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Uzma Mustakahmed Shaikh, J Nov Physiother 2017, 7:6(Suppl)
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5th International Conference on
PHYSIOTHERAPY
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# Effects of kinesio-tapping versus myofascial release in temporo-mandibular myofascial muscle dysfunction: A randomized clinical trial

**Uzma Mustakahmed Shaikh**
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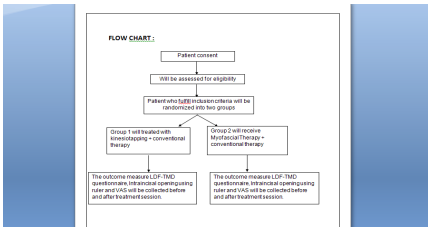


Temporomandibular joint disorders are defined as a subcategory of craniofacial pain involving pain in TMJ, masticatory muscles and associated head and neck musculoskeletal structures. The National Institute of Dental and Craniofacial Research classified TMJ disorders into 3 categories: (1) Myofascial pain, (2) Internal derangement and (3) Degenerative joint disease. Myofascial pain is the pain that derives from myofascial trigger point. Myofascial trigger point is a hyperirritable tender point associated with a taut band of a skeletal muscle. Myofascial pain, TMD, neuralgia, dental pain mostly presents with overlapping signs and symptoms. The SCM can be said to be a factor that may affect the ROM of the temporomandibular joint along with the muscles that move the chin. Masseter acts chiefly in closing the jaw and is used for greater closing force. If pain is predominately emphasized with closure of the jaw then it is likely that the sequence of lateromotion is involved. This sequence has a sub-unit in the masseter muscle. Kinesio Taping was studied in a wide range of painful disorders including musculoskeletal pathologies. Myofascial release is a collection of technique used for purpose relieving soft tissue from an abnormal hold of a tight fascia. Masseter and SCM are both involved in TMD causing limitation of mandibular motion and pain. To compare the effectiveness of kinesio tapping and MFR in treatment of in masseter and SCM muscle leading to TMJ dysfunction. It is a randomized control trial in which 2 groups is selected. 1st group will be treated with kinesio-tapping and conventional therapy 2nd group will be treated with myofascial therapy and conventional therapy. The used variable was: VAS, Intra-incisal opening, limitations of daily functions- temporomandibular disorder questionnaire. Intragroup comparison shows improvement in both groups after 1 week but in experimental group showed significant improvement (p=0.05). KT taping is useful to reduce pain or improve ROM in patient with TMD by releasing MTrP in masseter and sternocleidomastoid and its better option for treatment.

## Biography

Uzma Mustakahmed Shaikh has completed her Bachelor's degree from Gujarat University, India. She is pursuing Masters in Musculoskeletal Condition and Sports. She had completed four modules of kinesio-taping and presently she is working on kinesio-taping effect on different orthopedic condition.

## References

1.Ilke Coskun Benlidayia (2016) KinesioTaping for temporomandibular disorders: Single-blind, randomized, controlled trial of effectiveness (2016) Journal of Back and Musculoskeletal Rehabilitation; 29(2016): 373-380.

2.M A Capo-jaun, et al. (2017) Conducted study on short term effectiveness of pressure release and kinesio-taping in cervical myofascial pain caused by sternocleidomastoid muscle: A randomized clinical trial. Association of Fisioterapeutas Elesvier 2017.

3.Bae Y (2014) Change the myofascial pain and range of motion of the temporomandibular joint following kinesio taping of latent my ofascial trigger points in the sternocleidomastoid muscle. J Phys Ther Sci.; 26: 1321-1324.

4.Travel J G, Simons D G (1999) Myofascial pain and dysfunction, the trigger point manual. Upper Half of Body. 2nd Ed. Baltimore: Williams & Williams; 1: 329-46.

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R Harihara Prakash et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Perception of undergraduate physiotherapy students' regarding clinical educators' attributes towards clinical teaching

**R Harihara Prakash, Janki Lukhi, Kajal Maheshwari and Mahima Thakkar**
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To explore the Perception of undergraduate physiotherapy students' regarding clinical educators' attributes towards clinical teaching. A study was done on 'Perception of undergraduate physical therapy students regarding the clinical teaching attributes of their clinical instructors' in Pakistan (2016) and it concluded that clinical instructors were helping for students however more focus should be placed on evidence based practice. Similar study was done in Nigeria (2012) and concluded that, Nigerian physiotherapy students rated the clinical teaching attributes of their teachers highly and they were also satisfied and felt positively challenged during their clinical rotations. Common reasons that limit learning are asking questions in a rude way that discourages the students and error correction of students in front of patients. The study is important to get better outcomes in clinical learning. The source of data is taken from K. M. Patel Institute of Physiotherapy, Karamsad. All the subjects who are voluntarily ready to give their thoughts in form of prepared questionnaire are selected as part of study and written informed consent of all the subjects is obtained after explaining the purpose of study. The 25-points McGill clinical teaching evaluation tool (CTE) is used in our study. This questionnaire is given to 2nd, 3rd and 4th year BPT students excluding 1st year BPT students as they are not yet exposed to clinical teaching. Since the study is under process, the result will be declared after doing proper analysis by using appropriate statistical tools.

