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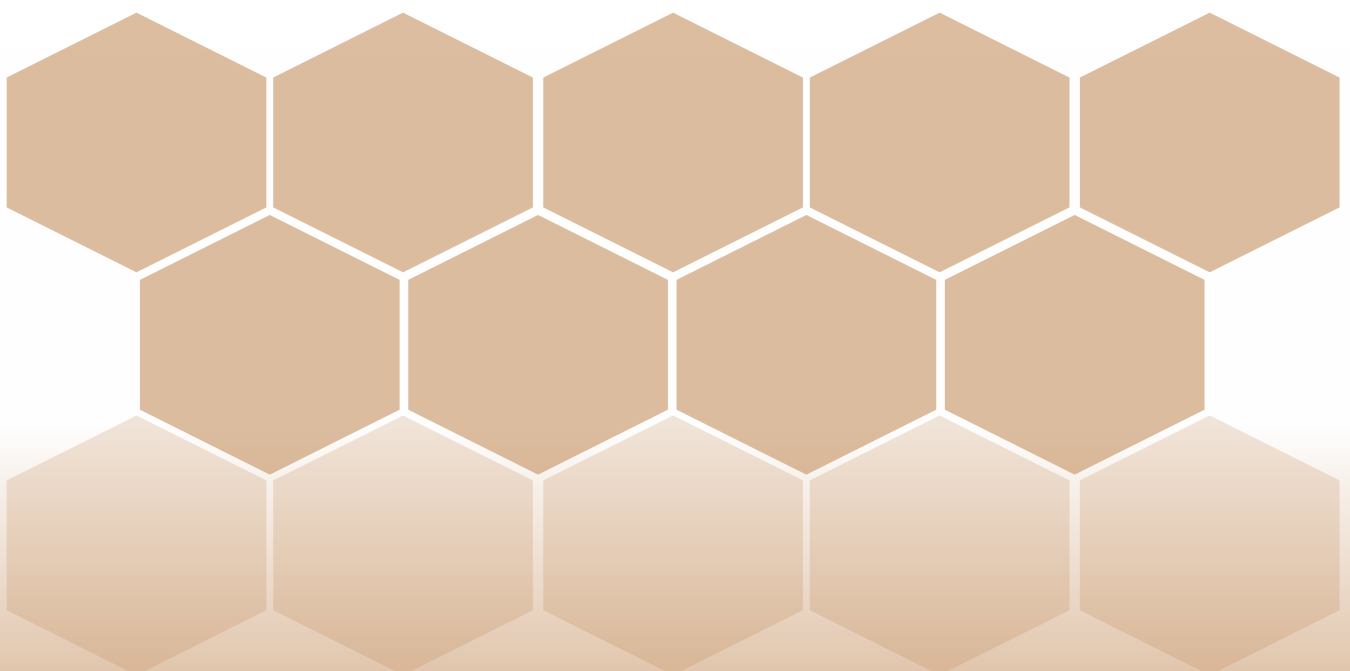
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5th International Conference on

Physiotherapy

November 27-29, 2017 Dubai, UAE

Scientific Tracks & Abstracts (Day 1)



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PHYSIOTHERAPY

November 27-29, 2017 Dubai, UAE

Therapy accompanying use of VR-glasses in hemiparetic children and adolescents

Jennifer Honing and Michael Jung

Fresenius University of Applied Sciences, Germany

Statement of the Problem: Hemiparetic untreated children are particularly affected by a developmental disorder, some of them never learn to walk by their own. Hemiparesis as a result of an ischemic stroke in children and adolescents under 16 years of age is reported in the literature with an incidence of approximately 3-5 and 1, 6:100.000, respectively. The theoretical basis for the study of the therapeutic use of VR in children and adolescents with hemiparesis is based on the success of mirror therapy. Similar to mirror therapy, a situation, a movement sequence is presented to the brain in the therapy-accompanying treatment with the virtual reality spectacles (VR glasses) in such a way that the patient believes that his affected limb would be actively involved, thus causing the corresponding brain area of the affected side. By the mirroring of the non-affected extremity, important motor areas are activated in the affected hemisphere, which could otherwise only be activated by voluntary movements of the affected limb itself. The purpose of this study is to describe the effect of using VR glasses for improving movements by hemiparetic children.



Figure 1: VR- glasses, Gear VR, Samsung

Methodology & Theoretical Orientation: The design of the pilot study corresponds to a 12-week prospective cohort study with simple blinded evaluation. The children and adolescents are examined with the assessments: Nine Hole Peg Test, Box and Block Test, Hand ability test Movement-ABC-2, Timed-up & go Test, Ten Meters Walking Test, Goal Attainment Scale and Six Minute Walking Test. The measurement times are before the study, after 6 weeks, after 12 weeks and after 6 months. Studies in adults have shown that it is possible to learn motor movements in the virtual reality and implement them in the real world.

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Biography

Jennifer Höning has her expertise in sportphysiotherapy and passion in improving athletes. Her pilot study based on responsive constructivists creates new pathways for improving healthcare. She has built this study after years of experience in research, evaluation, teaching both in hospital and education institutions. This approach is responsive to all stakeholders and has a different way of focusing.

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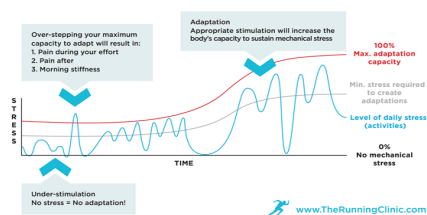
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Running as a lower limb injuries prevention

Albert Carrere

The Corridor Clinic, Spain

Physical activity has been associated with danger, recommending that visit a doctor before starting any physical activity program. Is physical activity or is inactivity more harmful? Running is a popular sport, practiced today by millions of people and within reach of all, but this activity is related to a high number of injuries being 80% of the runners injured per year the current figures. Why humans being injured with something he has done throughout his evolution and for which it is designed? The market and the brands have tried unsuccessfully to provide a solution to this large number of injured runners. However, they have not been able to reduce the incidence of injuries and have not even managed to improve their performance, based their recommendations on marketing rather than on the science. The main cause of the injuries of runners is a wrong Mechanical Stress Quantification, to prevent overuse injuries you have to adapt the mechanical stress progressively. The body adapts, provided that the applied stress does not exceed its adaptability. Based on this postulate, a sustained running program, with the appropriate recommendations, scientifically supported and free from commercial misrepresentation, will provide the benefits to maintain and/or improve the musculoskeletal health of lower limb and prevent pathologies of the locomotor system.



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Biography

Albert Carrere is an expert in the prevention and treatment of running injuries and has been trained specifically to acquire a great command of techniques to diagnose and treat runners. He currently runs his own clinic and take care of elite runners who competes internationally. He is co-responsible for La Clínica Del Corredor in Spain and provides training for health professionals in this field. He has also participated as a speaker at the XII SETRADE Congress of Orthopedic Trauma and Surgery as an expert in the choice of footwear as a tool in the prevention of running injuries.

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Implementation of early rehabilitation programs for patients after traumatic brain injury in acute care

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Introduction: The incidence of brain injury is high and result often in severe neurological impairment and functional disability with associated and sometimes catastrophic socio-economic consequences. Rehabilitation medicine is now challenged by patients who survive with severe complex deficits (sensorimotor, disorders of consciousness and neurocognitive as well as neurobehavioral) confirmed the importance of immediate rehabilitation following the injury and the importance of a rehabilitation continuum of care. Early rehabilitation programs can be implemented not only in rehabilitation hospitals, but also in acute care. Especially physio-therapeutical early mobilization including bed cycling and other specialized therapy options is one of the main points in the therapy program.

Aim: The aim of the study is to show the implementation of early rehabilitation programs for patients after traumatic brain injury in acute care and to evaluate the outcome after 12 and 24 months.

Methods & Subjects: A total of 51 survivors (age 33.8, range 16-64 years, m:f=4 :1) of severe brain injury (GCS<8 for at least 24 hours) underwent a multidisciplinary early rehabilitation program. Duration of rehabilitation program was at mean 18.4 (4-78) days adapted to the individual capability for 3-4 hours/day, until they were discharged from hospital. The follow-up examination took place 12 and 24 months after the STBI.

Results: Data revealed a high level of independence in activities of daily living (mean Barthel Index after one year 92.7 points, after two years 93.7 points). After one and two years, 74.5% and 80.4% of the patients, respectively, were completely independent of need for care. Nevertheless, more than half of the patients had sensorimotor, behavioral, speech, visual and/or auditory disturbances. Return to work rates improved between one and two years after trauma, as evidenced by the rate of patients being back to full time work at one year (n=14, 28%) and two years (n=20, 40%) post-STBI. Return to work rates improved between one and two years after trauma, as evidenced by the rate of patients being back to full time work at one year (n=14, 28%) and two years (n=20, 40%) post-STBI; although, none of these changes reached statistical significance.

Discussion & Conclusion: In summary the successful implementation of early rehabilitation programs for patients after traumatic brain injury in acute care is possible. Focused on outcome, the data revealed a high level of independence in activities of daily living. There are still changes in both impairment and disability related areas between one and two years post-STBI, but the degree of improvement is variable depending on the area being considered. Clinicians should remain aware of the fact that modulation of impairment and disability appear to continue well beyond one year post-STBI which may impact on decisions regarding the provision and intensity of further rehabilitation efforts.

Biography

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Osteoarthritis of the anterior cruciate ligament and the medial tibial plateau: Public health considerations from a cadaveric model

Jessica Immonen

Rocky Mountain University of Health, USA

Some at-risk populations for osteoarthritis (OA) have been identified yet the literature makes little suggestion regarding precise age of disease onset or preventative strategies to reduce risk for disease onset in various groups. In 2008, the American College of Rheumatology estimated that 37.4% of 60+ years old Americans are affected by knee OA. This analysis suggests that this is largely underestimated. Morphometric analyses of the articular cartilage of the tibial plateau were performed on cadaver specimens using Image Pro software on three age populations: <70 years old, 70-79 years old and 80 years old. The articular cartilage of the medial tibial plateau in 80 years old specimens showed a 1.7-fold increase in surface area degeneration (mm²) compared to 70-79 years old specimens (P<0.05). This degradation was compared to donors' reported histories. Data showed that by the 7th decade of life, when patients are in their 60s, articular cartilage degeneration on the tibial plateau had commenced in 100% of specimen. All donors that reported homemaker as an occupation displayed above average medial tibial plateau degeneration (32.33 ± 24.85%) for their age group while simultaneously reporting pathologies in their clinical history that encourage a sedentary lifestyle. This assessment identifies an occupational class that should be aware of their propensity to develop disease while considering the concept that an appropriate BMI does not guarantee joint health. This assessment also identifies a more realistic time frame than previous public health advisory committees have produced regarding age of disease onset and initiation of preventative measures. It is recommended that strength training of the hip abductors and the musculature supporting the knee joint commence early in adult life to avoid valgus collapse and shearing at the knee joint, two of the most common biomechanical reasons for the initiation of pathologies such as OA.

