Physical Therapy Department for Musculoskeletal Disorder and Its Surgery

Master Degree 2020

Author	**:**	**Ahmad Mohammad Fawzy Tawfiq.**
Title	**:**	**Relationship between rotator cuff and hand grip strength in shoulder tendinopathy.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: Shoulder pain as a result of rotator cuff pathology is one of the most common musculoskeletal complaints presenting within primary care. Assessment of handgrip strength (HGS) has been proposed as an indicator of rotator cuff function. Purpose: The main objective of the study was to investigate whether or not there is a relationship between shoulder lateral rotators strength (LRS) and (HGS) and whether or not there is a relationship between shoulder LRS and pain in patients with rotator cuff tendinopathy (RCT). Subjects and Methods: Fifty patients with RCT aged between 20 to 40 years participated in this study. They were referred from orthopaedic physician and their diagnoses were confirmed with magnetic resonance imaging (MRI) or sonography. Shoulder LRS (measured with hand held dynamometer), HGS (measured with hand grip dynamometer) and pain (measured with visual analogue scale) were measured with the arm in three different positions: neutral shoulder position, 90° shoulder abduction and 90° shoulder abduction with 90° external rotation (ER). Results: statistics showed a strong positive correlation between shoulder LRS and HGS in 90° shoulder abduction and 90° shoulder abduction with 90° ER and a weak positive correlation in neutral shoulder position (r = 0.850, r = 0.820, r = 0.351 respectively). A strong negative correlation between shoulder LRS and pain in the same three positions (r = - 0.847, r = - 0.771 and r = - 0.697 respectively). Conclusion: Assessment of HGS when shoulder is abducted 90° can be reliably used to monitor the function of the lateral rotators of the shoulder in patients with RCT. Pain have a negative effect on shoulder LRS consequently, LRS should be a consideration in management of patients with RCT.

Key words	**1.**	**rotator cuff,**
	2.	**shoulder tendinopathy**
	3.	**Hand grip strength.**
Classification number	**:**	**000.000.**
Pagination	**:**	**79 p.**
Arabic Title Page	**:**	**العلاقة بين قوة الكفة المدورة و قبضة اليد في التهاب أوتار الكتف.**
Library register number	**:**	**7113-7114.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Alaa Yousri Mahmoud Atia.**
Title	**:**	**The Effects Of Cervical Muscle Fatigue On Neck Proprioception And Postural Stability.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: cervical flexor muscles fatigue is a predisposing factor for the affection of cervical spine proprioception and postural stability. Purpose: This study aims to investigate the effects of cervical flexor muscles fatigue on neck proprioception and postural stability. Subjects and Methods: forty-five male and female subjects were evaluated pre, immediately after induction of fatigue & after recovery. Isometric neck flexor muscle endurance test (NMET) was used for the induction of cervical flexor muscles fatigue. The Assessment of cervical proprioception by cervical joint position error test (JPET), and the assessment of postural stability by using (a) Biodex balance system measuring "Overall stability index (OASI), Anterior/ posterior (A/P) index and medial/ lateral (M/L) index", (b) multidirectional reach test. Results: There was a significant decrease in cervical proprioception (cervical joint position error test) & postural stability (Biodex balance system & multidirectional reach test) immediate post-induction of fatigue compared with before induction of fatigue ($p < 0.001$). Conclusion: Consequently, subjects suffering from cervical flexor muscles fatigue were vulnerable to have a significant effect on neck proprioception and postural balance as it impaired the cervical proprioception sense & postural stability. Therefore, this study provides information for preventing overload fatigue of the cervical spine for improving overall postural balance, neck proprioception & righting reaction.

