for CP and Developmental medicine (AACPDm) adapted sheet. The methodological quality of the reviewed studies was assessed by the AACPDm coding system and by using the PEDro scale. Results: only nine studies were selected according to inclusion criteria; all selected studies were subjected to descriptive analysis and only four studies were subjected to Meta-analysis. Conclusion: The analysis of the results of the included studies revealed the efficacy of WBV on BMD and motor functions in CP children but large controlled trials are needed to support the use of WBV.</p>		
Key words	1.	Cerebral palsy
	2.	Whole body vibration
	3.	Mobility
	4.	Children
Classification number	:	000.000.
Pagination	:	101 p.
Arabic Title Page	:	فحص منهجي: تأثير الاهتزاز الكلي للجسم في الأطفال المصابين بالشلل الدماغي
Library register number	:	4213-4214.

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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Nesma Abdelrahman Mohammed
Title	:	Sensory integration technique versus traditional occupational therapy on hand function in hemiparetic children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	HebaTallah Mohamed Kamal
	2.	Tarek El-Sayed Ismail Omar
	3.	Nanees Essam Mohamed
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Background: The improvement of hand function in hemiparetic children is a primary of most therapeutic interventions. Purpose: This study was conducted to investigate sensory integration technique versus traditional occupational therapy on hand function in spastic hemiparetic cerebral palsy children. Subjects and Methods: Thirty hemiparetic cerebral palsy children of both sexes were participated in this study, their age ranged from two to four years. They were divided randomly and equally into two groups: Group A and Group B. Group A received traditional occupational therapy while Group B received sensory integration technique. The hand functions including grasping and visual motor integration were assessed by using Peabody developmental motor scale (PDMS-2) for children in both groups before and after three successive months of the application of the suggested treatment program. Results: There was high significant improvement in both measurement variables in group B, while for group A there was significant improvement in grasping and non significant difference in visual motor integration. Conclusion: from the results of this work we can concluded that sensory integration technique may result in positive outcomes better than traditional occupational therapy in improving hand function in hemiparetic children.</p>		
Key words	1.	Hemiparetic children
	2.	Sensory integration technique
	3.	Traditional occupational therapy
	4.	hand function
Classification number	:	000.000.
Pagination	:	164 p.
Arabic Title Page	:	مقارنه التكامل الحسي مع العلاج الوظيفي التقليدي علي وظائف اليد مع الأطفال المصابين بالخلل النصفي
Library register number	:	4395-4396.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT
DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Nezar Mohamed Bahieldin Mohamed Salem
Title	:	Effect of Kinesio Tape on flat foot in children with Down syndrome
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Hebatallah Mohamed Kamal
	2.	Samah Attia El Shemy
	3.	Hassan Magdy El Barbary
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of this study was to determine the effect of Kinesio Tape on flat foot in children with Down syndrome. Thirty Down syndrome children with ages ranged from six to eight years from both sexes participated in this study. They were divided equally and randomly into two groups (control and study). All children in the two groups were assessed for their medial arch of foot by Staheli's planter arch index and the foot posture index for both feet before and after three successive months of treatment. Control group received traditional physical therapy program in form of strengthening exercise for foot muscles, gait training and balance training, while study group received the same physical therapy program given to control group in addition to kinesio tape application. The results of this study revealed high statistically significant improvement in both groups in all measured variables when comparing their pre and post treatment mean values. Also, there was significant improvement in post treatment mean values when comparing both groups in favor of the study group. From the obtained results of this study, it can be concluded that Kinesio tape had a beneficial effect in improving the flat foot in children with Down syndrome.</p>		
Key words	1.	Down syndrome
	2.	flat foot
	3.	Kinesio tape
	4.	Children
Classification number	:	000.000.
Pagination	:	85 p.
Arabic Title Page	:	تأثير شريط الكينيسيو على القدم المسطحة في الأطفال المصابة بمتلازمة داون
Library register number	:	4401-4402.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Noha Abd El-Kader Abd El-Kader Hasan
Title	:	Correlation Between Muscle Strength and Muscle Fatigue with Body Mass Index in Children
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Hebatallah Mohamed Kamal
	2.	Zeinab Ahmed Hussein
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of current study was to determine if there was correlation between Body Mass Index (BMI) with muscle strength and muscle fatigue in normal children with different body weight. Subjects: Seventy five Subjects of both sexes with ages ranged from 10 to 13 years old were chosen from Awlady Association in Maadi. They were classified into three groups according to their BMI Group A (normal BMI < 85th percentile), Group B (overweight > 85th to <95th percentile) and Group C (obese >95th percentile). Methods: All children had been assessed by Biodex Isokinetic Dynamometer at 60°/sec angular velocity for Peak torque and time to fatigue of Quadriceps and Triceps muscles, and abdominal muscles were assessed by Manual Muscle Testing (MMT). Results: The results revealed statistically positive correlation between BMI and muscle strength in quadriceps and triceps muscles while negative correlation between abdominal muscle strength and BMI and negative correlation with muscle fatigue. Conclusion: There was correlation between Muscle Strength and muscle fatigue with Body Mass Index as peak torque increase as BMI increases in quadriceps and triceps muscles but in abdominal showed inverse relation between muscle strength and BMI and time to fatigue decrease as BMI increases.</p>		
Key words	1.	Muscle Strength
	2.	Muscle Fatigue
	3.	Body mass index
	4.	Children
Classification number	:	000.000.