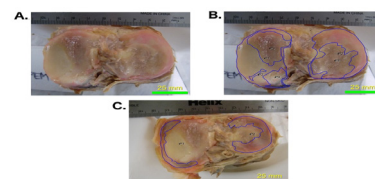


Figure 1. Photographs of the tibial plateau of a right cadaveric knee specimen. **A.** Displays the degenerative changes to the articular cartilage on the medial and lateral aspects of the plateau. **B.** Displays the posterior cruciate ligament trace on the medial and lateral aspects of the tibial plateau. **C.** Displays the surface area traces for the medial and lateral menisci.

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Biography

Jessica Immonen has completed her BS in Biology at the University of Dayton, Ohio, Master's degree in Anatomy and PhD in Anatomy at Pennsylvania State University's, College of Medicine. She defended her dissertation on work in translational drug therapy for diabetic wound healing and presently, she is working as a Faculty at Rocky Mountain University of Health Professions in Provo, Utah. Her work on diabetic wound healing received the 2015 Best Clinical Paper Award from the Society of Experimental Biology and Medicine. Currently, she teaches courses in gross anatomy, neuroscience and physiology and serves as the Co-Chair of the Department of Anatomy and Physiology. Her primary research includes work on osteoarthritis of the knee using cadaveric models and earned her the 2017 Young Faculty Honorarium from the American Association of Anatomists.

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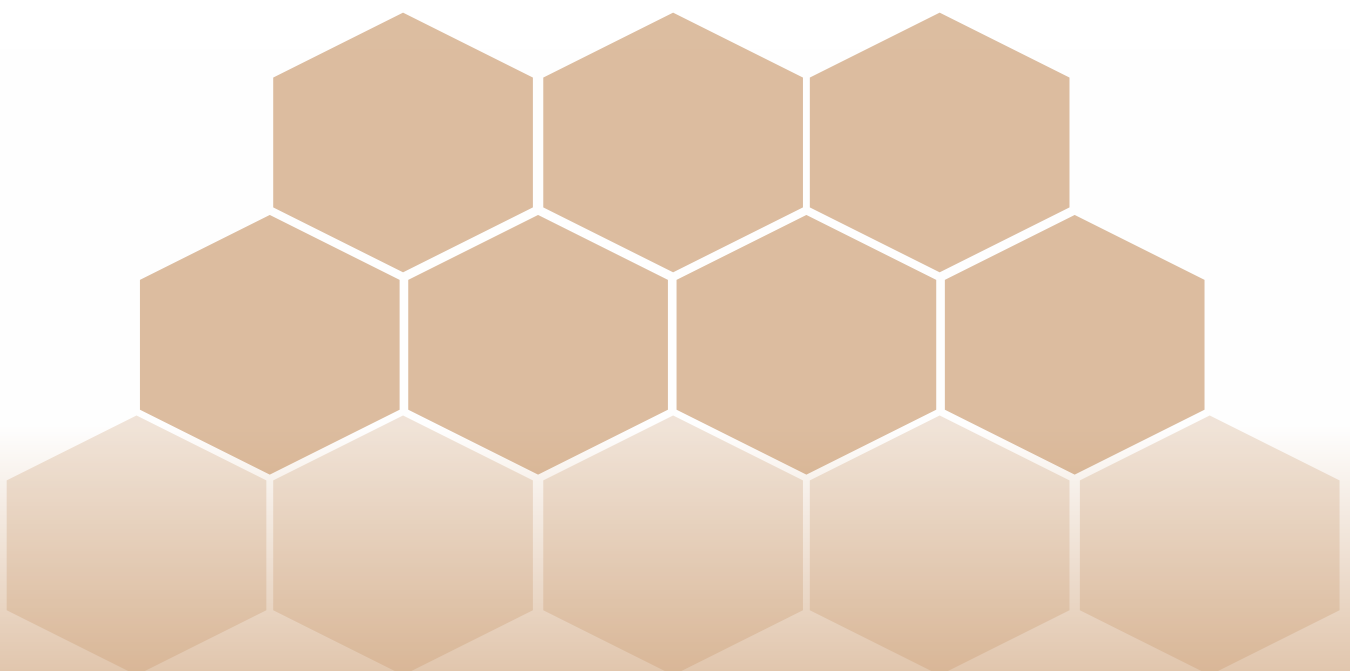
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Workshops (Day 1)



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Castellano Juan

La Coruna University, Spain

L.A.F method, a new approach in physiotherapy in the management of mechanical dysfunctions

Stability re-training targets both the local and global stability systems. Activation of the local stability system to increase muscle stiffness along with functional low-load integration in the neutral joint position controls segmental or articular give.

Global muscle retraining is required to correct multisegmental or myofascial dysfunction in terms of controlling the site and direction of load that relates to provocation.

"L.A.F method (Location, Analysis, Facilitation), a new approach in physiotherapy for the management of mechanical dysfunctions.

L.A.F solves dysfunctions with 3 steps (3 R System):

Rebalance by global active stretch

Reeducation by proprioceptive and corrective technics

Retraining by the right patterns of movement adapted to morphology and physical condition.

L.A.F applies precise forces through manual techniques and provides accuracy to the movement being very effective in the physical condition recovery phase, in re-education and training for a high spectrum of populations. "

L.A.F (Location, Analysis and Facilitation). Is a pedagogic protocol that intend to align the right steps for the management of mechanical dysfunctions using natural patterns of movement to analyze the reasons or causes of the loss of mobility or stability. Our pedagogic method solves dysfunctions with 3 steps (3 R System): (1) Rebalance by global active stretch, (2) Reeducation by proprioceptive and corrective technics, and (3) Retraining by the right patterns of movement adapted to morphology and physical condition.

The pedagogic protocol is based on palpating bone references to analyze what happens during the integrated movement and to know if there are lacks of stability or mobility in the arthrokinetic chain.

In the corrective phase, forces are applied to facilitate certain segmental patterns of movement with sufficient stability. This system has an application to the clinic to avoid irritating the soft tissues before past traumatic episodes.

Biography

Juan Castellano is an authority and leader of opinion in the prescription of exercise for health. He provide education to numerous institutions as Universities and hospitals, wellness centers and other health associations worldwide. He is a pioneer in the formal training of the prescription of exercise for health and Pilates method in physiotherapy in Spain. His programs have been accredited by professional colleges of physiotherapy, universities and by the National Continued Training department of the Ministry of Health. He begun his pre-doctoral program initiating clinical trials on diabetes type II in 2009. His research focused on the exercise and life style for promoting health, specifically the biological mechanisms. Nowadays, actually he is studying how the different type of exercises promote brain health and the effects of resistance and endurance exercise in partial autophagy deficiency in mice. His current project study the mechanisms of the exercise to promote health: circulating miRNA characterization and validation as epigenetic regulator of molecular response to exercise. (Start date: 01/01/2016; finish date: 31/12/2018)

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Martina Christine Steinboeck

Vivantes Humboldt Clinic, Germany

The use of combined treatment procedures during cervical dystonia

Dystonia is characterized by a colorful picture of symptoms. However, the different forms of manifestation, as well as their treatment possibilities, are not sufficiently known. Cervical dystonia is the most prevalent type of dystonia and many patients face a lifetime of chronic disability despite repetitive Botulinum neurotoxin A (BoNT) injections. A synergistic effect of individualized physiotherapy adapted to this disease and the injection of BoNT within outpatient and inpatient neurological rehabilitation is not sufficiently researched. In this workshop the individual therapeutic areas will be explained in the form of a short overview followed by a case study of a patient with torticollis. It is to assess if the results of the therapy show improvement within body functions and activities, as well as the Health related Quality of Life. From the obtained results from this case study, an improvement can be demonstrated after the combination of BoNT-injection and individualized therapy. It becomes clear that a good therapy success is possible only through the implementation of several different therapeutic procedures. This combination offers the patient an extended field of interventions to minimize their symptoms and improve their quality of life.

Biography

Martina Christine Steinboeck is currently working as a Physical Therapist in the neurological rehabilitation clinic Vivantes in Berlin, Germany, focused on state-of-the-art technology of gait rehabilitation and movement disorders.

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The stomatognathic system's role in postural and physical rehabilitation

Silverio Di Rocca

M.P.R International School, Switzerland

When dealing with chronic pain, the holistic approach in diagnosis and treatment is very important. We live in a time where super-specialization in medicine, leads professionals to be blind and unprepared in front of patients with problems that spread beyond their sectorized specialty. We seem to have forgotten that the human body is not made up of small sectors, but is one, indivisible whole. In the specific case of postural and physical rehabilitation, specialists are too often confronted with treatments that should work but somehow do not have lasting results, due to interferences from other parts of the body. In particular the stomatognathic system is a great disturber when a balanced mandibular position is lost. With the jaw being part of the muscle chains, through the hyoid system that connects it with the rest of the body, it is extremely important to have an understanding of this complex relation to obtain balanced and functional results, that are in harmony throughout the whole body.

Biography

Silverio Di Rocca has completed his graduation degree in Dentistry and post-graduation degree in Functional Orthopedics from University of Buenos Aires, Argentina. He has also received degree in Dentistry and Prosthetic at the University of Turin, Italy and Doctorate in Dentistry and Prosthetic at University of Turin, Italy. He is the Director of the MPR International School, Vice President International Representative and Founder of API Swiss (International Association of Posturology Switzerland). He is also a Professor in Amocoac Diplomate in Mexico and COMEI, College of Dentistry in Mexico, Associate Professor in ICOM (International College of Osteopathic Medicine) Milan, Italy and an International Honorary Member of AMOCOAC.

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Metabolic reason for bone and joint pain: A clinical and radiology differential diagnosis perspective for physiotherapists

Harish S Krishna

Malabar Medical College, India

The first line physiotherapy diagnosis is to identify/rule out reasons/conditions which mimics bone and joint pain (global differential diagnosis), e.g., hematological, oncology, metabolic, immunological, etc. once ruled out the next level of diagnosis is to identify the pain producing anatomical structures (anatomical differential diagnosis), then search for the possible causes for its dysfunction. Among the vast spectrum of global differential diagnosing conditions, metabolic reasons are common to be seen, confusing to identify. The clinical part of the talk covers the clinical tips which helps in diagnosing metabolic bone/joint pain by understanding in depth of its nature, type behavior, etc. and its comparison with mechanical pain. The radiology part will be dealing with spine and extremity changes as seen in X-ray and MRI in cold orthopedic conditions as well post-operative ones which as a physiotherapist have to look out for a safe and quality treatment. The end-note of the talk consists of the recent evidence based physiotherapy management for metabolic pain.

Biography

Harish S Krishna has completed Bachelor of Physiotherapy, Masters in Musculoskeletal and Sports Physiotherapy. Currently, he is pursuing PhD in the area of osteopathic manual therapy in chronic lung diseases. He has 13 research papers and his main field of interest in research is podiatry. He has designed a couple of exercising machines for the correction of foot abnormalities and is in the process of achieving patency. He is the Chairperson of ethical committee for NITTE institute of physical therapy under NITTE University, Review committee member for *Indian Journal of Physical Therapy*. He is the chief instructor of SHARP INSIGHT-a research center in Mangalore formed by physiotherapists, Orthopedicians, Radiologists, Mechanical and Electrical engineers. He is a consultant on ergonomics, corrective exercises to various MNCs.