## Biography

Miss Janki Lukhi is third year undergraduate physiotherapy student of K M Patel Institute of Physiotherapy.

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# Smart shirt with textile strain sensors as experimental method for ballerina shoulder girdle motion control

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Smart textile products are widely used in different fields of engineering and everyday life now. For example, smart garments find wide range of healthcare applications, including health monitoring and rehabilitation. In sports and biomedical applications, smart sensors and smart sensor garments had been used for sports performance improvement of an individual and recovery and the correction of movements and ergonomics. One of the main parts of smart garment is the sensing system which can include one or several sensing elements for posture and joint motion control. Ballet is a type of performance dance which requires a series of movements in which the person moves in space and time to the rhythm of music. Ballet is a high-performance dance that requires an advanced level of technical skills, movement precision and aesthetic, advanced motion coordination. Ballet dancers are described as athletes because they can perform complex, physically demanding routines and are subjected to long periods of coaching. The aim for this single subject experimental (ABA) design study was to capture and monitor shoulder girdle motion during training sessions for ballet Scheherezade and her tales, Sun variation theme out of laboratory environment for ballerina with type I or Inferior scapular dysfunction (Kibler classification). External visual feature is the right-side prominence of the inferior angle because of anterior tilting of the scapula in the sagital plane and excessive shoulder elevation during shoulder flexion and abduction above shoulder level, compare with left side. As monitor tool have been used smart shirt with textile strain sensors (made in Rigas Technical University, patent number: LV 14920), which captures motion in real time and gives visual feedback on electronic data processing device screen. Smart shirt has been used in addition to conventional physiotherapy to reduce right side shoulder girdle elevation during advanced motion as ballet performance. Results showed that smart shirt can be useful and convenient in addition to conventional physiotherapy for ballerina shoulder girdle motion control.

## Biography

Guna Semjonova has completed her BSc from Riga Stradins University, Latvia. Presently, she is pursuing Master's degree in Health Sciences (Physiotherapy) in Riga Stradins University, Faculty of Rehabilitation. She is Member of Performing Arts Medicine Association and Latvia Physiotherapy Association and has four-year work experience as Physiotherapist in field of traumatology and orthopedics.

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Abdulaziz Aoudh Albalwi, J Nov Physiother 2017, 7:6(Suppl)
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# Effects of head motion on postural stability in participants with chronic motion sensitivity

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**Background:** Motion sensitivity, or motion sickness, is common among individuals in modern vehicular and visually stimulating environments; notably, people with normal vestibular function are susceptible to this condition. Motion-provoked dizziness often causes postural instability.

**Purposes:** This study aimed to compare the effects of head motion on postural stability in healthy adults with and without chronic motion sensitivity (CMS) and to determine the effects of head motion direction (horizontal versus vertical) on postural stability.

**Methods:** 60 healthy adult males and females aged 20 to 40 years old were assigned to two groups, 30 participants with CMS and 30 participants without CMS. Pre-data collection, all participants were trained on specific parameters of cervical rotation, flexion and extension. Then, postural stability measurements were taken during three conditions (static, horizontal, and vertical head movements) using the Bertec balance advantage dynamic computerized dynamic posturography (CDP).

**Results:** There was a significant difference between the CMS and non-CMS groups in mean postural stability during head movement in both horizontal and vertical head motions (p=0.005 and p=0.024; respectively), however, no significant difference was shown in mean postural stability between horizontal and vertical head motions within each group (p=0.297 in CMS group and p=0.179 in non-CMS group).

**Conclusion:** The results indicate that healthy young adults without CMS have better postural stability during head motion than those with CMS and that head motion direction (horizontal versus vertical) does not influence postural stability within each study group.

## Biography

Abdulaziz Albalwi has completed his DSc degree from Loma Linda University, USA, in 2017.

