

**ELECTRONIC GUIDE TO THESES APPROVED BY  
DEPARTMENT OF BASIC SCIENCE  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED  
Department of Basic Science**

**Doctoral Degree  
2016**

<b>Author</b>	:	Abdelrhman Ismail Abdelghany
<b>Title</b>	:	Relationship between postural changes and dynamic balance in forward head posture students
<b>Dept.</b>	:	Department of Basic Science.
<b>Supervisors</b>	1.	Prof. Dr. Maher Ahmed Elkeblawy
	2.	Prof. Dr. Nagi Ahmed Zaki
	3.	Dr. Shaimaa Algarieb Ali
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2016.
<b>Abstract</b>	:	
<p><b>Background:</b> Forward head posture is a common type of postural deformity seen in patients with neck disorders that are associated with several musculoskeletal system problems such as chronic neck pain, damage of bones, joints and ligaments of the cervical region. <b>The purpose:</b> of this study was to investigate the relationship between postural changes and dynamic balance in forward head posture students. <b>Subjects:</b> forty students (23 males, 17 females) were included in this study. All students had anterior head displacement range from 35 to 74 millimeter. Their age ranged from 18 to 21 years, body mass index from 17.3 to 30.64 kg/m<sup>2</sup> and height from 159 to 179 cm. <b>Methods :</b> Rotation around x,y,z-axes ,and translation around x,y,z-axes were measured by Postureprint software for the head, rib cage , and pelvis regions and mediolateral stability, anteroposterior stability and overall stability were measured by Biodex balance system at 2 levels 4 and 8 . <b>Results :</b> there was no significant relationship between postural changes of the head, rib cage ,pelvis regions and dynamic balance in forward head posture students. <b>Conclusion:</b> there was no significant relationship between postural changes and dynamic balance in forward head posture students.</p>		
<b>Key words</b>	1.	Forward head posture
	2.	Postureprint
	3.	Biodex balance
<b>Classification number</b>	:	000.000.
<b>Pagination</b>	:	97 P.
<b>Arabic Title Page</b>	:	العلاقه بين التغيرات فى القوام و الاتزان الحركي فى حالات الوضع الامامى للرأس عند الطلاب.
<b>Library register number</b>	:	5103-5104.

**ELECTRONIC GUIDE TO THESES APPROVED BY  
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Author		Fairouz Hatem Mohammed Ameen Hussain
Title		Hand Grip Strength: Age and Gender Specific Normative Data Healthy Adult Egyptian Population
Dept.	:	Department of Basic Science.
Supervisors	1.	Prof. Dr. Omaima Mohammed Ali Kattabei
	2.	Dr. Mohammed Taher Eldesoky
	3.	Dr. Magda Gayed
Degree	:	Doctoral.
Year	:	2016.
Abstract	:	
<p><b>Background:</b> The existing normative values of the hand grip strength are not suitable for all populations, plus, it can change with time due to alterations in lifestyles, age, gender, handedness, Work and leisure activities, anthropometric data, geographic location and races, consequently we mustn't depend on them as they were performed on nations that are different from us. Though this study was conducted to establish normal values of hand grip strength for healthy adult Egyptian population. <b>Methods:</b> The sample was randomly collected according to a sample size calculation from urban, suburban and rural areas all over Cairo, from April 2014 till May 2016. Jamar dynamometer was used to assess hand grip strength. The American society of hand therapists recommended position was applied and a mean of three trials was recorded. Anthropometric data and occupation was collected from the subjects for further correlations. <b>Results:</b> After exclusion of subjects according to our exclusion criteria, the participating subjects was 1029 individual with 505 female subjects and 524 male subjects, with mean ages of 42.4 years for total population the mean height was 167.5 cms, the mean weight was 78.2 kgs The mean BMI was 27.9 and the mean Right hand grip strength and left hand grip strength were 31.2 kgs and 29.6 kgs respectively. <b>Conclusion:</b> within the limitations of the current study it was concluded that grip strength was affected negatively by aging. The male subjects had stronger hand grip strength than female subjects. The anthropometric measures as height and weight significantly affected the right and left hand grip strength, except for female right hand grip strength that didn't correlate to weight. We also found that BMI had negative or no correlations with hand grip strength.</p>		
Key words	1.	Hand grip strength
	2.	Normative data
	3.	Jamar hand held dynamometer
	4.	Age
	5.	Gender
	6.	Normative Data of Healthy
	7.	Adult Egyptian Population
	8.	work category
Classification number	:	000.000.
Pagination	:	138 P.
Arabic Title Page	:	قوة قبضة اليد: القياسات الطبيعي ة الخاصة بالعمر والنوع فى المجتمع المصري للبالغين الأصحاء.
<b>Library register number</b>	:	<b>5105-5106.</b>