Key words	**1.**	**Cervical Flexor Muscles Fatigue.**
	2.	**Postural Stability.**
	3.	**Proprioception.**
	4.	**Joint Position Error.**
	5.	**Neck Proprioception.**
	6.	**Biodex Balance System.**
Classification number	**:**	**000.000.**
Pagination	**:**	**94 p.**
Arabic Title Page	**:**	**تأثير الإجهاد العضلي العنقي على المستقبلات الحسية العميقة للرقبة و إتزان القوام.**
Library register number	**:**	**7111-7112.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Alshaymaa Abdeldaiem Mohamed.**
Title	**:**	**Cross-Cultural Adaptation And Validation Of The Arabic Version Of The Core Outcome Measures Index In Patients With Low Back Pain.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Aliaa Rehan Youssef**
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Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Purpose: To cross-culturally adapt and test the psychometric properties of the Core Outcome Measures Index for the back (COMI-back) for the Arabic language in Egyptian patients with non-specific low back pain (LBP). Methods: COMI-back was translated and cross-culturally adapted into Arabic according to standard guidelines. Its construct validity was assessed in 85 patients with chronic LBP (mean (± SD) age, 41.1 (±10.4)years)who completed a booklet of questionnaires including the Arabic versions of COMI-back, Roland Morris Disability Questionnaire, Oswestry Disability Index, the Short Form Health Survey 36, and the Visual Analogue Scale for back pain. Test-retest reliability was assessed in 52 participants who completed the booklet again within 7 days. Results: Floor effects (worst status; 1.2-10.6%) and ceiling effects (best status; 1.2-11.8%) for COMI-back were acceptable, except for symptom-specific well-being (18.8%, floor), leg pain (23.5%, ceiling), and work disability (31.8%, ceiling). The COMI item scores correlated with those of the reference questionnaires (ρ=0.45 to 0.88), except for the COMI symptom-specific well-being (ρ=0.16 - 0.17) and quality of life (ρ=0.38). The intra-class correlation coefficient for the summary score was 0.90, whereas that of the individual items ranged from 0.71 to 0.92. The standard error of measurement and minimal detectable change for the summary score were 0.51 and 1.41 points, respectively. Conclusion: The Arabic version of COMI-back represents a valid and reliable instrument for use in Arabic-speaking patients with non-specific LBP.

Key words	**1.**	**Non-Specific low back pain.**
	2.	**Core Outcome Measures Index (COMI).**
	3.	**Cross-cultural adaptation**
	4.	**Validity.**
	5.	**Low Back Pain.**
	6.	**Reliability**
Classification number	**:**	**000.000.**
Pagination	**:**	**177 p.**
Arabic Title Page	**:**	**اختبار صلاحية النسخة العربية من استبيان مؤشر قياس النتائج الاساسية على مرضى ألم أسفل الظهر**
Library register number	**:**	**7133-7134.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Dalia Mostafa Ibrahim Mahmoud.**
Title	**:**	**The effect of scapular retractors strenghtening exercises on chronic mechanical Neck pain.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Nadia Abdelazeem Fayaz**
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	3.	**Ahmad Hamdi Azzam**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Introduction: Mechanical neck pain is a significant societal burden and may include symptoms in the neck and upper extremity. It has been reported that the lifetime and point prevalence of neck pain are almost as high as those of low back pain. Scapular postural correction strategies have been advocated as part of the intervention for patients with neck pain who display an alteration in scapular orientation affecting the head posture. Objective: the purpose of this study was to investigate if scapular retractors strengthening exercise had an effect on pain, function and posture in patients with chronic mechanical neck pain. Methods: The study was conducted on thirty patients; their age was between 18-40 years old. The patients were assigned randomly into two equal groups. Experimental group (A); in which 15 patients with mean ± SD age and BMI were 26.73 ± 4.71 years and 25.8 ± 3.25 kg/m² respectively, were treated with scapular retractors strengthening program with the same traditional physical therapy received for the second group for 18 sessions over 6 weeks period.; Whereas control group (B); 15 patients with mean ± SD age and BMI were 28.53 ± 6.93 years and 26.53 ± 3.18 kg/m² respectively ,were treated with only the traditional physical therapy treatment in the form of (infrared, activation of deep neck flexors, isometric exercises, and stretching exercises).Results: statistics showed that there was no significant difference in the VAS, NDI,CVA and SHA post treatment between the study and control groups (p = 0.69), (p = 0.715),(p = 0.107), (p = 0.3) respectively. Conclusion: Based on the findings of the current study, it is concluded that the combined effect of scapular retractors strengthening program with traditional physical therapy treatment had no significantly improvement on pain intensity, functional level, forward head posture and rounded shoulder posture expressed as VAS, NDI, CVA and SHA respectively than the traditional therapy treatment only for 18 sessions over 6 weeks period. However, there was high significant difference in inter-group comparison between pre and post treatment effects in each group for all variables, perhaps reflecting that a longer duration program (>8weeks) is needed.