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Educating patients and health care providers about how complete decongestive therapy (CDT) can help reduce the risk of developing severe lymphoedema

Erika Van Der Mescht and Erika Physio
Lymphoedema Association of South Africa

Lymphoedema is often overlooked as a manageable condition as it is not directly life-threatening or debilitation in the early stages. Or in many cases, it is wrongly diagnosed as merely a chronic edema. But chronic edema for 3 months or longer should be diagnosed as lymphoedema secondary to a specific cause: (1) Primary lymphoedema is rare and in many cases health care providers not referring for complete decongestive therapy is because of a lack of awareness about the possible treatment options. In the past 30 years, there has been a lot of research regarding lymphoedema management, of which all added to the development of complete decongestive therapy as the gold standard for lymphoedema treatment. (2) There has also been a randomized, single blinded, clinical trials' proving that lymphoedema risk reduction protocols are successful. (3) Surgical studies have been done recently mostly showing good promise in reducing limb volume, but most of these studies are done in combination with complete decongestive therapy before, during or after surgery is performed. (4) Some studies have investigated the negative effect of lymphoedema on quality of life. (5) And even if only that is the objective of lymphoedema management, education for early referral and interventions for lymphoedema is vitally important. There are early studies using near-infrared fluorescence imaging, proving a visible effect on contractile lymphatic function after doing manual lymph drainage to create anastomoses to non-affected areas and (6) even though this has been clinically seen for many years. The goal of the session is to emphasize the importance of educating health care providers to diagnosing primary and secondary lymphoedema in the early stages of the condition in order to prevent debilitating, deformed limbs, which has detrimental effects on a patient's health, work, social life and activities of daily living.

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Biography

Erika van der Mescht is a Physiotherapist (BPhysT) and certified Lymphoedema Therapist. She co-presents courses with the International Lymphoedema and Wound Care Institute and does various awareness talks about lymphoedema for BSN Medical. She also submits articles to be published in the local Physiotherapy magazine about lymphoedema on a monthly basis. Her expertise is in the field of lymphoedema diagnoses, management and education. She is passionate about reducing the risk of developing lymphoedema after trauma and educating patients and health care providers about warning signs and symptoms of what can become a very debilitating condition.

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Aquatic physiotherapeutic intervention on the balance of healthy elderly

Maria de Lourdes Oliveira Vilela Garcia
International Halliwick Association, Brazil

This presentation deals with the fear of falling, which often afflicts the elderly and is related to the reduced functioning of their balance (the visual, vestibular, somatic and sensitive systems). These systems can be influenced by specific aquatic physiotherapeutic methods and can also benefit from immersion. This study aims to identify scientific works which prove the effects of aquatic physiotherapy in improving balance in healthy older people. It concludes that certain methods of aquatic physiotherapy, when adequately applied, are important in promoting a satisfactory response in these people's balance.

Biography

Maria de Lourdes Oliveira Vilela Garcia has graduated in Physiotherapy and is a Specialist in Aquatic Physiotherapy. She has received her Post-graduate in Aquatic Physiotherapy in Vallens-Switzerland and another Post graduation in Physiotherapy Applied in Neurology in Goiania, Brazil. She is a Member of IHA Executive Committee and International Instructor of the Halliwick Concept and Bad Ragaz Ring Method. She has also written an article on aquatic physiotherapeutic intervention on the balance of healthy elderly. Presently, she has been working in the area of aquatic physiotherapy, on rehabilitation and habilitation of neurological, orthopedic, rheumatologic, geriatric and cardiopulmonary patients.

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Multidisciplinary intervention for a child with hearing loss and vestibular concerns

Kern Rebello and Samir Dalwai

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Introduction: Children with congenital hearing loss have speech and language impairments. Profound hearing loss leads to vestibular dysfunction, which results in balance and co-ordination deficits. Thus, the child has difficulties in acquiring gross motor skills, which in turn limit her interaction with the outside world and acquisition of academic and life skills. We have documented the comprehensive evaluation of a child with hearing loss and vestibular concerns, under various disciplines within the same clinical setting and the successive interventions that the child received.

Case Report: A 12 year old girl with speech and hearing concerns was evaluated at a multidisciplinary child development center. MRI-cochlea and auditory evaluation indicated Mondini dysplasia with moderate to profound hearing loss in the left and right ear respectively. Developmental evaluations revealed balance and co-ordination deficits; gross and fine motor delay and sensory concerns. Academic evaluation indicated difficulties in reading, spelling, writing and comprehension. Psychological evaluation indicated moderate sub-normality in social and intellectual functioning, associated with behavioral concerns.

Intervention: Multidisciplinary intervention was implemented over 18 months. Hearing aids enabled the child to express her needs using single words and improve receptive and expressive vocabulary. Physiotherapy and occupational therapy improved depth perception, balance and attention span. Pre-academic skills improved significantly (e.g., shape, color and number recognition; phonemic awareness). Parental counseling and behavior modification techniques reduced tantrums and stubborn behavior.

Conclusion: Multidisciplinary intervention is incumbent for optimally reducing vestibular concerns associated with hearing loss. Functional improvement across multiple developmental domains is essential to improve quality of life.

Biography

Kern Rebello has completed Bachelors in Physiotherapy from Father Muller Medical College at Mangalore, India and Post-graduation in Health and Rehabilitation Sciences from University of Pittsburgh, USA.

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The occurrence Of Osteoarthritis among the cases presented at Habib Physiotherapy complex Peshawar

Mahboob ur Rahman

Pakistan Physiotherapy Association, Pakistan

Background & Aim: Physiotherapy is multi-dimensional and can treat a vast variety of conditions, ranging from musculoskeletal aches, arthritis, joints problems, paraplegia, hemiplegic, sports injuries and frozen shoulder, etc. apart from culture competency and core medical knowledge a physiotherapist must competent enough in all a physiotherapist medical condition where physical therapy play vital role, this study aims to identify the frequency of common clinical condition among client presented at Habib Physiotherapy Complex (HPC), Hayatabad in 2010.

Methodology: This was descriptive study; the data were retrieved from record register of HPC (Indoor and Outdoor patients) recording their presenting complains and known diagnoses. Data was collected on structure grid. Data was analyzed using SPSS version 15 and presented in term of frequency and percentages.

Result: Majority of clients, 1280 (29%) were suffering from low back pain, the second common condition, 891 (20%) was osteoarthritis of knee joint and cerebrovascular accidents 824 (18.4%), while cervical pain account 734 (16.4%). Rest of clinical conditions included frozen shoulder, pelvic inflammation, cerebral palsy, polio affected and paraplegia.

Conclusion: The study reveals the occurrence of osteoarthritis (low back, cervical pain and knee joints pain) were the most common condition which deteriorated the performance of common individuals in our society.

Biography

Mahboob ur Rahman is the Founder and Chairman of Habib Physiotherapy Complex, graduated in Physiotherapy from Karachi University, Pakistan. He is also the Founder of Mahboob School of Physiotherapy and was awarded with recommendation by Government of Pakistan by Quaid-e-Azam Gold Medal and King Abdullah Gold Medal. He has also been Member of Pakistan Bait ul Mal Khyber Pakhtunkhawa Province. Currently, he is also elected as the Chairman, Board of Directors and Pakistan Physiotherapy Association. His book Chest Physio for the War Wounded has been published by National Book Foundation, Islamabad.

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Gait parameters across three attentional loading conditions during timed up and go test: A comparative study between age-matched healthy individuals and stroke survivors**Harsh Agarwal**

Indian Association of Physiotherapist, India

BACKGROUND: The benefits of this study is that it may improve motor functions along with cognition and activity limitation which occurs with ageing. The results of the study can be used judiciously, in the management of motor function of old adults as well as stroke survivors.

PURPOSE: To determine the effects of attentional loading conditions Timed Up and Go Test on Gait Parameters in age-matched healthy older adults and stroke patients.

METHODS: A sample of 30 subjects was recruited and randomly assigned into 2 groups- Group1-experimental group including stroke survivors and Group 2-control group including age-matched healthy individuals . Both groups received attention demanding task (Single task condition,Dual motor task condition and Dual cognitive task condition) along with Timed Up and Go Test.

RESULTS: Repeated measures analysis of variance(ANOVA) was used to analyze gait parameters across 3 attentional loading conditions(single,dual-motor,and dualcognitive task condition) between groups.A post hoc Bonferroni comparison was performed when the repeated measure ANOVA test revealed a significant difference($P<0.05$).TUG TIME comparison between group 1 and group 2 showing MEAN \pm SD of TUGS,TUGDT and TUGCB as 17.21 \pm 1.31 and 13.74 \pm 3.72, 18.52 \pm 1.40 and 13.68 \pm 0.91, 18.52 \pm 1.40 and 15.74 \pm 2.03 respectively. On comparison of Mean TUGS of group 1 and group 2 , 't' value was 3.40 and 'p' value was 0.002. Hence there was significant difference in Mean TUGS between group 1 and group 2. On comparison of Mean TUGDT of group 1 and group 2 , 't' value was 11.14 and 'p' value was 0.001. Hence there was significant difference in Mean TUGDT between group 1 and group 2.On comparison of Mean TUGCB of group 1 and group 2 , 't' value was 4.34 and 'p' value was 0.001. Hence there was significant difference in Mean TUGCB between group 1 and group 2. NUMBER OF STEPS comparison between group 1 and group 2 showing MEAN \pm SD of NSS,NSDT and NSCB as 15.26 \pm 1.94 and 13.33 \pm 1.44 , 15.26 \pm 1.94 and 14.00 \pm 1.36 ,15.86 \pm 1.76and 14.86 \pm 1.72 respectively.On comparison of Mean NSS of group 1 and group 2 , 't' value was 3.08 and 'p' value was 0.005. Hence there was significant difference in Mean NSS between group 1 and group 2. On comparison of Mean NSDT of group 1 and group 2 , 't' value was 2.066 and 'p' value was 0.048. Hence there was significant difference in Mean NSDT between group 1 and group 2.On comparison of Mean NSCB of group 1 and group 2 , 't' value was 1.56 and 'p' value was 0.128. Hence there was no significant difference in Mean NSCB between group 1 and group 2. WALKING VELOCITY comparison between group 1 and group 2 showing MEAN \pm SD of WVS, WVDT and WVCB as 35.13 \pm 2.55 and 49.40 \pm 5.56, 33.53 \pm 2.13 and 43.93 \pm 2.78, 32.53 \pm 2.26 and 38.53 \pm 4.71 respectively.On comparison of Mean WVS of group 1 and group 2 , 't' value was 9.02 and 'p' value was 0.001. Hence there was significant difference in Mean WVS between group 1 and group 2. On comparison of Mean WVDT of group 1 and group 2 , 't' value was 11.46 and 'p' value was 0.001. Hence there was significant difference in Mean WVDT between group 1 and group 2.On comparison of Mean WVCB of group 1 and group 2 , 't' value was 4.44 and 'p' value was 0.001. Hence there was no significant difference in Mean WVCB between group 1 and group 2.

CONCLUSION: In this study, we accept that there is significant difference in gait parameter during Timed Up and Go Test across three attentional loading conditions between age-matched healthy individuals and stroke patients.

Biography

Harsh Agrawal has completed his Bachelors in Physiotherapy from Institute of Technology and Science in year 2012 and Masters in Neurology from the same institute in year 2014. He has a work experience with renowned Multispeciality NABH accredited Hospitals of India like Apollo Hospital, Delhi and Medanta Hospital, Gurgaon. He is a certified Manual Therapist and has done full time course from Indian Academy of Fitness Training. Presently he is working as a Senior Consultant at Portea Medical and Healers at Home and is a life time Member of IAP, MTFI and IAFT.