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Dhara Patel et al., J Nov Physiother 2017, 7:6(Suppl)
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# The knowledge of ethical values in physical therapy practice amongst physical therapists

**Dhara Patel, Charmi Brahmbhatt and Sanjana Chauhan**
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It is a survey conducted to know the ethical knowledge in physical therapists. Knowledge of ethics is important amongst the physical therapists as they are expected to have thorough knowledge, professionalism, good skills and polite behavior to achieve a good rapport with the patient because this is a field where we deal with the patient hands-on. The American physical therapy association (APTA) has delineated several documents regarding core values of a physical therapist. The core values of code of ethics include: Altruism, integrity, accountability, compassion, excellence, professional duty and social responsibility. The lack of awareness on ethics amongst the physical therapist is noted based on the following articles: 'moral reasoning among physical therapists: Results of the defining issues test' concluded that the post conventional moral reasoning of the physical therapist was much lower than other health care workers, 'levels of professionalism among physical therapists in India: A national cross-sectional survey' concluded that the professionalism among Indian physical therapists was moderate and altruism and compassion levels were also low and 'Perception on physical therapy students and professionals about the importance of professional ethic' they overall concluded that professional code of ethic should be included in academic and clinical practice. In this study the participants are selected on the basis of their clinical experience and hence it is administered on post graduates' students, clinical practitioners and academician in and around city of Anand and Vadodara Gujarat state India. The research is to ascertain the knowledge of ethics amongst the participants with their voluntary involvement. The questionnaire is based on the professionalism and physical therapy: Core value reflection self-assessment which is divide into 7 parts inclusive of accountability, altruism, compassion, excellence, professional duty, integrity and social responsibility; responses will be recorded ranging from 0 i.e. never to 4 i.e. always, each part containing core ethical values given by APTA. Once the data collection is completed results will be derived after proper analysis using appropriate statistical tools.

## Biography

Dhara Patel is a third-year undergraduate student of physiotherapy at K. M. Patel Institute of Physiotherapy. She was awarded First Prize in poster competition as a part of World Bioethics Day, which was celebrated by Gujarat, Indian Unit of the UNESCO Chair in bioethics, Haifa. She is also very disquisitve for research works.

Charmi Brahmbhatt is a third-year undergraduate student of physiotherapy at K. M. Patel Institute of Physiotherapy. She was awarded First Prize in poster competition as a part of World Bioethics Day, which was celebrated by Gujarat, Indian Unit of the UNESCO Chair in bioethics, Haifa. She is also very disquisitve for research works.

Sanjana Chauhan is a third-year undergraduate student of physiotherapy at K. M. Patel Institute of Physiotherapy. She was awarded First Prize in poster competition as a part of World Bioethics Day, which was celebrated by Gujarat, Indian Unit of the UNESCO Chair in bioethics, Haifa. She is also very disquisitve for research works.

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Tomasz Wójcik, J Nov Physiother 2017, 7:6(Suppl)
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# An evaluation of the influence of physiotherapy treatment on stress experienced

**Tomasz Wójcik**
Jan Kochanowski University, Poland

**Background:** Among numerous pain etiological factors, chronic stress is one of the cause. As a result, the impact of stress in the human body loses the ability to control muscle tone, especially the ability to relax. Abnormal muscle tone leads to instability in the motor segments and formation of degenerative changes in spine.

**Purpose:** The aim of this study was to answer the question, whether alleviation of inflammation and relief of chronic spinal pain may affect the level of the stress experienced.

**Methods:** Outcome measures were Visual Analogue Scale (VAS), Perceived Stress Scale (PSS-10) and Neck Disability Index (NDI). 94 people with chronic neck pain were enrolled in this study. The participants were examined before and 30 days after the end of the treatment. The subjected group underwent a 10-day therapy consisting of TENS, magnetic field, laser and kinesiotherapy including manual therapy. After the therapy was completed, patients were instructed how to practice at home and at work.

**Results:** Studies have shown that PSS-10 scores were lower after treatment. The intensification of the perceived pain measured by Vas scale has decreased from 6 to 4 score. Statistical analysis showed that more patients indicated no disability after treatment (8% before treatment, 20% after treatment) and mild disability (24% before treatment, 36% after treatment) measured by NDI scale.

**Conclusion:** The research proved that the pain of patients who underwent the physical therapy has decreased. Applied therapy reduces the level of stress compared to the pre-test results.

## Biography

Tomasz Wójcik has completed his PhD and presently he is a Physiotherapist with 9 years of work experience and an academic teacher with 7 years of work experience. Currently, he is working with patients who are suffering from work-related pains, mainly back pains.

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Jiho Park et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Reducing assistance force during robotic-assisted gait training improves motor function: A randomized controlled trial in patients with subacute stroke

**Jiho Park[1], In Jae Park[2], Hyunyong Seong[2], Yong Il Shin[2] and Joshua H You[1]**
[1]Yonsei University, South Korea
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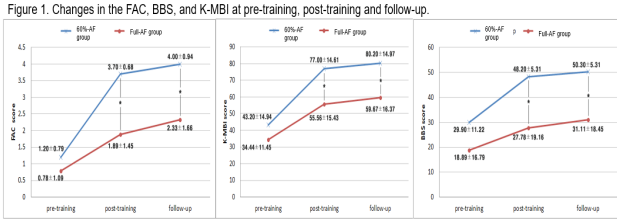
**Background:** In order to determine optimal control strategies for robotic-assisted gait training (RAGT), it is essential to take into account, the level of assistance force of the robot system affect locomotor control. However, none of the studies investigated the effects of different level of assistance force control during RAGT on motor function in patients with subacute stroke.