Key words	**1.**	**chronic mechanical neck pain.**
	2.	**VAS, neck disability index.**
	3.	**scapular retractor**
	4.	**shoulder angel.**
	5.	**craniovertebral angle.**
Classification number	**:**	**000.000.**
Pagination	**:**	**107 p.**
Arabic Title Page	**:**	**تأثير تمارين التقوية للعضلات المقربه للوح الكتف عند مرضى آلام الرقبة الميكانيكية المزمنة.**
Library register number	**:**	**6991-6992.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Labib Mousa Labib Ghali.**
Title	**:**	**Validity And Reliability Of Goniometer Records Smartphone Application In Measuring Knee Range Of Motion For Patellofemoral Pain Syndrome.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Enas Fawzy Youssef**
	2.	**Samah Saad Zahran**
	3.	**Ahmad Hamdi Azzam**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: limitation of knee range of motion (ROM) in patients suffering from patellofemoral pain syndrome (PFPS) affects knee function thus the need of accurate assessment of ROM is increased to apply the best management. Nowadays, smartphones are widely used in musculoskeletal assessment besides that they are easily accessible and portable. Many applications have been validated to measure joints ROM, expecting the effective use of smartphones as a clinical tool in assessing ROM. The aim of this study is to investigate the concurrent validity and reliability of using smartphones in assessing knee ROM in patients with PFPS. Methods: 40 PFPS patients were assessed (8 females and 32 males). Knee ROM was measured simultaneously by the smartphone "Goniometer Records" application and the bubble inclinometer. Each participant had three times measurements for each movement (knee flexion, knee extension) per session and the average of the three trials was taken as the patient's ROM score and used for further statistical analyses. Results: Reliability and Validity of the smartphone application were analyzed using the Interclass Correlation Coefficient (ICC) and Pearson's correlation. There was a strong positive correlation to confirm concurrent validity between the smartphone goniometer application and the bubble inclinometer (r=0.97-0.98; p=0.0001) in this study. Intra-rater reliability and inter-rater reliability and Test-retest reliability of smartphone application suggested excellent reliability for knee flexion and extension (ICC = 0.988 - 0.997), (ICC= 0.985 - 0.994), (ICC= 0.984 - 0.994) respectively. Conclusion: Smartphone application is a valid and reliable alternative for bubble inclinometer in measuring active knee ROM in patients with PFPS.

Key words	**1.**	**Reliability**
	2.	**Validity**
	3.	**ROM,**
	4.	**patellofemoral pain syndrome.**
	5.	**Goniometer Records Smartphone Application.**
	6.	**Smartphone.**
	7.	**Knee Range Of Motion.**
Classification number	**:**	**000.000.**
Pagination	**:**	**70 p.**
Arabic Title Page	**:**	**صلاحية و موثوقية تطبيق "جونيوميتر ريكوردز" للهاتف الذكي لتقييم المدى الحركي لمفصل الركبة في مرضى متلازمة الألم الفخذي البطني.**
Library register number	**:**	**7065-7066.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Mahmoud Samir Abd El-Azeem.**
Title	**:**	**Comparing Between Mulligan and Mcconnell Taping Techniques in Patellofemoral PainSyndrome.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Samah Saad Zahran**
	2.	**Ahmad Hamdy Azzam**
	3.	