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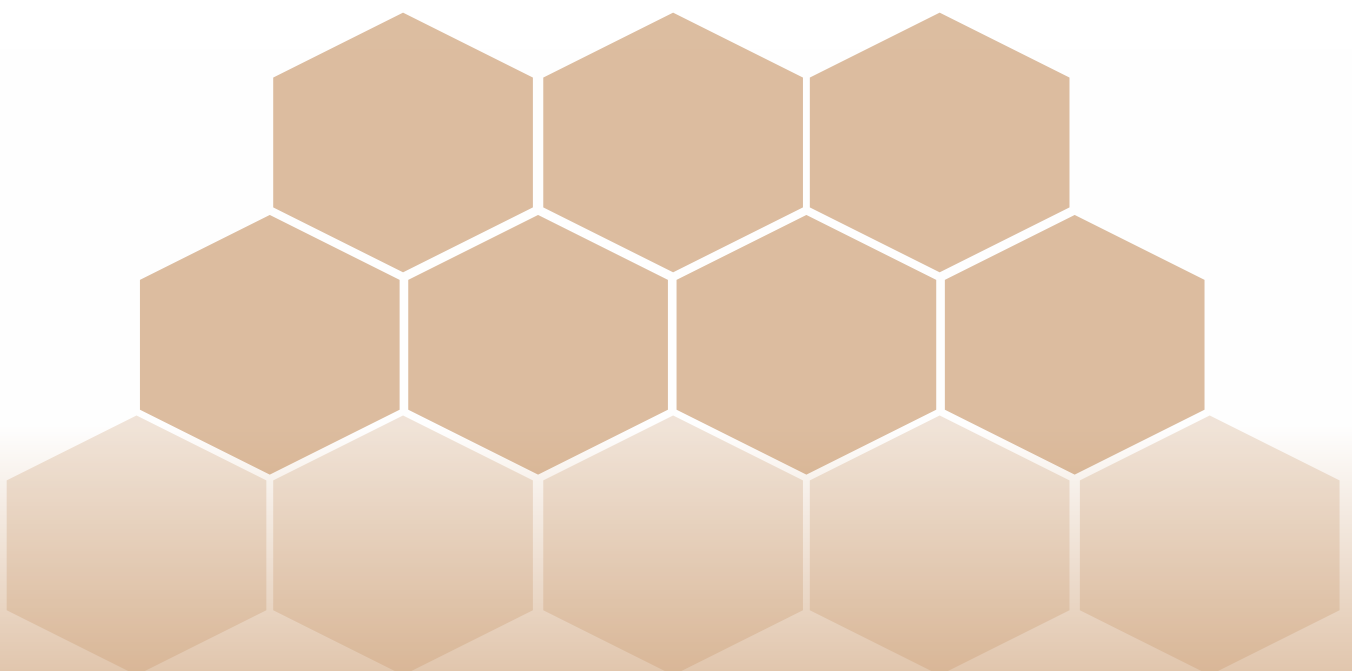
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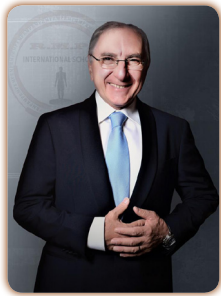
Workshop (Day 2)



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PHYSIOTHERAPY

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Silverio Di Rocca

M.P.R International School, Switzerland

Body equilibrium device: Preventing the stomatognathic system from interfering with rehabilitation

It is well known that when the stomatognathic system is not in balance with the rest of the body, it interferes continuously with the static posture. This is actually the reason why most rehabilitation therapies' results do not have lasting effects, ending up in what we all know as back-treatment. Therapists that work in the field of rehabilitation (physiotherapists, osteopaths, chiropractors, etc.) find themselves confronted with this problem day after day and often cannot reach conclusive lasting results. In the specific cases where the masticatory system hinders therapy, it is essential to counteract its negative effect. This is where B.E.D. (Body Equilibrium Device) comes into play. It is an oral device specifically designed to override the negative effect of the masticatory system on the static posture of the body. B.E.D. is a unique heat moldable, night-time use device that can be easily individualized by rehabilitation therapists themselves, according to the needs of each patient and is used to achieve an optimal and lasting global equilibrium. It is the only oral device, designed specifically for rehabilitation therapists, that allows obtaining definitive results that last over time, by allowing therapists to rebalance the muscle chains without negative interferences, reducing muscle tension and restoring neuromuscular balance.

Biography

Silverio Di Rocca has completed his graduation degree in Dentistry and post-graduation degree in Functional Orthopedics from University of Buenos Aires, Argentina. He has also received degree in Dentistry and Prosthetic at the University of Turin, Italy and Doctorate in Dentistry and Prosthetic at University of Turin, Italy. He is the Director of the MPR International School, Vice President International Representative and Founder of API Swiss (International Association of Posturology Switzerland). He is also a Professor in Amocoac Diplomate in Mexico and COMEI, College of Dentistry in Mexico, Associate Professor in ICOM (International College of Osteopathic Medicine) Milan, Italy and an International Honorary Member of AMOCOAC.

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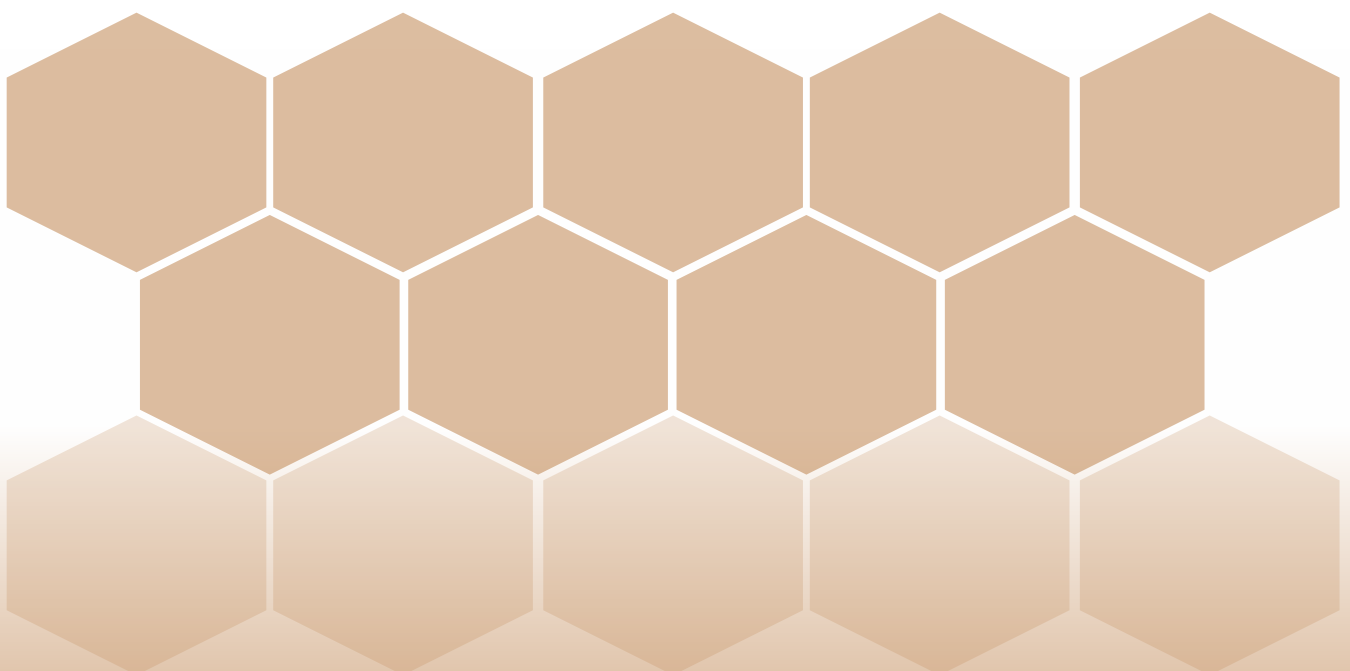
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Scientific Tracks & Abstracts (Day 2)



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Implementation of early rehabilitation programs for patients after traumatic brain injury in acute careTomanova M¹ and Lippert-Gruner M²¹ Rehabilitation Institute Brandys nad Orlicí, Czech Republic² Charles University, Czech Republic

Introduction: The incidence of brain injury is high and result often in severe neurological impairment and functional disability with associated and sometimes catastrophic socio-economic consequences. Rehabilitation medicine is now challenged by patients who survive with severe complex deficits (sensorimotor, disorders of consciousness and neurocognitive as well as neurobehavioral) confirmed the importance of immediate rehabilitation following the injury and the importance of a rehabilitation continuum of care. Early rehabilitation programs can be implemented not only in rehabilitation hospitals, but also in acute care. Especially physio-therapeutical early mobilization including bed cycling and other specialized therapy options is one of the main points in the therapy program.

Aim: The aim of the study is to show the implementation of early rehabilitation programs for patients after traumatic brain injury in acute care and to evaluate the outcome after 12 and 24 months.

Methods & Subjects: A total of 51 survivors (age 33.8, range 16-64 years, m:f=4 :1) of severe brain injury (GCS<8 for at least 24 hours) underwent a multidisciplinary early rehabilitation program. Duration of rehabilitation program was at mean 18.4 (4-78) days adapted to the individual capability for 3-4 hours/day, until they were discharged from hospital. The follow-up examination took place 12 and 24 months after the STBI.

Results: Data revealed a high level of independence in activities of daily living (mean Barthel Index after one year 92.7 points, after two years 93.7 points). After one and two years, 74.5% and 80.4% of the patients, respectively, were completely independent of need for care. Nevertheless, more than half of the patients had sensorimotor, behavioral, speech, visual and/or auditory disturbances. Return to work rates improved between one and two years after trauma, as evidenced by the rate of patients being back to full time work at one year (n=14, 28%) and two years (n=20, 40%) post-STBI. Return to work rates improved between one and two years after trauma, as evidenced by the rate of patients being back to full time work at one year (n=14, 28%) and two years (n=20, 40%) post-STBI; although, none of these changes reached statistical significance.

Discussion & Conclusion: In summary the successful implementation of early rehabilitation programs for patients after traumatic brain injury in acute care is possible. Focused on outcome, the data revealed a high level of independence in activities of daily living. There are still changes in both impairment and disability related areas between one and two years post-STBI, but the degree of improvement is variable depending on the area being considered. Clinicians should remain aware of the fact that modulation of impairment and disability appear to continue well beyond one year post-STBI which may impact on decisions regarding the provision and intensity of further rehabilitation efforts.

Biography

Michaela Tomanová is the Consultant, Coach, NLP Master Practitioner at Institut de Touraine.

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Long-term outcome after ultrasound therapy for calcific tendinitis of the shoulder: Results of the 10 years' follow-up of an RCT**Gerold Ebenbichler¹, Karin Pieber¹, Martina Grimm-Stieger⁴, Franz Kainberger¹, Martin Funovics¹, Karl-4 Ludwig², Thomas Bochsansky³ and Eleonore Pablik¹**¹Medical University of Vienna, Austria²Gesundheitsforschungsinstitut, Bad Elster, Germany³VAMED, Austria⁴Wilhelminen Hospital, Vienna

Objective: To follow both the structure and function related 10 years' outcome of shoulders that had been treated with therapeutic ultrasound (US) for symptomatic calcific tendinitis; to identify predictors for an unimpaired shoulder function.