Figure 1. Changes in the FAC, BBS, and K-MBI at pre-training, post-training and follow-up.




**Objectives:** To compare the effects of full assistance force (Full-AF) versus 60% assistance force (60%-AF) RAGT on motor function in patients with subacute stroke.

**Methods:** 23 patients (age >19 years; 4 weeks after the onset but 6 months) with subacute stroke at Functional Ambulation Category (FAC) 0-3 were randomly assigned into two different RAGT groups. 11 were treated with Full-AF RAGT combined with conventional physical therapy and 12 were treated with 60%-AF RAGT combined with conventional physical therapy. Two groups performed 5 days a week for 4 weeks, with a total of 40 sessions. After 4-weeks of RAGT combined with conventional physical therapy, all patients underwent only conventional physical therapy 5 days a week for 4 weeks, with a total of 20 sessions. Clinical outcomes included FAC, Berg Balance scale (BBS) and Korean version of the modified Barthel index (K-MBI) measured at pre-RAGT, post-RAGT and 4-week follow-up.

**Results:** In the intention-to-treat analysis, there were between two groups effects for clinical motor functions (Figure-1). In addition, both groups showed significantly improved at post-training (P=0.01) and follow-up (P=0.01) in the FAC; post-training (P=0.01) and follow-up (P=0.006) in BBS and post-training (P=0.022) and follow-up (P=0.017) in K-MBI.

**Conclusion:** Reducing robotic assistance force during RAGT may be more effective robotic control strategy than full robotic assistance force RAGT in facilitating motor recovery and retention of trained locomotor functions in patients with subacute stroke.

## Biography

Jiho Park received her BSc degree in the department of Physical Therapy from Yonsei University, Wonju, South Korea. She is currently a PhD student at the Yonsei University. Her research interests include robotic-assisted gait training, human-robot interaction, gait-related brain dynamics, control strategies, neuromuscular control and motor learning in patients with neurological impairments.

## References

1.Marchal-Crespo L, Reinkensmeyer DJ (2009). Review of control strategies for robotic movement training after neurologic injury. Journal of neuroengineering and rehabilitation 6:20.

2.Morone G, Paolucci S, Cherubini A, De Angelis D, Venturiero V, Coiro P, Iosa M (2017). Robot-assisted gait training for stroke patients: current state of the art and perspectives of robotics. Neuropsychiatric disease and treatment 13:1303.

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Ji-hyun Kim et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Comparative effect of modified shrug exercises with and without abdominal muscle activation on scapular upward rotator EMG and thickness in subjects with scapular downward rotation syndrome

**Ji-Hyun Kim, Hyeo-bin yoon, Joo-hee Park and Hye-seon Jeon**
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Scapular downward rotation syndrome (SDRS) is a common scapular alignment impairment that causes insufficient upward rotation and muscle imbalance, shortened levator scapulae (LS) and rhomboid and lengthened serratus anterior (SA) and trapezius. A modified shrug exercise (MSE), performing a shrug exercise with the shoulders at 150° abduction, is known as an effective exercise to increase scapular stabilizer muscle activation. Previous studies revealed that scapular exercise is more effective when combined with various abdominal muscle contractions in decreasing scapular winging and increasing scapular stabilizer muscle activation. Therefore, the purpose of our study was to clarify the effect of MSE with or without abdominal muscle contraction in subjects with SDRS. Eighteen (18) volunteer subjects (male=10, female=8, mean age=22.8) with SDRS were recruited for this experiment. All subjects performed MSE under 3 different conditions: (1) MSE, (2) MSE with an abdominal draw-in maneuver (ADIM) and (3) MSE with an abdominal expansion maneuver (AEM). The muscle thickness of the lower trapezius (LT) and the SA were measured using an ultrasonography in each condition. Electromyography (EMG) data were collected from the LT, LS, SA and upper trapezius (UT) muscle activities. Data were statistically analyzed using one-way repeated analysis of variance at a significance level of 0.05. The muscle thickness of the LT and the SA were the significant difference among the conditions ($p<0.05$). In both LT and SA, the order of muscle thickness was MSE with AEM, MSE with ADIM and MSE alone. No significant differences, however, were found in the EMG activities of the SA, UT, LS and LT. In conclusion, MSE is more beneficial to people with SDRS when combined with abdominal muscle contraction by increased thickness of scapular stabilizer muscles.