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: One of the most common knee problems is patellofemoral pain syndrome (PFPS) which has a higher rate among females especially athletes than males. It is believed that the main problems of PFPS are pain and impaired knee function. Purpose: To compare the effect of Mulligan (MT) and Mcconnell (MCT) taping on pain intensity and functional level in patients with PFPS. Methods: Forty-five patients (male and female) with PFPS participated in the study. Their age ranged from 18 to 35 years. They were assigned randomly into three equal groups. The first group (A) included 15 patients with a mean age of (24.06 ± 1.7 years) and mean BMI (22.66 ± 3.51 kg/m^2) were treated with MT and exercises for six weeks. The second group (B) included 15 patients with a mean age of (24.46 ± 2.23 years) and means BMI (22.72 ± 2.3 kg/m^2) were treated with MCT and exercises for six weeks. The third group (C) was the control included 15 patients with a mean age of (23.86 ± 1.84 years) and mean BMI (22.93 ± 3.23 kg/m^2) were treated with exercises onlyfor six weeks. Pain intensity was measuredby numerical pain rating scale (NPRS). Anterior knee pain scale (AKPS) was analyzed to assess the functional level. Measurements were done before the intervention, after 3 weeks (post I) and after 6 weeks (post II) in all groups. Results: Findings revealed a significant decrease in NPRS and a significant increase on AKPS over time in all groups (P = 0.0001). Among groups, the results showed there was a significant decrease of pain and improvement of function in group (B) compared to groups (A) (C) at (post I) and (post II). Conclusion: Both Mulligan and Mcconnell taping techniques can improve pain and function in PFPS patients with a preference of MCT.

Key words	**1.**	**Mulligan taping**
	2.	**McConnell taping**
	3.	**patellofemoral pain syndrome**
Classification number	**:**	**000.000.**
Pagination	**:**	**93 p.**
Arabic Title Page	**:**	**المقارنة بين تأثير شريط موليجان وشريط ماكونيل على مرضى متلازمة ألم الرضفة وأسفل الفخذ.**
Library register number	**:**	**7075-7076.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Mohamed Hemied Nasser Ali.**
Title	**:**	**Efficacy of Biceps Brachii Muscle Strengthening Exercises on Shoulder Impingement Syndrome.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Salwa Fadl Abdul Majeed**
	2.	**Ahmed Foad Mohamed Seif El Deen**
	3.	**Mohammed Ali Sarhan**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: Shoulder impingement syndrome one of the most common diseases of the musculoskeletal system. There is lack of literature about the effect of biceps brachii muscle strengthening exercises on shoulder impingement syndrome. Purpose: To investigate the effect of biceps brachii muscle strengthening exercises in treatment shoulder impingement syndrome. Objective: This study was to investigate the effect of biceps brachii strengthening exercises on shoulder pain and disability index, isometric strength of shoulder abductors, internal and external rotators, posterior capsule tightness, and acromiohumeral distance at shoulder abduction and adduction with unilateral shoulder impingement syndrome. Methods: This study consisted of twenty five patients (two groups). Group A; consisted of fourteen patients, with mean age of 32 years, treated with scapular muscles exercises, rotator cuff exercises, posterior capsular stretch and biceps brachii exercises. Group B; consisted of eleven patients, with mean age of 34 years, treated with as group A but without biceps brachii exercises. Each patient was assessed for pain and disability using shoulder pain and disability index (SPADI), isometric strength using hand held dynamometer, acromiohumeral distance (AHD) using ultrasonography and posterior capsule tightness using tape measurement. Results: there was non-significant difference between both groups in shoulder pain and disability, isometric strength, acromion humeral distance and posterior capsular tightness, but significant difference only within group A in disability (t=-5.43, p-value = 0.000), isometric abductor strength (t=3.71, p-value = 0.001), (AHD) at adduction (t=2.4, p-value = 0.015) and posterior capsular tightness (t=2.24, p-value = 0.04). Conclusion: there was more clinical improvement in pain and showed statistically significant difference in disability, static acromion humeral distance, abduction isometric strength and posterior capsular tightness only within biceps groups.