**ELECTRONIC GUIDE TO THESES APPROVED BY  
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<b>Author</b>		Mohamed Hesham Sayed Abo Elenain
<b>Title</b>		Effect of Cross Education in Unilateral Immobilization Using Elbow Support on Contralateral Muscle Torque in Tennis Elbow
<b>Dept.</b>	:	Department of Basic Science.
<b>Supervisors</b>	1.	Prof. Dr. Mohamed Hussein Elgendy
	2.	Ass. Prof. Dr. Amira Hussin Draz,
	3.	Ass. Prof. Dr. Nehad Mahbob
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2016.
<b>Abstract</b>	:	
<p><b>Background:</b> Immobilization was used for the purpose of stabilizing and protecting an area of the body which has been injured through trauma or disease. Lateral epicondylitis commonly referred to as tennis elbow affects 1% to 3% of the population. It is thought to be an overuse injury, originating in the wrist extensor muscles, rather than an inflammatory problem. Atrophy can be reversed after short periods of immobilization in tennis elbow patients. <b>Purpose:</b> determine the percentage of change in strength of biceps and triceps brachii muscles after cross training and unilateral immobilization using elbow support in contralateral and ipsilateral sides in tennis elbow patients. <b>Subjects:</b> twenty chronic tennis elbow patients participated in this study, their age varied between (15-20) with mean (18.46±1.548) years, their weight varied between (55-75) and its mean (67.93±7.090) kg. and height varied between (155-175) and its mean height (168.93±5.452) cm. <b>Design of the study:</b> Pre test post test control group. <b>Materials and Methods:</b> Subjects were divided into two equal groups. Subjects in the first group (10 subjects) received Delorme resisted training, and subjects in the second group (10 subjects) control group received elbow immobilization by elbow support without training of the non affected side. Biodex system 3 Program isokinetic dynamometer was used to measure the peak torque to body weight ratio (PK/BW) of the non affected ipsilateral and affected contralateral (immobilized) biceps and triceps brachii muscles for three trials and the mean was calculated. <b>Results:</b> The results of this study for group I showed significant difference in the percentage of strength by 16.8% of the contralateral and 40.6% in the ipsilateral biceps brachii, as regard to the triceps brachii was 19.7% in the contralateral and 56.7% ipsilateral muscle, while group II (control group) there was no significant improvement in both sides, in which the percentage of strength was improved by 0.24% in the contralateral and 2.2% in the ipsilateral biceps brachii, as regard to the triceps brachii was 0.82% in the contralateral and 3.3 in ipsilateral. <b>Conclusion:</b> Delorme resisted training improved muscle torque in the contralateral and ipsilateral biceps and triceps brachii muscles in tennis elbow patients after unilateral immobilization using elbow support.</p>		
<b>Key words</b>	1.	cross training
	2.	Delorme resisted training
	3.	Immobilization
	4.	Elbow Support
	5.	Contralateral Muscle Torque
	6.	Tennis Elbow
<b>Classification number</b>	:	000.000.
<b>Pagination</b>	:	111 P.
<b>Arabic Title Page</b>	:	تأثير تثبيت المفصل أحادي الجانب باستخدام جبيرة الكوع على عزم القوة للعضلة على الجانب الآخر في الكوع التنيسي.
<b>Library register number</b>	:	4907-4908.