## Biography

Ji-Hyun Kim is a M.Sc student in the Department of Physical Therapy at the Graduate School of Yonsei University. She received B.S. degree in department of rehabilitation health from Yonsei University. Her main research interests are orthopedic rehabilitation, athletic rehabilitation and motor control.

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# The efficacy of chair-based aerobic exercise with resistance using thera-band in improving the cardiovascular endurance of post-stroke patients in cavity

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**Introduction & Aim:** Aerobic Exercise refers to an exercise which helps to increase the maximum endurance capacity such as cycling, running, swimming, dancing and even walking. But, since older people perform limited movements, many people in different fields develop programs to enhance the endurance of geriatric patients. One of these is the chair-based aerobic exercise. Chair-based aerobic exercise is designed to elevate the heart rate and keep it elevated for a set period of time. It helps build endurance and strengthen the heart. The purpose of this study is to determine whether Chair-based Aerobic Exercise with resistance training or Chair-based aerobic exercise without resistance training is more effective in improving the cardiovascular endurance of post-stroke geriatric patients in Panapaan II, Bacoor City, Cavite.

**Method:** The research was conducted with fourteen chronic post-stroke geriatric patients both male and female aged 60-80, and they were divided into two groups named chair-based aerobic exercise with resistance using thera-band (group 1) and chair-based aerobic exercise without resistance (group 2) which consist of marching in place for 5 minutes, bilateral D2 flexion and extension, bilateral D1 flexion and extension 12 repetition for 3 sets and cool down exercises for 10 minutes that lasts for a total of 30 minutes for both groups. Both groups consist of seven participants. The research lasted for four weeks with a total of 12 treatment sessions which the participants were individually visited from the research locale Barangay Panapaan II, Bacoor City, Cavite three times a week. Cardiovascular endurance was measured using 6 minute walk test (6MWT) for pre-test and post-test. Paired t-test was used to get the results with 0.005 level of significance.

**Result:** The two groups were calculated using paired t-test in determining the significance difference in cardiovascular endurance of both group. Results show that the weighed mean (WM) of group 1 and 2 is 27.72 in the pre-test. The post-test result shows that the group 1 and 2 got also the same WM of 32.64. Group 1 received a t-value of -4.585 and a P-value of 0.004. Since the computed P-value is less than the 0.05 significance level, the null hypothesis is rejected. Group 2 received a t-value of -5.450 and a P-value of 0.002. Since the computed P-value is less than the 0.05 significance level, the null hypothesis is rejected.

**Conclusion:** According to the data gathered, it has been proven that both chair based aerobic exercise with and without resistance have significant effects in improving the cardiovascular pulmonary endurance of the patients.

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Hyeo-Bin Yoon et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Comparison of the foot muscle EMG and medial longitudinal arch angle during short foot exercises at different ankle position

**Hyeo-Bin Yoon, Ji-Hyun Kim, Joo-Hee Park and Hye-Seon Jeon**
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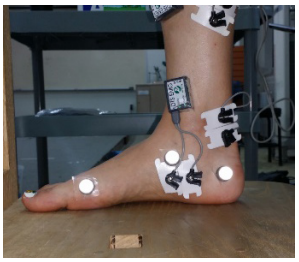

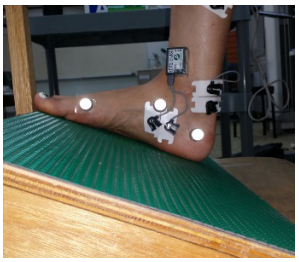

It has been generally known that the height of medial longitudinal arch (MLA) is influenced by both AbdH and extrinsic muscles. Previous studies revealed that the short foot exercise (SFE) is an effective exercise for the people with pronated foot by increasing the height of MLA. However, most of the research related to short foot exercise determined the efficiency of SFE using the enhanced abductor hallucis (AbdH) activation. Therefore, we examined a modified short foot exercise (MSFE) with three different ankle joint angle [neutral (NL), dorsiflexion (DF) at 30º and plantarflexion (PF) at 30º] to optimize the involvement of the foot extrinsic muscles together with AbdH. The purpose of this study was to clarify the effect of MSFE on MLA angle and activation of both intrinsic and extrinsic muscles and to determine the best condition for a pronated foot. 20 healthy subjects performed MSFE in sitting at different ankle positions. During each MSFE, we measured the activation of the AbdH, tibialis anterior (TA) and peroneus longus (PL) and the MLA angle. It is assumed that each ankle position provides different mechanical condition to TA, PL and AbdH. Consequently, the activation of the muscles would be influenced while the subjects perform a MSFE. The collected data were analyzed by one-way repeated-measures ANOVA. The activation of the AbdH and TA was significantly greater in the DF condition than in the NL and the PF conditions ($p<0.01$). The PL was most activated in the DF condition, but no statistical significance was detected. The MLA angle, however, showed no significant difference among conditions. Therefore, MSFE in ankle DF could be considered as more effective way than traditional exercise (e.g., SFE in a neutral ankle joint) in terms of balanced activation of the arch supporting muscles individually. Further longitudinal intervention studies are required.