Pagination	:	92 p.
Arabic Title Page	:	العلاقة بين قوة العضلات والإجهاد العضلي مع مؤشر كتلة الجسم لدى الأطفال
Library register number	:	4367-4368.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Rofida Gamal Abd Elmanam
Title	:	Effect of Virtual Reality Games on Shoulder Functions in Children with Erb's Palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Eman Ibrahim El-Hadidy
	2.	Mostafa Mohi El-Ahmady
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Virtual reality (VR) is a treatment tool can be used in rehabilitation practices. Purpose: to determine the effect of virtual reality using Wii games technology on shoulder range of motion (flexion, abduction and external rotation) and functional activities in children with Erb's palsy. Methods: forty children of both sexes having uni-lateral Erb's palsy, their ages ranged from four to six years old participated in this study. They were divided randomly into two groups of equal number (A and B). They were evaluated using electrical goniometer and Peabody Developmental Motor Scale before and after three successive months of the treatment program. Group A: received selected physical therapy program, where group B, received virtual reality using Wii games in addition to the program given to group A. Results: The results of the study revealed statistically significant improvement in all measured variables of both groups in favor of group B (p<0.001). Conclusion: virtual reality using Wii games therapy in addition to selected physical therapy program is beneficial therapeutic technique to improve shoulder range of motion and functional activities in children with Erb's palsy.</p>		
Key words	1.	Virtual Reality
	2.	Wii games
	3.	Erb's palsy
	4.	Shoulder
	5.	Children
Classification number	:	000.000.
Pagination	:	129 p.
Arabic Title Page	:	تأثير ألعاب الواقع الافتراضي على وظائف الكتف في الأطفال المصابين بالشلل الاربي
Library register number	:	4523-4524.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sawsan Abd Elmonem Ali Mohamed
Title	:	Role of Treadmill Training on Gait and Balance in Children with Hemiparetic Cerebral Palsy
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Gehan Hassan Elmeniawy
	2.	Ahmed Mahmoud Kholief
	3.	Nahed Shukri Thabet
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>The purpose of this study was to evaluate gait and balance in hemiparetic cerebral palsied children following participation in physical therapy program which included selected exercises program and treadmill training; Thirty hemiparetic cerebral palsied children from both sexes (12 girls and 18 boys), their age ranged from six to eight years old, were selected from the outpatient clinic of the Faculty of Physical Therapy, Cairo University. They were classified randomly into two groups of equal numbers; control group (A) and study group(B). Gait parameters (average walking speed, average step length, time on each foot) were assessed using the Biodex gait trainer 2 and Balance(overall stability index, anteroposterior stability index, mediolateral stability index) using the Biodex balance system before and after participation in the treatment programs. Pre treatment results of this study revealed non significant difference between the two groups, while the results revealed statistically significant improvement in all the measuring variables in group (A) and group (B) when comparing their pre and post treatment mean values. However, significant difference was observed when comparing the post treatment mean values of the two groups (A and B) in favor of group (B). It could be concluded that, treadmill training program may be used in addition to traditional physical therapy programs to improve gait and balance in children with hemiparetic cerebral palsy.</p>		
Key words	1.	Cerebral palsy
	2.	Spastic Hemiplegia
	3.	Gait
	4.	Balance
	5.	Treadmill Training
	6.	Children
Classification number	:	000.000.
Pagination	:	152 p.
Arabic Title Page	:	دور التدريب بالسير المتحرك على المشى والاتزان عند الأطفال المصابين بالخلل النصفي
Library register number	:	4329-4330.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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DISORDER IN CHILDREN AND ITS SURGERY
PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Silvia Hanna Botros Tawadros
Title	:	Body-scaled Information and Reaching Strategy in Normal and Children with Hemiplegia
Dept.	:	Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd El-Azim
	2.	Huda Marzouk Mohammed
Degree	:	Master.
Year	:	2015.
Abstract	:	
<p>Objective: The study was conducted to examine the difference of body scaled information that determines reaching strategy between hemiplegic cerebral palsy children and children with typical development. Subjects: Twenty hemiplegic cerebral palsy children aged from 4 to 6 years and fifty age-matched normal developing children participated in the study. Methods: Children were instructed to reach and grasp different cube sizes represented in ten pairs. Assessment was divided into non instructed trial and forced instructed trial. In each trial every cube was reached and grasped three times so a total of sixty trials were collected from each child. All reaching trials were recorded using two cameras placed on right and left sides of the child. The ratio between each cube size and the maximal distance between index finger and thumb was calculated to determine the dimensionless ratio. Results: There was no statistically significant difference in the mean critical ratio for both hands in normal children (1.32 for preferred hand/1.37 for non-preferred hand) while there was significant difference between paretic and non-paretic hands (1.89 and 1.36 respectively). The mean critical ratio of preferred hand in normal group was statistically significant higher than that of non-paretic hand in hemiplegic children, but there is no significant difference between non-preferred hand and paretic hand. Conclusion: Under forced conditions paretic hand has the ability to perceive the same affordance as normal children. The knowledge of critical ratio can be utilized to decrease the chance of trial and error of chosen objects in treatment sessions and hence facilitate engagement of paretic hand in unilateral or bilateral activities according to task requirements</p>		
Key words	1.	Reach
	2.	Hemiplegia
	3.	Children
	4.	Body scale
	5.	Anthropometry
Classification number	:	000.000.
Pagination	:	130 p.
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