**ELECTRONIC GUIDE TO THESES APPROVED BY  
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Author		Mohamed Naeem Mohamed Saleem
Title		Validation of Manipulative Procedures on Lumbosacral Radiculopathy Using H Reflex
Dept.	:	Department of Basic Science.
Supervisors	1.	Prof. Dr. Fatma Seddek Amen
	2.	Prof. Dr. Samir El Sabbahi
	3.	Prof. Dr. Amira Mohamed El Gohary
Degree	:	Doctoral.
Year	:	2016.
Abstract	:	
<p><b>Background:</b> Lumbosacral radiculopathy (LSR) is a common clinical problem that involves L5 and S1 nerve roots, LSR occurs as a result of degenerative disc herniation or traumatic in younger population and also as a result of foraminal narrowing from osteophyte formation. It may also result from spinal cord injuries, spinal canal stenosis, spinal diseases and other conditions. <i>The purpose</i> of this study was to investigate the effect of Mulligan technique, Neural mobilization and Positional Release Technique on reduction of pain and improving of functional disability on patients with lumbosacral radiculopathy using H reflex. <i>Subjects:</i> Forty patients (27 female and 13 male) were diagnosed as lumbosacral radiculopathy, Their age ranged from 25 to 50 years (48.54±5.8). They voluntarily participated in this study. All patients were assigned randomly into two groups (experiment and control). <i>Method:</i> Subjects were distributed into 2 groups then the experiment group was divided to three subgroups according to underlying pathology; Experimental group A was received infrared for 10 minute and mulligan technique for 30-minute, Experimental group B was received infrared for 10 minute and neural mobilization for 30 minute, Experimental group C was received infrared for 10 minute and positional release for 30 minute and Control group D was received infrared for 10 minute and conventional treatment for 30 minute in 3 day / week for four weeks. Pain severity was measured by Visual Analogue Scale, Functional disability score was measured by Oswestry disability scale and H reflex(amplitude &amp; delay) was measured by electromyography. Measurements were taken at two intervals pre-treatment and post-treatment. <i>Results:</i> Data obtained was analyzed by ANOVA using SPSS software. There were statistical significant effect in all experimental group and Mulligan technique had the most highly significant effect on reduction of pain severity, improving of functional disability scores and H-reflex. <i>Conclusion:</i> Mulligan technique, neural mobilization and Positional Release Technique were effective in reducing pain severity, improving functional disability score and H-reflex in patients with lumbosacral radiculopathy.</p>		
Key words	1.	Radiculopathy
	2.	Mulligan Technique
	3.	Positional release technique
	4.	H Reflex
	5.	Manipulative
	6.	Lumbosacral Radiculopathy
Classification number	:	000.000.
Pagination	:	204 P.
Arabic Title Page	:	التحقق من صلاحية الإجراءات المعالجة اليدوية على المرضى الذين يعانون من اعتلال الجذور القطنية العجزية باستخدام انعكاس هوفمان.
<b>Library register number</b>	:	<b>5023-5024.</b>