## Biography

Hyeo Bin Yoon is an MSc student in the Department of Physical Therapy at the Graduate School of Yonsei University. She has received her BS degree in Physical Therapy from Yonsei University. Her main research interests are rehabilitation of musculoskeletal impairments, gait analysis in patients with neurological impairments, physical therapy for pediatrics.

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# Cross-cultural adaptation, reliability, internal consistency and validation of the Arabic version of the International Knee Documentation Committee (IKDC) subjective knee form for Arabic people with ACLR

**Husam Almalki, Herrington L and Jones R**
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**Introduction & Aim:** The use of patient-reported outcome measures is to measure symptoms and limitations in function and sports activities due to knee impairment for every knee-related problem encom¬passing not only arthritis but also ligament injury. In order to administer this questionnaire to Arabic speakers, a rigorous process of cross-cultural adaptation and validation is required in order to reach equivalence between the original publication and target version of the questionnaire. The primary aim of the present study is to translate and culturally adapt IKDC into Arabic to suit Arabic people with Anterior Cruciate Ligament Reconstruction (ACLR).

**Methods:** According to the guidelines for cross-cultural adaptation, translation and backward translation of the English version of the IKDC subjective knee form were performed. After translation into the Arabic version, 35 ACLR patients were asked to complete the Arabic IKDC, KOOS, VAS and Brabd-36 (SF-36). These patients were retested one week later to evaluate test-retest reliability. Construct validity was analyzed by investigating the correlation with KOOS subscales, VAS score and SF-36; content validity was also evaluated. Standardized mean response was calculated for evaluating responsiveness.

**Results:** The test-retest reliability proved excellent with a high value for the intraclass correlation coefficient (r=0.95). The internal consistency was strong (Cronbach's α=0.91). Good content validity with absence of floor and ceiling effects and good convergent and divergent validity were observed.

**Conclusion:** The Arabic IKDC demonstrated good measurement properties. We suggest that this instrument is an excellent evaluation instrument that can be used for Arabic patients with ACLR.

## Biography

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Abdullah Alyami et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Reliability of lower limb biomechanical outcome measures among healthy subjects using a 3D motion analysis during five specific sports tasks: Single-leg squats, single-leg landings, running, cutting 135 and cutting 90

**Abdullah Alyami, Jones R and Herrington L**
University of Salford, UK

**Aim:** The aim of this study was to determine between-day reliability of lower limb biomechanical variables among healthy individuals during five functional tasks; running, cutting 90, cutting 135, single leg squat (SLS) and single leg landing (SLL) tasks. In addition, to examine the reliability of coefficient of variation (CV) as an outcome measure of variability in these variables.

**Methods:** 12 recreational athletes (male: Aged 27.8 4.4 years; mass 66 7.2 kg; height-1.7 0.1 m) completed two separate sessions one week apart. Kinematic and kinetic data was obtained using 3D motion analysis and a force platform (AMTI) embedded into the floor.

**Results:** Generally, in all tasks, all of the variables' ICC values ranged between 0.49 and 0.99, reporting fair to excellent reliability. Running and SLS reported the highest combined averages of ICC values (0.86 and 0.84) respectively. However, SLL and cutting reported the lowest combined averages of ICC values (0.82 and 0.80) respectively. Standard error of measurement (SEM) values for all kinematic variables (angles) ranged between 1.52° and 5°. The between-day ICC values of CV for all kinematic and kinetic variables ranged between 0.40 and 0.96, reporting fair to excellent reliability.

**Conclusion:** This study demonstrates that all kinematic and kinetic variables obtained during all five functional tasks showed fair to excellent consistency with relatively low standard error of measurement values. In addition, it demonstrates that CV is a reliable measure of the variability in these variables. These findings would assist clinicians who are utilising such measures for screening and prospective studies of rehabilitation programs.

## Biography

Abdullah Alyami is a currently a PhD student at The University of Salford, completed his MSc in Advancing Physiotherapy from The University of Salford, UK.