Key words	**1.**	**Shoulder impingement syndrome**
	2.	**Biceps brachii**
	3.	**Therapeutic exercises**
	4.	**Acromiohumeral distance**
	5.	**Muscle Strengthening Exercises.**
Classification number	**:**	**000.000.**
Pagination	**:**	**138 p.**
Arabic Title Page	**:**	**فاعليه تمارين تقوية العضلة ذات الراسين العضدية في متلازمة انحشار الكتف.**
Library register number	**:**	**7001-7002.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Mohamed Nagy Hassan Abdelhamid.**
Title	**:**	**Myofascial Trigger Point Release Versus Instrument Assisted Soft Tissue Mobilization On Upper Trapezius Myofascial Trigger Points In Mechanical Neck Pain.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Enas Fawzy Youssef**
	2.	**Maha M. Mohammed**
	3.	**Ahmad Hamdi Azzam,**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	
Background: Mechanical neck pain is a widespread significant health problem with a huge burden on the individual and economy. Finding a non-invasive effective treatment that is non-exhaustive for the therapist and non-painful for the patient is highly needed. Study design: Double-blinded randomized clinical trial Objective: To investigate and compare the effects of myofascial trigger point release (TPR) and instrument-assisted soft tissue mobilization (IASTM) using M2t blade in terms of neck pain level, pressure pain threshold (PPT), neck lateral flexion and rotation range of motion and neck function on upper trapezius myofascial trigger points (MTrPs) in mechanical neck pain. Methods: Forty patients between 18 and 55 years were randomly assigned to either group A or B. Group A received one session of Trigger point release (TPR) and passive stretching while group B received one session of IASTM using M2t blade and passive stretching. Visual analogue scale, Pressure algometer, measuring tape were used to evaluate patients' pre-treatment, post-treatment, and at follow up. Arabic version of the neck disability index (NDI) was used pre-treatment and at follow up. Results: There was a significant improvement in all outcomes immediately post-treatment and at follow up in both groups ($p < 0.001$). There was a significant increase in PPT and decrease in VAS and NDI levels in favor of group B at immediate post-treatment and at follow up ($p < 0.01$) without significant difference at lateral flexion and neck rotation between both groups ($p > 0.05$). Conclusion: Both TPR and M2t blade were effective in treating upper trapezius MTrPs in patients with mechanical neck pain in the short term with favoring M2t blade for improving both neck pain and function		
Key words	**1.**	**M2t blade**
	2.	**Pressure pain threshold**
	3.	**Pressure algometer**
	4.	**Neck range of motion.**
	5.	**Myofascial Trigger Point Release.**
	6.	**Soft Tissue Mobilization.**
	7.	**Upper Trapezius Myofascial Trigger Points.**
	8.	**Neck function.**
	9.	**Neck disability index.**
Classification number	**:**	**000.000.**
Pagination	**:**	**102 p.**
Arabic Title Page	**:**	**تفكيك نقطة الألم الليفي العضلي مقابل تحريك الأنسجة الرخوة بمساعدة أداة على نقاط الآلام الليفية العضلية بالعضلة الشبة منحرفة العلوية في ألم الرقبة الميكانيكي.**
Library register number	**:**	**7073-7074.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Ola Ismail Ibrahim Mohamed.**
Title	**:**	**Comparative Study Of The Combined Effect Of Therapeutic Exercises And Mobilization Between Stage Ii And Stage Iii Frozen Shoulder.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Salwa Fadl Abdul Majeed**
	2.	**Walid Reda**
	3.	**Mohammed Ali Sarhan**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	
BACKGROUND: Frozen shoulder (FS) is a painful and debilitating condition affecting up to 5% of the population. Frozen shoulder is considered fibrosis of the glenohumeral joint capsule with a chronic inflammatory response. Patients experience pain, limited active and passive range of motion and disability. Frozen shoulder is idiopathic, self-limiting syndrome divided into four consecutive stages; Painful stage, Freezing stage, Frozen stage and Thawing stage. It is imperative to consider the patient's symptoms and stage of the condition. There is little evidence to suggest that the disease prognosis is affected and this raises the need for new research. OBJECTIVE: To compare the combined effect of shoulder mobilization and therapeutic exercises on pain, range of motion (ROM), and overall shoulder functions between stage II and stage III frozen shoulder. METHODS: This study consisted of 30 patients (two groups). Group A; consisted of 15 patients stage (II), (FS), with mean age of 52 years, Group B; consisted of 15 patients stage (III), (FS), with mean age of 53 years, both groups were treated with mobilization, stretching exercises, active exercise and Codman pendulum exercises. Each patient was assessed for pain and disability using shoulder pain and disability index (SPADI) and shoulder ROM using universal goniometer. RESULTS: There was significant effect of mobilization and therapeutic exercises on pain and overall shoulder functions in stage II and stage III frozen shoulder with a significant increase in the percentage of change in pain and function of stage II compared with that of stage III. Also there was significant effect on shoulder ROM with the superiority of flexion and abduction in stage II compared with that of stage III. But there was no significant difference in the percentage of change in shoulder internal rotation and external ROM between stage II and stage III. Whereas there was a significant increase in the percentage of change in shoulder extension ROM of stage III compared with that of stage II. CONCLUSION: The combined effect of mobilization and therapeutic exercises has a significant effect on shoulder ROM, pain and overall functions in stage II and stage III frozen shoulder which is more significant in stage II more than stage III (p = 0.0001).		