Method: Long-term follow-up of 45 shoulders (37 patients) that had been treated for symptomatic calcific tendinitis with either a series of US or sham US 10 years ago. The main outcome variables were presence of calcium deposits and subacromial impingement on standardized X-ray imaging, shoulder symptoms (Binder score) and function (Constant score).

Results: At 10 years, a similar proportion of calcium deposits had resolved in 78% of the originally US treated compared with 83% of sham treated shoulders, whereas at nine months significantly more calcium deposits had been resolved in the US group ($p=0.045$). Shoulder symptoms and function had significantly improved at both nine months' and 10 years' follow-up examinations with no significant differences between groups. No variables were found to be of prognostic value to predict a favorable long-term outcome.

Conclusion: Symptomatic calcific tendinitis of the shoulder has a good likelihood to completely resolve in the long-term. Treating the calcium deposit effectively, however, may not be causal to the recovery from symptoms and function in calcific tendinitis.

Biography

Gerold Ebenbichler is a Research Associate Professor and Senior Clinical Specialist at the University Department of Physical Medicine, Rehabilitation and Occupational Medicine, Vienna Medical University and General Hospital of Vienna, Austria. He has received his MD from the University of Innsbruck in 1991 and performed his Doctoral Thesis at the University Department of Neurology (1998-1991), University of Vienna. After the completion of his residency, he spent a research fellowship awarded by the Austrian Science Foundation at the Neuro-Muscular Research Center, Boston University in 1999 and 2000. Thereafter he was appointed as a clinical specialist at the rehabilitation hospital Weisser Hof in 2001. His research focuses on the rehabilitation related physiology and pathophysiology of neuromuscular functioning and health as well as the evaluation of treatment effects of physical medical and rehabilitative interventions. He is a peer reviewer for several major biomedical journals related to Physical and Rehabilitation Medicine. He serves as an associate editor to the Journal of Neuro-engineering and Rehabilitation and as an editorial board member to the American Journal of Physical Medicine and Rehabilitation. He is also the section editor for continuous medical education to the Journal of Physical and Rehabilitation Medicine.

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The effectiveness of early physiotherapy intervention on infant’s motor performance: Comparison between inpatient and outpatient settings

Areej Al-Abdulrahman and Khalid Al-Hathlol
National Guard Health Affairs, KSA

Aim of Study: To compare the effectiveness of, early physiotherapy intervention (EPI) program between following in-patient since admission neonatal intensive care unit (NICU), intermediate care nursery (ICN) until post hospital discharge. Moreover, between patients referred as out-patient under the age of 18 months old to the early physiotherapy intervention outpatient clinic.

Methodology: A cross sectional retrospective study at Ministry of National Guard Health Affairs Hospitals in Riyadh. All the study data extracted from electronic medical chart system. Outcome measures are GMFCS and GMFM 66/88 used twice during the study duration from Feb 2016 to Feb 2017. 38 subjects included and two excluded. Age range from 1-18 month was all included subjects were followed by same pediatric physiotherapists during in-patient stay or at out-patient clinic.

Interventions: Neurodevelopmental therapy (NDT), osteopathic techniques and patient- family centered care.

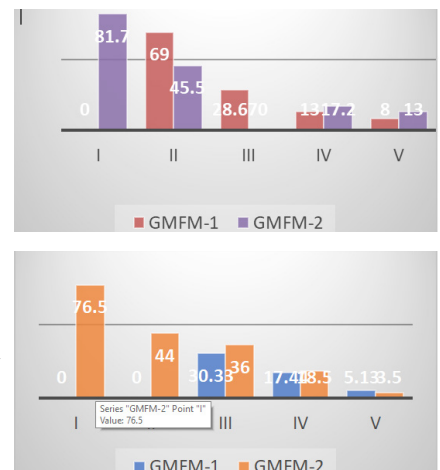
Results: The in-patient group GMFCS and the GMFM mean scores showed improvement from the first assessment (GMFM-1) were nine patients with GMFCS IV and 8 with V level and their average score (17.44 and 5.13). Moreover, on the second evaluation (GMFM-2) 8 patients with GMFCS IV and only 2 with level V and their average score (18.5 and 3.5). The out-patient group also showed improvement in the mean score of (GMFM-1) 6 patients were GMFCS III and nine patient with GMFCS IV with an average score (28.67 and 13) But (GMFM-2) 5 patients with GMFCS IV and one patient with GMFCS V and their average score (17.2 and 13).

Conclusion: The early physiotherapy intervention program is very effective on infants’ motor performance until the age of 18 months old if initiated at an early age from 1-4 months of age. Recommendations in-patient and out-patient both benefit from EPI program if started from 1-4 months age.

Biography

Areej Al-Abdulrahman a Pediatric Physiotherapist with 16 years’ experience in pediatric and neonatology. She is sub-specialized in Neonatal and early intervention program. She is working in King Abdul-Aziz Medical City and King Abdullah Specialized Children’s Hospital in Riyadh. She has received a Master’s Degree in Clinical Research Administration, Liverpool University, UK, 2013. She has received Bachelor’s Degree from King Saud University, SA, Riyadh.

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Neuroplasticity and upper extremity motor recovery after stroke

Ibrahim Ali Almoghassil
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Stroke is a leading cause of disability. There are common motor impairments after stroke such as hemiparesis in the upper extremity contralateral to the affected hemisphere. Many stroke patients may suffer long term upper limb motor deficits. This decrease in hand dexterity could negatively affect the performance of daily activities that need skilled upper limb use such as grasping force control and coordination as well as appropriate fine motor skills. Participation, satisfaction and activity of stroke patients decline and difficulty in using the paretic hand in daily tasks and functional limitation have been associated with decrease in participation and quality of life. Thus, improving the affected hand function of chronic stroke patients is vitally important. It has been reported that there is functional re-organization after stroke and that such cortical plasticity might be correlated with upper limb motor recovery. Understanding the neurophysiological changes after stroke and how these changes are associated with hand motor recovery as well as how to promote such plastic changes would assist in developing effective therapeutic interventions that are based on neurophysiological evidence in order to resolve upper limb motor impairments in stroke patients. During the last two decades, the significant progress in neuroscience has led to novel concepts for rehabilitation interventions post stroke. The constraint-induced movement therapy (CIMT) has been shown to improve function and amount of use of the paretic hand of chronic stroke patients and is thought to induce cortical plasticity. The aim of the speech is to demonstrate and discuss the role of cortical re-organization (plasticity) in motor recovery of the paretic upper extremity of chronic stroke patients as well as the efficacy of CIMT in improving upper extremity motor function of chronic stroke patients and its potential underlying mechanism. It also shows the potential cellular mechanisms that underlie neural plasticity.

Biography

Ibrahim Ali Almoghassil has attained his Master's degree in Health Practice in Rehabilitation from Auckland University of Technology, New Zealand, after completing his Postgraduate Diploma in Health Science from AUT University. He has worked as an Assistant to the Director of Rehabilitation Department in Directorate of Health Affairs, Saudi Arabia and as Physiotherapy Department Head under Ministry of Health. He is presently the Director of Takamol Alelaj Medical Center, a well acclaimed clinic noted for its systematic and standardized rehabilitation services in Qatif, KSA.

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Repetitive McKenzie spinal extension exercises on cardiovascular responses in class I obese subjects

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Pioneer College of Physiotherapy, India

Introduction & Aim: Obese population is dramatically increasing worldwide. There is a strong association between obesity and low back pain. The 1 month prevalence of low back pain ranges from 30% to 40% in the general population. McKenzie method is commonly used in the diagnosis management of patients with back pain. The objective of the study is to examine the cardiovascular responses of two common exercises namely, extension in lying (EIL) and extension in standing (EIS) used in the McKenzie system with different repetitions among class I obese subjects.

Methods: 50 Class I obese subjects (25 males and 25 females) were randomly selected with in the age range of 20-40 years. Base line measurement of resting heart rate (HR), blood pressure (BP) and rate pressure products (RPP) were taken before and after exercises. Multiple comparisons were done to analyze the significance within groups. One way analysis of variance for repeated measures was used to compare the dependent values obtained at rest and after 10, 15 and 20 repetitions. Independent "t" test was used to determine the significance between two groups.

Results: No significant difference ($p > 0.05$) were found in SBP and DBP after 10 repetitions in group 1 and SBP after 10 and 15 repetitions in group 2. There was a significant difference ($p > 0.05$) in RPP after 15 and 20 repetitions within and between the groups.

Conclusion: Increase repetitions of spinal extension exercises in prone lying bring more cardiovascular stress when compared to the same performed in the standing position among Class I obese subjects.

Biography

H Bala Jeya Perumal has completed his MPT in Cardio Thoracic from Vinayaka Mission University. He is the principal of pioneer college of physiotherapy for the past 7 years. He has published more than 5 papers in reputed journals. He was also got the award for best teacher 2011 by FPT Tamil Nadu branch.

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Effects of model of exercise on type-2 diabetes progression

Sub Title:- Exercise is the new pill for the prevention and treatment of chronic diseases

Castellano Juan¹, Goyanes S², Ibabe A², Baute D³, Prieto H³, Diaz-Martinez E⁴, Ubeda N⁵, de Gonzalo-Calvo D⁶, Tomas-Zapico C⁷, Iglesias-Gutierrez E⁷ and Fernandez-Garcia B⁷

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Stroke is a leading cause of disability. There are common motor impairments after stroke such as hemiparesis in the upper extremity contralateral to the affected hemisphere. Many stroke patients may suffer long term upper limb motor deficits. This decrease in hand dexterity could negatively affect the performance of daily activities that need skilled upper limb use such as grasping force control and coordination as well as appropriate fine motor skills. Participation, satisfaction and activity of stroke patients decline and difficulty in using the paretic hand in daily tasks and functional limitation have been associated with decrease in participation and quality of life. Thus, improving the affected hand function of chronic stroke patients is vitally important. It has been reported that there is functional re-organization after stroke and that such cortical plasticity might be correlated with upper limb motor recovery. Understanding the neurophysiological changes after stroke and how these changes are associated with hand motor recovery as well as how to promote such plastic changes would assist in developing effective therapeutic interventions that are based on neurophysiological evidence in order to resolve upper limb motor impairments in stroke patients. During the last two decades, the significant progress in neuroscience has led to novel concepts for rehabilitation interventions post stroke. The constraint-induced movement therapy (CIMT) has been shown to improve function and amount of use of the paretic hand of chronic stroke patients and is thought to induce cortical plasticity. The aim of the speech is to demonstrate and discuss the role of cortical re-organization (plasticity) in motor recovery of the paretic upper extremity of chronic stroke patients as well as the efficacy of CIMT in improving upper extremity motor function of chronic stroke patients and its potential underlying mechanism. It also shows the potential cellular mechanisms that underlie neural plasticity.