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Manuel Garabal Miguel et.al., J Nov Physiother 2017, 7:6(Suppl)
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# Negative pulsed controlled pressure mechanotherapy in skin grafts: A case report

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Massage is a treatment approach in burnt skin grafts in order to avoid the collagen bundles, soften the tissue, prevent adhesions and desensitize the skin. Limitations are pain, discomfort, skin irritation, pressure and high frequency required. Negative pulsed controlled pressure mechanotherapy (NPCPM) could solve these. Physium System® is a medical device of NPCPM that mobilize tissues in different depths improving elasticity, edema reduction and desensitization of the grafted skin without pain. 16-year old woman with 2ndand 3rd degree burns on the back, gluteal area, left flank, thigh and leg, both mammary glands and heels, covering the 17% of the total body surface. Partial loss of the left auricular pavilion and deep temporal fascia. Homo skin grafts used to cover these areas with 45 days of hospitalization. At day 90, patient started NPCPM treatment. POSAS (The Patient and Observer Scar Assessment Scale) was assessed for measuring scar quality by the observer and patient: sum of 6 items from 1 to 10; VAS scale for pain. These were used in follow up at visit 1, 5 and 10 followed by registration of goniometry. At each follow up, treatment timing and pressure of NPCPM expressed in millibar (mbar) are stated. Results were in 10 NPCPM sessions. Visit 1 (26 min/50 mbar): VAS 7, POSAS Observer (POSAS_O): 50/60, POSAS Patient (POSAS_P): 59/60; hip internal rotation (IR) 10º/adduction 15º, spine flexion (SF) 15º. Visit 5 (43 min/70 mbar): VAS 5, POSAS_O:31/60, POSAS_P:45/60; hip IR 45º/adduction 40º, SF 38º. Visit 10 (60 min/ 90-100 mbar): VAS 3, POSAS_O: 26/60, POSAS_P: 31/60; hip and spine with normal range of motion (ROM). Thus, Physium System® is a safe medical device which can normalize the ROM, skin appearance and sense without pain in less treatment frequency. This could be a new treatment approach in skin grafted patients.

## Biography

Manuel Garabal Miguel has completed his PhD from Alfonso X El Sabio University, UCM in Spain. Private Clinic Exercise ,Ph. Professional cycling Teams and Official Ph. "Vuelta Ciclista a España" for 15 years, Official Ph. "Madrid en Danza 2015,2016,2017", Responsible-organizer of the Physiotherapy Area of the international sporting events of the Olympic candidacy of Madrid 2012 y 2016, introduces in Spain and Europe the technique of Kinesiotape in 1989, President of the Spanish Association of Shiatsu Specialists for 20 years, Shiatsu Teacher from 1987, ChD, In 1995 performs the foot and ankle rehabilitation protocols operated by minimal incision surgery for The Academy of Ambulatory Foot and Ankle surgery (USA). Biomechanics collaborator for Adidas Padel for your products, member of the Spanish Society of Ultrasound in Physiotherapy, member of the Physium System Scientific Committee, member of the Spanish Association of Physiotherapists and the Official College of Physiotherapists of Madrid

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# The repeatability of lower limb biomechanical variables during a sidestep 90 and 135 degree cutting tasks

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**Introduction & Aim:** Change of direction (cutting) manoeuvres are important for many field sports, however, they are unfortunately associated with non-contact ACL injuries. Particularly, changes in the frontal plane angle of the knee during cutting are thought to predict an increased risk of non-contact ACL injury. High knee abduction angles during cutting tasks are associated with joint positions including increased hip flexion, adduction and internal rotation angles. So, it is important to look at the correlation between dynamic knee-valgus variables and lower extremity kinematics. However, our understanding of the hip movement and the relationship to ACL injury mechanism throughout side-step cutting tasks at 90° and 135° angles is limited. Thus, the aim of this study to investigate between-days reliability of using 3D movement analysis system to measure lower limb kinetic and kinematic variables during sidestep cutting manoaeuvre at 90° and 135°.

**Methods:** 10 healthy adult participants were recruited to take part in this study. All the participants were male; age range was 27.8±4.4 years, height-1.7±0.1 m and mass 66±7.2 kg. 3D motion lower limb biomechanics during cutting manoaeuvre at 90° and 135° was assessed.

**Results:** The test-retest reliability proved that all 3D variables in both tasks reported good to excellent between-day reliability, ranging in ICC values between 0.85 and 0.98. The SEM value in both tasks ranged between 1.11 to 3.47 degree for angles and 0.07 and 0.25 Nm-Kg for moments.

**Conclusions:** The result of this study has determined that all 3D kinematic and kinetic variables are reliable with low SEM values during cutting tasks.

## Biography

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# Influence of spa treatment on hand functionality in female patients with rheumatoid arthritis

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**Statement of the Problem:** Rheumatoid arthritis (RA) is a systemic chronic disease of connective tissue with an immunological basis. Typical in that case arthritis, mainly in the hands, leads to grip weakening and manipulative deficiency, which in many cases hinders daily functioning and causes dependence on the environment. The aim of this study was to evaluate the effects of spa therapy in improving the hand functionality in RA women compared with the group of patients in the outpatient treatment.