**ELECTRONIC GUIDE TO THESES APPROVED BY  
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Author	:	Rania Reda Mohammed
Title	:	Effects Of Age And Gender On Facial Movements: Utilizing Moire Topography
Dept.	:	Department of Basic Science.
Supervisors	1.	Prof. Dr. Ragia Mohamed Kamel
	2.	Prof. Dr. Mohsen M. El Sayyad
	3.	Prof. Dr. Neveen Abdel Latif
Degree	:	Doctoral.
Year	:	2016.
Abstract	:	
<p>Back ground: Facial movement measurement is very important to give information about personality and communication. The Individuals vary in terms of their facial expressions; there are also differences between the two facial sides, gender and age differences as well. Purpose: The purpose of this study was to investigate the effect of different age groups and gender on facial movements by using Moiré Topography. Subjects: One hundred and fifty healthy subjects, both genders, age ranging from 20-50years. Subjects were assigned randomly into three groups (A, B, C):(20-30),(30-40)and (40-50 years old),(Group A):Fifty subjects (25 females and 25 males) were included in this group. Their mean <math>\pm</math> SD age was (24.36 <math>\pm</math> 3.48 years), with maximum value of 30 years and minimum value of 20 years. (Group B): Fifty subjects (25 females and 25 males) were included in this group. Their mean <math>\pm</math> SD age was (35.48 <math>\pm</math> 3.02 years), with maximum value of 40 years and minimum value of 30 years. (Group C): Fifty subjects (25 females and 25 males) were included in this group. Their mean <math>\pm</math> SD age was (47.08 <math>\pm</math> 3.21 years), with maximum value of 50 years and minimum value of 40 years. Materials and Methods: five facial angles were measured at both sides of the face for each subject three times during static position and during contraction, these angles were right and left raising, closing, smiling, kissing and blowing angles and the AutoCAD program used to calculate and analyze these angles. Results: There were a statistical significant effect of age groups on the five facial movements including right and left raising(<math>p=0.0001</math>), closing (<math>p=0.0001</math>), smiling (<math>p=0.0001</math>), kissing (<math>p=0.0001</math>), and blowing(<math>p=0.0001</math>), also there was a statistical significant effect of sex on the five facial angles (<math>p=0.0001</math>) and finally there was a statistical significant interaction effect of age groups and sex difference on the five facial movements by Two Way ANOVA including raising (<math>p=0.001</math>),closing (<math>p=0.0001</math>), smiling (<math>p=0.04,0.007</math>), kissing (<math>p=0.001,0.005</math>)and blowing (<math>p=0.009,0.0001</math>). The regression analysis indicated that the correlations between age groups and facial movements were negative statistical significant correlation for the five angles at right and left side including right raising(<math>r=-0.52</math>),left (<math>r=-0.56</math>),right and left closing(<math>r=-0.54</math>),right smiling(<math>r=-0.48</math>),left(<math>r=-0.47</math>),right kissing(<math>r=-0.59</math>),left(<math>r=-0.53</math>)and right blowing(<math>r=-0.59</math>),left(<math>r=-0.61</math>) and also there was a negative statistical significant correlation between sex and five facial angles. Conclusions: there were a statistical significant effect of age and sex different on the facial movements including the five angles of the face at right and left side and that with increasing the age, the decreased angles of the female are more than the decreased angles of the male in the range of the five facial angles.</p>		
Key words	1.	Moiré topography
	2.	Healthy
	3.	Auto CAD.
	4.	Age
	5.	Gender
	6.	Facial Movements
Classification number	:	000.000.
Pagination	:	217 P.
Arabic Title Page	:	مدى تأثير السن والجنس على حركات الوجه باستخدام المويرتوبوجرافى.
Library register number	:	5019-5020.