| | Control N=12 | Resistance N=10 | Aerobic N=9 | Pilates N=11 |
|--|-----------------|--------------------|----------------|-----------------|
| Body composition | | | | |
| Weight | Ns | Ns p=0.06 | Ns | Ns |
| Abdominal perimeter | Ns | Ns p=0.06 | ↓* | Ns |
| % body fat | Ns | Ns | ↓* | Ns |
| Metabolic markers | | | | |
| Glucose | Ns | ↓* | ↓* | Ns |
| Insulin | Ns | Ns | Ns | Ns |
| HOMA | Ns | Ns | Ns | Ns |
| HbA1c | Ns | Ns | Ns | Ns |
| Circulating markers of endothelial function | | | | |
| Hcy | ↑* | Ns | Ns | Ns ↑ p=0.06 |
| NO | Ns | ↓* | Ns | ↓* |
| VCAM | Ns | Ns | Ns | Ns ↓ p=0.06 |
| ICAM | Ns | Ns | Ns | ↓* |
| VEFG | Ns | Ns | Ns | Ns |

Sub Title:- Exercise is the new pill for the prevention and treatment of chronic diseases

Physical activity represents a cornerstone in the primary prevention of at least 35 chronic diseases. Today exercise has a role as therapy in diseases that do not manifest mainly as disorders of the locomotors system. In physiotherapy it is relevant to train professionals who know how to prescribe exercise effectively based on the theoretical-practical knowledge of the biological bases. Evidence suggests that in certain cases exercise therapy is as effective as medical treatment and in special situations more effective or increases its effect. The accumulated knowledge is now so broad that it has to be implemented. Although there is still a need to define the optimal type and dose of exercise, explore whether high-intensity interval training as well as low intensity and long-term training or other newer exercise modalities will have a place for specific populations. Health systems should create the necessary infrastructure to ensure that supervised exercise can be prescribed as a fundamental part of treatment. Physiotherapists should promote a physical active lifestyle. It is necessary educators who know how to evaluate globally to each individual the morphological type and the factors of risk not modifiable as those that if can be modified as the diet and the exercise.

Biography

Juan Castellano is an authority and leader of opinion in the prescription of exercise for health. He provide education to numerous institutions as Universities and hospitals, wellness centers and other health associations worldwide. He is a pioneer in the formal training of the prescription of exercise for health and Pilates method in physiotherapy in Spain. His programs have been accredited by professional colleges of physiotherapy, universities and by the National Continued Training department of the Ministry of Health. He begun his pre-doctoral program initiating clinical trials on diabetes type II in 2009. His research focused on the exercise and life style for promoting health, specifically the biological mechanisms. Nowadays, actually he is studying how the different type of exercises promote brain health and the effects of resistance and endurance exercise in partial autophagy deficiency in mice. His current project study the mechanisms of the exercise to promote health: circulating miRNA characterization and validation as epigenetic regulator of molecular response to exercise. (Start date: 01/01/2016; finish date: 31/12/2018)

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What is the role of physiotherapy in cancer recovery?**Dibyendu Roy**

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When someone is undergoing cancer treatment, Physiotherapy may not be the first healthcare field that comes to mind. Cancer treatment is done with Oncologist, Oncosurgeon, Radiation Oncologist and Stoma Therapist. However, People who are suffering from cancer should also consider the role of physical therapy in their cancer recovery. Cancer treatment is a grueling course, leaving many people exhausted, weak and with a compromised immune system. Just getting out of bed can be a huge and daunting task, let alone exercising or playing at the park with grandchildren. This is where a physical therapist comes in. Despite advances in medical treatments, individuals that receive cancer treatments typically experience extensive physical limitations during and after treatments. These limitations include and are not limited to cancer-related fatigue (CRF), pain, nerve damage, lymphedema, deconditioning, as well as incontinence. There is strong evidence to support conservative management of these impairments through physical therapy. As each individual experiences different impairments during and after cancer treatment, it is important to have an individualized evaluation to focus your rehabilitation. Physical therapy can address common cancer related impairments including:

Lymphedema: Effective lymphedema management is accomplished through manual lymph drainage, range of motion exercises, Multi layered lymphatic bandaging.

Restricted Joint Range of motion: After Cancer Surgeries people have the joint restrictions. After Mastectomy Shoulder flexion and abduction get restricted. After Lipo Oral Surgeries Neck Shoulder Range of Motion get restricted. Active Range of Motion exercises, passive stretching, resistive exercises help to recover

Trismus: After Lipo Oral Surgeries TM Joint ROM gets restricted. Mouth Opening limited to 1-2 inches. Active Exercises like Protraction and Retraction of TM Joint and Latetal to Medial movement of Jaw helps to improve.

Pain: There are many pain relief strategies that can reduce the intensity and frequency of pain after cancer treatment. Specifically, treatment strategies including soft tissue mobilization, Manual Lymphatic Drainage, modalities like Transcutaneous Electrical Nerve Stimulator, Cold Laser, therapeutic stretching and strengthening help to reduce the Pain

Deviation of Mouth: After Oral Cancer Surgeries like CA Buccal Mucosa, Lower Alveolus, Tongue, Chick face gets deviated and tongue movements restricted. Oro facial exercises help to recover this problem. Along with this active exercises Kinesio Taping helps to improve the symptoms quickly.

Cancer Related Fatigue: Individualized strength training and functional management training is known to reduce effects of cancer related fatigue both during and after medical cancer treatments.

Peripheral neuropathy: Often times, cancer survivors experience peripheral neuropathy, which is abnormal nerve function that can be experienced as pain, numbness and tingling. Physical therapy can help to improve nerve function or compensate

Genitourinary complications: For men undergoing treatment for prostate cancer and women undergoing treatment for bladder or ovarian cancer, incontinence and sexual dysfunction are common. A skilled physical therapist can help to rebuild the strength of the pelvic floor in order to improve urinary continence and reduce pain After Cancer Surgeries and the Course or Chemotherapy and Radiation if people avail Cancer Rehabilitation program they can have a healthy and quality life. Its never too late to start the treatment.

Biography

Dibyendu Roy started his Physiotherapy Career in the year of 2010 at Calcutta Medical Research Institute, India. In the year 2015 he did the Cancer Rehabilitation and Lymphoedema Management Study from Tata Memorial Hospital, Mumbai, India and for advanced Study moved to Lymphoedema Training Academy, UK under Jane Wigg. He gained experience in Wolverhampton Lymphoedema Service and Hadenham Health Care (UK) He set Up his own Cancer Rehabilitation Clinic in India, named Corel. Now he is engaged with several Cancer Rehabilitation program in various Institutions and Hospitals

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Management with cortico-subcortical neuronal bypass: A future approach

Nandu Chhabria

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It is a great occasion where all of us are interested in research specially changing the methodology for future evaluations and treatment. More so important in the presence of physicians and other faculties. Research purely to reduce our handicaps in management and encourage better results in a shorter time compared to our routine treatments. We are so used to accept the thought process of cardiac bypass but none yet have thought of neuronal bypass. Your contribution to this approach after being understood will definitely add a great deal to the science of physical therapeutics. This theory of CSR will be well presented during the conference. The problem need not be where the pain or the complaint is but for the cause and symptom to be redirected to the neuronal bypass. Treatment should be focused on cause and not the effect as the lifestyle of the individual leads to human disorder. Lifestyle definitely involves the fascia which is from head to toe thus causing pain at many sites rather than only at a lesion.

Biography

Nandu Chhabria is an Ex-Lecturer of All India Institute of Physical Medicine and Rehabilitation, Mumbai, was the Director of Rehabilitation Science at Sir HN Hospital and presently, works for CSR Therapeutics Private Clinic, India.

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Notes:

5th International Conference on

PHYSIOTHERAPY

November 27-29, 2017 Dubai, UAE

Motor imagery for gait and balance rehabilitation in post stroke hemiparesis

Aparna Gupta
SGT University, India

Researchers have been exploring the brain structures involved in motor imagery for over two decades. Understanding brain plasticity after stroke is important in developing rehab strategies. MI is a cognitive process in which a subject imagines that he/she performs a movement without actually performing the movement and without ever tensing the muscles. MI involves activation of neural system while a person imagines performing a task or body. A plethora of neuroimaging studies have demonstrated that the cortical and subcortical regions activated during MI tasks substantially overlap with those involved in movement execution. Generally portions of cerebral cortex considered to be involved with motor control include the primary motor cortex (M1), supplementary motor area (SMA) and pre motor cortex (PMC). MI induced brain activity typically involves premotor, SMAs and PMCs. Objective was to evaluate effect of MI on gait and balance in stroke patients and the design was RCT. A total of 30 patients with gait and balance dysfunction after first ever stroke were randomly allocated to a motor imagery training group and a conventional group. MI group relieved 5 days each in 3 weeks mental practice followed by conventional therapy and control group relieved 5 days each in 3 weeks only conventional therapy/exercises. MI group was shown a video showing normal movements before each session. Each week had a separate video comprising normal movements. Patients viewed and imagined the same. Videos were shown and repeated to help patients imagine the right and specific movements influencing their gait and balance. Motor imagery was evaluated based on questionnaire KVIQ and gait and balance were assessed based on tinetti performance oriented mobility assessment scale. MI was found significantly useful improving gait and balance in post stroke hemiparetic population.

Biography

Aparna Gupta is a dedicated PT with over 9 years of acute care experience with history of exemplary ratings on performance reviews. Her solid credentials that include licensure of PTA for New York (USA), BLS and lifesaving services certifications and Master's degree in neurology (PT). Currently, she is pursuing PhD from Amity University. Has worked with Manipal hospital, Bangalore, Holy family hospital, Delhi and many more. She taught in RPIIT, Karnal and is now working in SGT University as an Assistant Professor in faculty of physiotherapy. Her area of work includes work with pediatric, adolescent, adults and geriatric population, also well versed in broad range of PT programs, treatments and modalities, restoring function and mitigating disability in diseased and injured patients.

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Physical therapist wellbeing is improved by following ergonomically right posture and rightly designed set up

Monika Naresh

New World Physiotherapy and Rehab Centre, India

Wellbeing is state of being comfortable, healthy and happy. Apparently, it is imperative for physical therapist to be fit and healthy to influence the wellbeing of the people around and the patients. Undoubtedly, the posture and fitness of Physical therapist is at the cost of providing best treatment to the patients. So, the topic directly relates to how physiotherapists take care of themselves as well as their patients wellbeing. Some interesting facts and practical advices would be solely described that would be of great value to all physiotherapists. This talk emphasis mainly on all dimensional wellbeing of the physiotherapists to connect with the importance of delivering the best by being best.

Biography

Monika Naresh has her expertise in evaluation and passion in improving health and wellbeing. she has completed her Bachelors' of Physiotherapy from Amarjyoti Institute of Physiotherapy. Since 2013, she is working as independent physical therapist. She has also achieved certificates in Kineso Taping, Pilates, Dryneedling, bobath technique and many more. she has also served as Assistant Head of Department at Roshan Hospital and currently is an owner at NewWorld Physiotherapy and Rehab Centre.

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November 27-29, 2017 Dubai, UAE

Muscle strength, range of motion and function changes following hip arthroscopy**Mohamed Abdulla Husain^{1,2}, Schilders E^{1,3,4,5}, Griffiths C¹ and Cook C⁶**¹Leeds Beckett University, UK²University of Bahrain, Bahrain³Fortius Clinic, UK⁴Wellington Hospital, UK⁵Yorkshire Clinic, UK⁶Leeds Trinity University, UK

Background: Muscle strength (MS), the range of motion (ROM) and function improvements post hip arthroscopy (HA) require in depth analysis. Also, many factors at the time of surgical intervention may play a role in prognosis.