**Methodology:** The double study included 120 women with RA aged 35-45, including 60 patients who were rehabilitated at Ziemowit Hospital in Rymanow Zdroj and 60 patients undergoing ambulatory care at the Department of Occupational Medicine NZOZ in Sanok. The pincer grip, key grip tests and the Grind test were performed. Wilcoxon test and Chi-square ($\chi 2$) test was used for the analysis.

**Results:** After the therapy, the number of women who were able to perform the pincer and key grip increased in both groups and the Grind's test did not show any pain in the wrist-thumb joint area. There was also statistically significant increase in the point values (according to the adopted: 0-1 system) in individual tests that indicated an improvement.

**Conclusion:** Comprehensive procedures in spa treatment and outpatient therapy have a similar effect on improving functional parameters in RA female patients.

## Biography

Ewa Puszczalowska-Lizis specializes in the treatment of adult and pediatric patients with congenital abnormalities, joint contractures and neuromuscular disorders. She has received her PhD from the University School of Physical Education in Cracow, Poland. Her research interests focus on the development of vertebral column, changes in body posture in various developmental periods and effects of musculoskeletal disorders treatment, also the efficiency of the foot in static and dynamic conditions, frequency of deviations below the norm and variability in foot structure in different periods of ontogeny. She has published a book, 15 book chapters and more than 70 articles in peer-reviewed scientific journals.

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# Academic education in the field of sport and physical therapy between totality and democracy: The example of Charles University in Prague

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The beginnings of higher education of physical education specialists, or the physical education teachers at secondary school, can be found in the year 1892, when the first training course for future teachers at secondary school was launched. A significant part of the course was devoted to teaching the importance of health and physical exercises and some of its graduates can be considered forerunners of today's physical therapists. However, a full training of physical education specialists was possible only after the Institute of Physical Education and Sport was established in 1953. In the late 1950s, the Institute of Physical Education and Sport has become one of the faculties of Charles University and since 1965 bears the name the Faculty of Physical Education and Sport. In 1982, the study of physical therapy was opened, at that time it was called rehabilitation. After the collapse of communist power, the Czechoslovak and Czech higher education system underwent important changes caused mainly by the Higher Education Act of 1990 and 1998 which both naturally had an impact on the form of educational process at the faculty of physical education and sport at Charles University in Prague.

## Biography

Marek Waic has completed his PhD from Charles University and he has completed his Professor of History of Sport from the Faculty of Physical Education and Sport, Charles University. He is the Director of Department of Kinanthropology and Humanities. He has published more than 50 papers in reputed journals and 4 monographs.

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# Efficacy of neurodynamic techniques in comparison with sham therapy in the carpal tunnel syndrome: A preliminary study

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**Objective:** The purpose of this study was to compared the efficacy of neurodynamic techniques, with sham therapy in the mild and moderate carpal tunnel syndrome (CTS).

**Methods:** The study included 39 CTS patients (the average age 53.2; SD=11.5) who were randomly assigned to the NT group (neurodynamic techniques) or to the CG group (sham neurodynamic techniques). Nerve conduction study (NCS), pain severity (NPRS), symptom severity (SSS) and functional status (FSS) (Boston Carpal Tunnel Questionnaire-BCTQ) were assessed pre- and post-treatment. Therapy was conducted twice weekly and both groups received 10 therapy sessions. In the statistical analysis, the ANOVA model was used, supplemented with a post hoc test (p level 0.05).

**Results:** A baseline assessment revealed no group differences in NCS, NPRS, SSS and FSS (in all cases $p>0.05$). Four weeks after the last treatment procedure, nerve conduction was examined again. In the NT group, median nerve sensory conduction velocity increased by 53%, motor conduction velocity by 10%, distal motor latency was decreased by 30% (in all cases, $p<0.001$). There were no significantly changes in NCS of median nerve in the CG group. Immediately after therapy were evaluated NPRS, SSS and FSS. In the MT group NPRS decreased by 308%, SSS decreased by 72% and FSS increased by 49%. There were no significantly changes in NPRS, SSS and FSS in the CG.

**Conclusion:** Neurodynamic techniques had a positive effect on NCS, NPRS, SSS and FSS as compared with sham therapy in the mild and moderate CTS patients.

## Biography

Tomasz Wolny has completed his PhD in 2006. He is a Researcher at the Department of Kinesitherapy and Special Methods in Physiotherapy, The Jerzy Kukuczka Academy of Physical Education in Katowice in Poland. He has published more than 67 papers in reputed journals and has been serving as an editorial board member of repute. For many years he has been evaluating the efficacy of neurodynamic techniques in the treatment of CTS patients.

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