Key words	**1.**	**Frozen shoulder.**
	2.	**therapeutic exercises**
	3.	**Mobilization.**
Classification number	**:**	**000.000.**
Pagination	**:**	**118 p.**
Arabic Title Page	**:**	**مقارنة التأثير المشترك للتمرينات العلاجية و التحريك اليدوي بين المرحلة الثانية و المرحلة الثالثة لمفصل الكتف المتجمد.**
Library register number	**:**	**7089-7090.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Randa Magdy Mohamed Younes.**
Title	**:**	**Sacroiliac joint mobilization versus gluteus medius strengthening in sacroiliac joint dysfunction.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Nadia Abdelazim Fayaz**
	2.	**Kahled Elsayed Ayad**
	3.	**Walid Reda Mohamed**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	

Background: The aim of this study was to compare the effect of gluteus medius strengthening exercises versus sacroiliac joint mobilization in anterior sacroiliac joint dysfunction. Study Design: Comparative study. Subjects: Thirty adult patients with pain, tenderness on posterior superior iliac spine and chronic low back pain from both genders participated in this study, their age was ranging from 25 to 40 years old, their body mass index was ranging from 20 to 25 (kg/m^2). Methods: The thirty patients were randomly divided into 2 equal groups with 15 patients each. Both groups were given conventional physiotherapy which included ultrasound and corrective exercises as a baseline treatment. Along with conventional physiotherapy Group A received strengthening exercises for gluteus medius subdivisions while Group B received mobilization techniques. The treatment duration was for 3 weeks. Provocation tests, pelvic tilt angle and pain were measured for evaluation before starting the treatment and then after 3 weeks. Results: There was no significant difference in pain and pelvic tilt between both groups post-treatment ($p > 0.05$). There was a significant decrease in pain and pelvic tilt angle post treatment in group A and B compared with that pre-treatment ($p < 0.001$). There was no significant difference in the results of provocation tests between group A and B at pre and post treatment ($p > 0.05$). There was a significant decrease in the number of patients who had positive provocation tests post-treatment compared with that pre-treatment ($p < 0.05$) in both groups. Conclusion: Both the gluteus medius strengthening exercises and the sacroiliac joint mobilization techniques were effective in treatment of anterior sacroiliac joint dysfunction.

Key words	**1.**	**Sacroiliac joint.**
	2.	**sacroiliac dysfunction.**
	3.	**gluteus medius.**
	4.	**provocation tests.**
	5.	**mobilization techniques.**
	6.	**corrective exercises.**
	7.	**pelvic tilt.**
Classification number	**:**	**000.000.**
Pagination	**:**	**102 p.**
Arabic Title Page	**:**	**التحريك للمفصل العجزي الحرقفي مقابل تقوية العضلة الألوية الوسطى في علاج اختلال المفصل العجزي الحرقفي.**
Library register number	**:**	**7021-7022.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Samar Mohamed Abd elhamied.**
Title	**:**	**Association of sacral inclination and lumbar curvature with clinical manifestation in patients with patellofemoral pain syndrome.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Nadia Abdelazim Fayaz,**
	2.	**Samah Saad Zahran,**
	3.	**Ahmed Mahmoud Gad**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	
Background: Patellofemoral pain syndrome (PFPS) is recognized as one of the most common lower-extremity disorders encountered by orthopedic physical therapists. Despite its prevalence, however, the etiology of this pain syndrome and specific treatment of this condition remain vague and controversial. Thus, spinal instrumentation, measurements of spinal and leg alignment are thought to be important in patients with PFPS. Objective: the purpose of this study was to investigate the association between sacral inclination and lumbar curvature with degree of pain severity, functional disability and degree of frontal plane projection angle. Methods: This study is: A Cross –Sectional Study. Overall, 60 female patients with mean age (32 ±6.47) years participated in this study as PFPS. Lumber curvature and sacral inclination were measured by Radiographic X-Ray (lateral view), Pain assessed by the Arabic Numeric Pain Rating Scale (ANPRS), Assessment of knee function done by the Arabic Anterior Knee Pain Scale (AAKP/Kujala) and finally the frontal plane projection angle measured using Kinovea Computer Program (KCP) .Results: The results of this study demonstrated that there is a strong positive correlation of both lumber Cobb's angle and sacral inclination with pain intensity and Frontal Plane Projection Angle (FPPA) (r=0.825, r=0.812 , p=0.0001) respectively, There is poor inverse correlation of both lumber Cobb's angle and sacral inclination with functional disability (r=-0.397 and r=-0.385, p=0.002) respectively. CONCLUSION: Lumber Cobb's angle and sacral inclination angle were significantly related to the pain intensity, functional disability and FPPA during the single leg squat in women with PFPS. These spinal alignments should be considered in clinical evaluation of knee-related disorders that are associated with PFPS.		