**ELECTRONIC GUIDE TO THESES APPROVED BY  
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Author		Reham Mohamed Abd El-Rahim
Title		Reliability of Using Kinovea Program in Upper Limb Range of Motion Measurement
Dept.	:	Department of Basic Science.
Supervisors	1.	Prof. Dr. Ragia Mohamed Kamel
	2.	Ass. Prof. Dr. Mohamed Farouk Ali
	3.	Dr. Eman Ahmed Abd El-Moez
Degree	:	Doctoral.
Year	:	2016.
Abstract	:	
<p><b>Background:</b> A critical component in physical therapy assessment is the measurement of range of motion. Goniometry is a frequently used tool for measurement and documentation of range of motion during a physical therapy examination. With modern innovations in technology new methods other than the universal goniometer have been applied. Kinovea software is a recent video-based method that uses a virtual goniometer to obtain joints range of motion values. Yet; its reliability in the measurement of upper limb joints range has not been studied. <b>Purpose:</b> This study was conducted to investigate the intra-rater and inter-rater reliabilities of the Kinovea software for the measurement of upper limb joints range of motion in normal individuals. <b>Subjects, Materials and Methods:</b> The shoulder, elbow and wrist joints range of motion was evaluated in a sample of one hundred normal participants aged between (20-35) years, using Kinovea software by three trained raters. Measurements were taken in a blinded random manner to test the Inter-rater reliability. Intra-rater reliability was examined by a single rater. <b>Results:</b> <math>\bar{x} \pm SD</math> of age was (27.6±4.2) years, height was (168.9±7) cm and weight was (69.9±8.2) kg. The inter-rater reliability ranged from Inter-Correlation Coefficient of (0.87 to 0.98), while the intra-rater reliability ranged from Inter-Correlation Coefficient of (0.92 to 0.99). The standard error of measurement performed with Kinovea ranged between (0.88° and 1.3°) for the inter-rater reliability, and (0.6° and 0.86°) for the intra-rater reliability. The minimal detectable change was between (2.5° and 3.6°) for the inter-rater reliability and between (1.7° and 2.4°) for the intra-rater reliability. <b>Conclusion:</b> The current study presented high reliability and low minimal detectable change for upper limb joints range of motion measures obtained with Kinovea software when used in normal individuals. The inter-rater reliability was higher than the intra-rater reliability.</p>		
Key words	1.	Kinovea
	2.	Measurement
	3.	Range of motion
	4.	Upper Limb Range
Classification number	:	000.000.
Pagination	:	71 P.
Arabic Title Page	:	مصداقية استخدام برنامج كينوفا في قياس المدى الحركي للطرف العلوي.
<b>Library register number</b>	:	<b>4741-4742.</b>

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Author		Shereen Hamed El-Wardany Mohammed
Title		Validity and Reliability of Kinovea Computer Program in Cervical Range of Motion Measurements
Dept.	:	Department of Basic Science.
Supervisors	1.	Prof. Dr. Wadida Hassan Abdel-Kader El-Sayed
Degree	:	Doctoral.
Year	:	2016.
Abstract	:	
<p><b>Purpose:</b> This study was conducted to investigate interrater, intrarater reliability and criterion validity of Kinovea Computer Program (KCP) in cervical Active Range of Motion (AROM) measurements compared with the CROM, as a gold standard valid and reliable tool. <b>Subjects:</b> Sixty four healthy participants in one group with mean age was <math>22.42 \pm 0.84</math> year, mean height was <math>160.23 \pm 6.17</math> cm, mean weight was <math>60.77 \pm 6.61</math>kg and mean body mass index was <math>28.60 \pm 1.40</math>. <b>Methods:</b> Digital camera, Laptop with installed Kinovea software and markers were used. The cervical AROM of each subject was measured using KCP by three examiners A, B and C three times in the same setting and get the average, to investigate the interrater reliability. The cervical AROM of each subject was measured by the same three examiners using KCP. Each of the three examiners measured cervical AROM three times in separate occasions using KCP to investigate the intrarater reliability. The cervical AROM of each participant was measured by examiner B using the CROM device three times in the same setting and get the average. The gained cervical measurement angles using KCP measured by the examiner with highest ICC were compared with the gained cervical measurement angles measured using the CROM device, to investigate the criterion validity. <b>Results:</b> There is an excellent interrater reliability of KCP for measuring the cervical AROM; cervical flexion, extension, Rt. side bending, Lt. side bending, rotation to the Rt. and rotation to the Lt. Also, there is strong positive pearson's correlation between the gained measurements from KCP compared with those gained from the CROM for cervical movements in all directions at <math>P &lt; 0.05</math>. <b>Conclusions:</b> KCP is valid and reliable method for measuring the cervical AROM.</p>		
Key words	1.	Reliability
	2.	Validity
	3.	Kinovea
	4.	Computer Program
	5.	Cervical Range
	6.	Motion Measurements
Classification number	:	000.000.
Pagination	:	
Arabic Title Page	:	صلاحية ومصداقية استخدام برنامج كينوفيا في قياس المدى الحركي للرقبة.
<b>Library register number</b>	:	<b>4999-5000.</b>