Purpose: This study evaluated postoperative changes in hip abduction (HAB) and adduction (HAD) MS, external (HER) and internal (HIR) rotation ROM and the modified Harris Hip Score (MHHS). The factors that may influence these measurements were also evaluated.

Methods: Data from 309 patients (mean age 41.4 ± 13.9 years) who had undergone a HA procedure were analyzed retrospectively. Repeated measures ANOVA with Bonferroni adjustment and mean of difference (MD) were used to examine differences between 2, 8 and 24 weeks postoperatively compared to preoperative scores. Multilevel modeling (MLM) was used to examine the effects of various factors on postoperative measurements.

Results: The highest improvement was seen at the 24th week postoperatively in HAB MS (MD=16.57, 95% CI [7.59, 25.55]), HAD MS (MD=18.29, 95% CI [10.17, 26.40]) and MHHS scores (MD=19.37 points, 95% CI [11.53, 27.21]) (all P <0.001). However, HER and HR ROM did not show statistically significant changes postoperatively (P=0.569). MLM showed that being older than 60 years old, a female and playing at a professional level affects postoperative measurements.

Conclusion: Following HA and appropriate physiotherapy, hip MS and function takes up to 24 weeks to show the greatest magnitude of improvement. Rehabilitation programs should be designed to accommodate the variation in postoperative progression based on age, sex and activity levels.

Biography

Mohamed Abdulla Husain is a PhD candidate in Sport at Leeds Beckett University. His research interests are in the area of sports injuries including physical and functional changes following hip arthroscopy and groin pain. He has obtained his BSc degree from Kuwait University (2008) then opened his private physiotherapy clinic in 2009. He has completed his MSc degree in rehabilitation from the University of Pittsburgh in 2013 focusing on musculoskeletal conditions.

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November 27-29, 2017 Dubai, UAE

Correlation between grip strength and finger length in geriatrics

Ishita Sood, Reena Kumari and Garima Kathpalia

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Background: Hand is an amazing instrument and helps in gripping instruments in several ways. Also, grip strength is predictive of functional limitations and disability. The performance in ADLs is governed by hand and a direct relationship is established between finger length and ADLs due to its relationship with grip strength. It has been seen that hand grip strength was highly predictive of functional limitations and disability in men aged 45-68. However, very little has been done to relate the hand grip strength and finger length in geriatric population. Therefore, in this study, I hypothesize that there is direct correlation between hand grip strength and finger length in geriatrics.

Objective: To study the relationship between finger length and grip strength in geriatric population.

Methods: Correlation design was used. 50 geriatric subjects (25 males, 25 females) were randomly selected according to the selection criteria. Finger length and grip strength were measured and correlation was established.

Result: There was statistically significant positive correlation between finger lengths and grip strength in geriatric population ($p < .05$).

Conclusion: It is concluded that grip strength has a strong positive correlation with the lengths of the index, middle, ring and the little fingers in geriatric population.

Biography

Ishita Sood has completed her Bachelors and Masters in Musculoskeletal Physiotherapy from India. Later, she moved to Melbourne, Australia and has been practicing as Grade 4 Supervised Physiotherapist at a private practice. She specializes in musculoskeletal injuries and has developed keen interest in women health physiotherapy. She has a published paper on scapular dyskinesia and serratus anterior and is working towards strategies to improve joint position strength in geriatrics.

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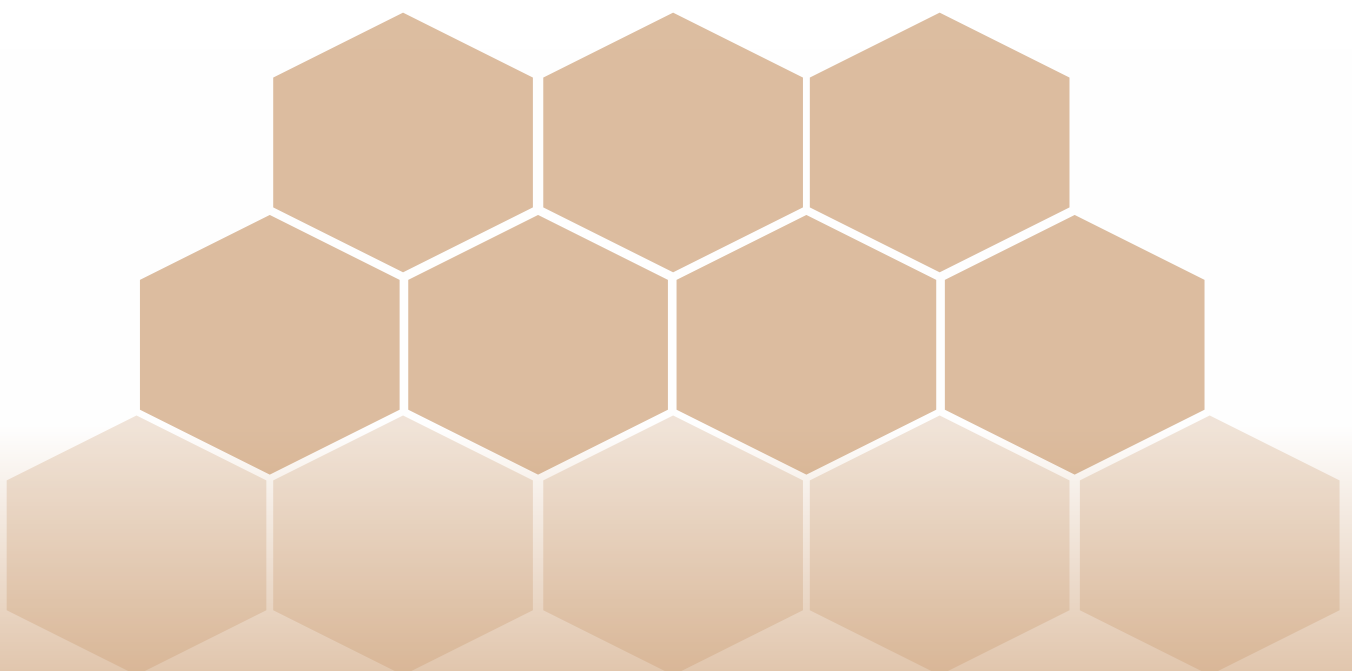
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Workshop (Day 3)



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November 27-29, 2017 Dubai, UAE



Mahindokht Rouhikia

Arya Clinic, UAE

Clinical use of QEEG (functional brain mapping) in rehabilitation

One of the primary considerations for treatment program in rehabilitation services is accurate and quantitative prognostic assessment which has vital importance and significant influence the disability prevention strategies along all the treatment stages. Primary assessments in rehabilitation are quite time consuming and gradual; it requires clients to undergo a variety of evaluation phases for finding impairments, limitation and restriction, with external and internal factors to be recognizing the barriers and facilitator. According to ICF checklist for body function categories in 2004, one of the important parts of assessment is the mental function, which is considered as a crucial part in most neurological disorders, such as TBI, CP, Closed head injury; specially when will be associate with language deficit or in the kids. QEEG as an interpretative analysis of EEG, based on a global culture/language free normative database can compare client brain activity with a normal person at the same age and gender in a simple, fast, measurable and accountable method. It has similar terminology among the involved professional teams such as neurologist and neuro-psychiatrists can have an important contribution towards the advantages communications within teams. In this paper the use of QEEG in rehabilitation services is to be explained as a brain function evaluation tool built on my 6 years' experience. This tool grants the acute evaluation and monitoring brain function changes during treatment session, as a pre-posttest, aimed at more effective design of brain function based treatment approach.

Biography

Mahindokht Rouhikia has Occupational therapy with MS in Mental Health with 15 year experience in neurological rehabilitation especially in pediatric with un-known diagnosis. She has earned qualification in field of QEEG, biofeedback, neurofeedback and manual therapy.

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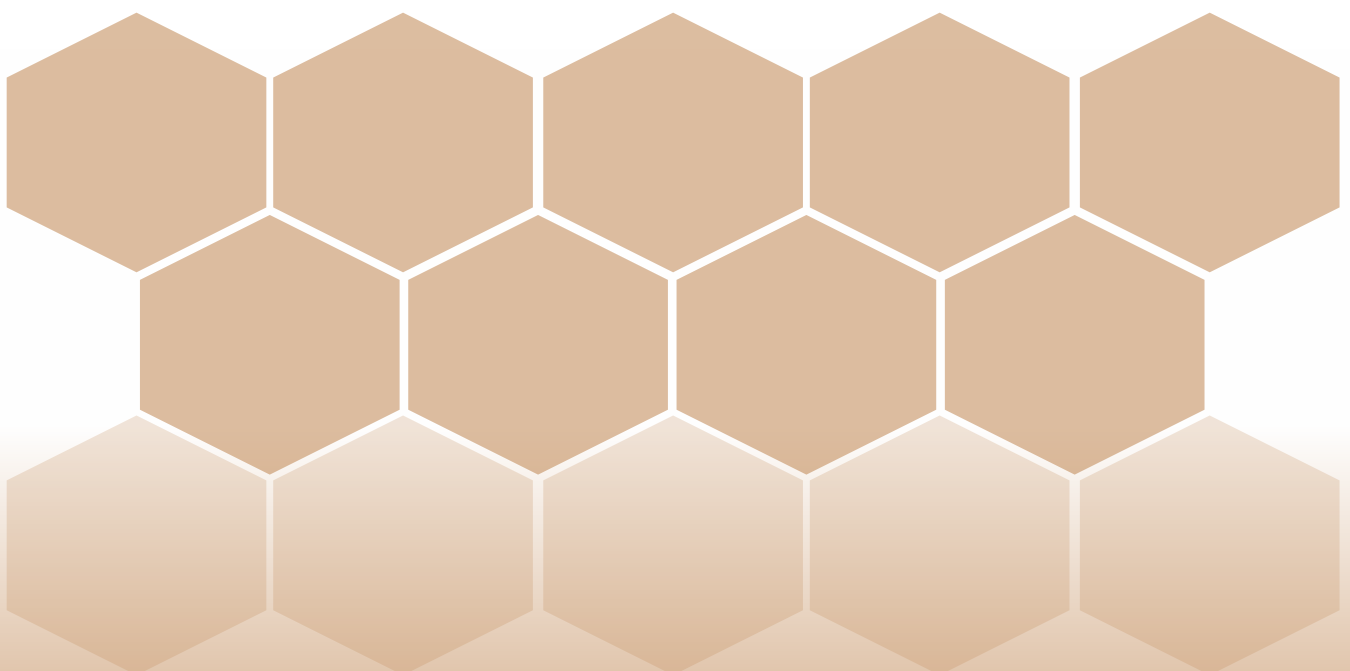
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Scientific Tracks & Abstracts (Day 3)



5th International Conference on

PHYSIOTHERAPY

November 27-29, 2017 Dubai, UAE

What are the factors influencing the community integration of patients following spinal cord injury: A systematic review

Muhammad Kashif

Riphah International University, Pakistan

Background: Spinal cord injury (SCI) is a high cost disabling condition, which brings a huge number of changes in individual's life. A traumatic SCI is one of the most dramatic injuries a person may experience. Traumatic SCI has great influence on individuals' life and their families. Unfortunately, situation for Person living with SCI is not favorable in developing countries. Due to lack of basic health facilities in developing countries including Pakistan, no special considerations are given towards rehabilitation of physically disable people.