Key words	**1.**	**Lumber spine.**
	2.	**anterior knee pain.**
	3.	**sacral angle**
	4.	**patellofemoral pain syndrome.**
	5.	**FPPA.**
Classification number	**:**	**000.000.**
Pagination	**:**	**98 p.**
Arabic Title Page	**:**	**ارتباط زاوية الميل العجزى ومنحنى الفقرات القطنية مع الأعراض الاكلينيكية في مرضى متلازمة ألم الرضفة.**
Library register number	**:**	**7285-7286.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER AND ITS SURGERY

Author	**:**	**Shaimaa Ramadan El Deab.**
Title	**:**	**Relationship between lumbopelvic muscles activity and ultrasonographic measurement of contralateral anterior humeral translation in chronic unilateral low back pain.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Bassem Galal El Dien El Nahass**
	2.	**Mohammed Shawki Abdelsalam**
	3.	**Nevien Ezzat El Liethy**
Degree	**:**	**Master.**
Year	**:**	**2020.**
Abstract	**:**	
Objective: This study was conducted to investigate the relationship between the amplitude of posterior oblique sling muscles; ipsilateral gluteus maximus (GM) and contralateral latissmus Dorsi (LD), and the amount of anterior translation of humeral head (ATHH) of the contralateral glenohumeral joint (GHJ) in subjects with unilateral chronic low back pain (CLBP) during ipsilateral prone knee extension (PHE) test. Methods: The study was conducted on thirty subjects (15 patients with CLBP and 15 healthy subjects). Ipsilateral GM and contralateral LD amplitude was recorded by surface EMG during PHE of the limb at the painful side and correlated to ATHH of contralateral GHJ as measured by ultrasonography. Results: There was statistically non-significant difference between RMS of GM value, LD value and ATHH value between both groups. There was non-significant correlation between EMG amplitude of each muscle and ATHH of contralateral GHJ. Conclusion: The assessment of ATHH, the amplitude of ipsilateral GM and contralateral LD during PHE of the limb at the painful side did not discriminate individuals with and without chronic low back pain. Although results did not reveal significant difference regarding our tested hypotheses, there was a trend toward ipsilateral GM hyperactivity and increase in ATHH of contralateral GHJ. ATHH of the contralateral GHJ wasn't related to EMG activity of ipsilateral GM and contralateral LD.		
Key words	**1.**	**Chronic Low Back Pain.**
	2.	**Anterior translation of humeral head**
	3.	**Prone Hip Extension,**
	4.	**lumbopelvic muscles.**
	5.	**ultrasonographic measurement.**
	6.	**Posterior Oblique Sling,**
Classification number	**:**	**000.000.**
Pagination	**:**	**87 p.**
Arabic Title Page	**:**	**العلاقة بين رسم عضلات التحكم بالحوض لجانب واحد و قياس الموجات الصوتية للحركة الأمامية لرأس عظمة العضد للكتف المقابل في مرضى آلام أسفل الظهر المزمن على جانب واحد.**
Library register number	**:**	**6997-6998.**