Purpose: This systematic review was carried out to identify and evaluate the factors associated with community reintegration of patients after Spinal cord Injury, to critically assess and evaluate the quality of included studies, to investigate and document the evidences related to the factors accountable for community reintegration after SCI and to make recommendation for the further improvement in practice area to handle the factors influencing the community reintegration following SCI.

Methods: Databases including AMED, BIOMED central, Cochrane Library, Medline, Psycho INFO, PubMed, Science Direct, Scirus and Wiley Online Library were searched. The methodological quality of included studies was analyzed by using McMaster university tool and Thomas tool.

Results: 11 articles that addressed the research questions were included in the study. The evidence extracted from included studies was classified into four groups; health related barriers or facilitators, environmental related barriers or facilitators, psychological barriers and social barriers that are associated with community reintegration of SCI individuals.

Conclusion: This review approves that there are more barriers in the form of health related issues, personal and environmental, psychological and social that hinder the community reintegration of SCI subjects as compared to facilitators. Most studies notified special challenges related to environment in the sense of accessibility of home and public buildings and transportation. Restraining barriers, which are related health, environment, and psychological and social factors, can enhance community reintegration of patients suffering from SCI.

Biography

Muhammad Kashif is an Assistant Professor of Physical Therapy and Principal at Riphah College of Rehabilitation Sciences, Riphah International University Faisalabad Campus. He has more than 9 years of clinical and academic experience as a musculoskeletal/Community-based physiotherapist working in hospitals, INGOs and academics settings. He currently works full time as an academic/researcher. His research focuses on the community-based rehabilitation, orthopedic manual physical therapy, advanced clinical reasoning, disabilities, systematic review and evidence based practice. He has published over 10 research papers as an author and co-author in different national and international scientific journals and presented his findings in conferences. He is also a reviewer for academic journals. Moreover, he supervised many research projects of undergraduate and postgraduate students.

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The incidence and nature of work related musculoskeletal injuries amongst physiotherapists, in South Africa, Gauteng province

Nadia Latib

Sefako Magatho University, South Africa

Work-related musculoskeletal disorders (WRMSDs) are a substantial part of injury burden in the field of Physiotherapy. A mixed methods sequential explanatory design comprising two phases was conducted. Phase-one demographics of participants were as follows: The mean age of participants was 37±9.29 years; the youngest was 25 years and the oldest 67 years old. Approximately, two thirds (64%) had a normal BMI and 87.8% were female. Physiotherapists (PTs) reported that they have sustained WRMSDs (n=98) and are A-type personalities. Work related pain among physiotherapist was more prevalent on the lower back (41.8%), thumb and fingers (27.6%), cervical/neck (24.5%), wrist and hand (20.4%) and shoulder (18.4%). Eighteen physiotherapists who sustained WRMSDs participated in phase two qualitative in-depth interview and data saturation was reached. Four themes that emerged were: factors of injury, management, culture of physiotherapists and future direction. PTs admitted that they feel guilty to take time off from work and would rather work through the pain and discomfort. Physiotherapy culture revealed denial regarding a predisposition to WRMSDs. Almost all the PTs in this study stated that they put their patients first. Most PTs do not report injuries, or take time off work, or see a doctor. Majority of physiotherapists self-treat or ask colleagues to do 5-10 minutes treatment. Many PTs leave the profession or cease clinical practice relatively early in their career. Deeper insight into the mind set and perception of physiotherapists was gained. Recommendations for injury prevention and sustainable clinical practice were postulated.

Biography

Nadia Latib is a Masters candidate at Sefako Magatho University, currently a Junior Lecturer at the same institute. She is currently the owner of a private practice and specializes in orthopedics, rehabilitation, sports injuries and musculoskeletal disorders. She is involved in community projects, where she advises, facilitates presentations and prescribes exercises to the senior citizens club, the grandfathers club and the cancer care association in her community.

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Shock wave therapy effectiveness in treating patients with heel pain: A randomized control trial

Eman Matar

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Shockwave therapy is increasingly used for plantar fasciitis, but limited evidence supports its use. In spite of plantar heel pain being so common in the population, a growing body of evidence indicates that various methods and modalities applied by physiotherapists to relieve the symptoms of plantar heel pain lack quality validating research and is, therefore, not evidence-based. The purposes of this study are to determine the clinical effectiveness of shock wave in the treatment of chronic patient with plantar heel pain in term of pain intensity and function level, to measure any changes in pain level before and immediately after the treatment and to compare the effectiveness of shock wave therapy with other regular modalities in physiotherapy. A randomized controlled trial with 90 patients with plantar heel pain were selected from the general public in the same order that they presented in the Physiotherapy Department at Ahmed Ali Kanoo Health Center. Patients were randomly assigned into 3 groups: Group A-Shockwave therapy group-using Piezoson 100 at each session, 2000 shots (0.12-.051 mJ/mm², 50 Hz) of shock waves and exercise Group B- Conservative treatment group-includes wax therapy and exercise and Group C-routine care with exercise only. The Foot and Ankle Ability Measure (FAAM) were used to measure function and The Visual Analogue Scale (VAS) to measure pain intensity. Results show that the pain intensity data group A (shock wave and exercise) was no immediate reduction. The mean value of pain intensity was calculated as 7/10 pre-intervention. The mean value of pain intensity was calculated as 3.3/10 post intervention. Pain intensity data for group B (wax and exercise) was no change in pain within the same session. The mean value of pain intensity was calculated as 6.5/10 pre-intervention. The mean value of pain intensity was calculated as 5.2/10 post intervention. Pain intensity data for group C (Exercise only) was an immediate reduction, but not lasting for next session. The mean value of pain intensity was calculated as 6.3/10 pre-intervention. The mean value of pain intensity was calculated as 4.2 /10 post intervention. Function has been improved by 80% with group A, 65% with group B and 33% with group C. The study demonstrates the clinical and statistical efficacy of shock wave therapy in the treatment of chronic patients with plantar heel pain in term of pain and function. In comparison to other physiotherapy modalities, shock wave therapy has been proven its effectiveness with other regular modalities in physiotherapy.

Biography

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November 27-29, 2017 Dubai, UAE

The effects of patellar taping on biomechanical variables in patellofemoral pain syndrome: A literature reviewMohammad Taghipour¹, Seyedeh Hedieh Hosseini Makrani² and Arsalan Ghorbanpour³¹Babol University of Medical Sciences, Iran²Semnan University of Medical Sciences, Iran³Tehran University of Medical Sciences, Iran

Introduction & Aim: Patellofemoral pain syndrome is the most common source of anterior knee pain that lower extremity and patella malalignment, muscle imbalance and over-activity have been proposed as potential causes. Taping is one of the specific physiotherapy interventions which use to correct patella alignment, patella biomechanical changes and pain reduction. The purpose of the review of previous studies is on the effects of patellar taping in the treatment of patellofemoral pain syndrome on the patellar biomechanical changes.

Methods: Related articles have been extracted by searching PEDro, Proquest, Pubmed, OVID, ScienceDirect and Google Scholar as valid databases in the field of Medical Sciences. Keywords included tape/taping, patellofemoral pain syndrome, biomechanics and literature search methods was performed in the databases. Inclusion criteria included the articles to English language and open access between 2007 and 2017.

Results: A total of 10 articles were selected according to the inclusion criteria and open access (9 clinical trials articles and 1 cohort article). In eight articles, all types of taping techniques improve alignment and biomechanical variables, but in two articles were expressed to not improve alignment and biomechanical variables. Also, in an article was observed short-term effects without long-term effects (except to patellar lateralization).

Conclusion: According to the review of studies, patellar taping techniques can improve patellar biomechanical variables such as alignment, PFJRF, GRF and third way can improve the patient's function and reducing pain. The long lasting effects of patellar taping techniques will require more studies.

Biography

Mohammad Taghipour is a Physiotherapist with a PhD degree. He has completed his Graduation from Iran University of Medical Sciences in Iran. He has been a full time associate professor in Babol University of Medical Sciences since spring 2007. He used to be a lecturer in Tabriz University of Medical Sciences from 1999 to 2002. He was the head of physiotherapy department in university and dean of greatest hospital in north of Iran, currently he is the head of Physiotherapy Clinic at Hospital and deputy of dean of mobility impairment research center.

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November 27-29, 2017 Dubai, UAE

Assessment of conventional and non-conventional wheelchair propulsion using surface electromyography activity of shoulder muscles

Tarek Atallah

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The high demand on the upper limbs during propulsion on the standard wheelchair is contributing to multiple injuries of the rotator cuff. Since the conventional wheelchair is being responsible of a second handicap, a new prototype based on a lever system has been suggested to reduce the risk of shoulder injuries. The objective of this study is to compare shoulder muscle activity during propulsion on the conventional and non-conventional wheelchair. 18 able-bodied were recruited from the Lebanese University. All Subjects were healthy males only for convenience in electrode placement. Participants propelled the conventional and non-conventional wheelchair at a speed of 0.9 m/s for two trials each one. Mean power frequency, RMS, Frequencies above 95% of the power spectral intensity, Median and Peak electro-myographic intensities of anterior deltoid, posterior deltoid, biceps brachii, triceps brachii, pectoralis major and middle trapezius were compared between the two wheelchairs. The results showed that anterior and posterior deltoid intensities were decreased during propulsion on the non-conventional wheelchair compared with conventional wheelchair. The activity of these muscles has been shifted by the brachial biceps and brachial triceps. However, the intensity of pectoralis major tended to increase during propulsion on the prototype contrariwise the intensity of the middle trapezius diminished compared to the standard wheelchair. The non-conventional wheelchair reduces and shifts the muscular activity during propulsion. Triceps and biceps brachii are the principle muscles; their activity decreased the intensity of anterior and posterior deltoid therefore the likelihood of shoulder injuries may diminish.

Biography

Tarek Atallah has completed his Research Master's degree in Physical Therapy from the Lebanese University. He is an Instructor at the Lebanese University and a Physical Therapist at Saint Georges Hospital University Medical Center.

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Comparative study of dry needling vs. soft tissue mobilization with hot moist pack in reducing pain of myofascial pain syndrome

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Myofascial pain syndrome is a regional pain syndrome characterized by muscle pain caused by MTrPs. MPS includes a regional muscle pain syndrome of any soft tissue origin that is associated with muscle tenderness. The muscles of the neck and shoulder often co-exist with neck pain conditions and can contribute to the symptoms. The researchers introduced dry needling and soft tissue mobilization that could treat myofascial pain syndrome. The purpose of this study is to determine the effectiveness of dry needling vs. soft tissue mobilization with HMP in reducing pain with myofascial pain syndrome of office workers in St. Dominic College of Asia. A quasi-experimental method using purposive sampling was conducted with 20 office workers of St. Dominic College of Asia and divided into 2 groups correspondingly dry needling and soft tissue mobilization with HMP, both groups consist 10 participants. The research lasted for 2 weeks with 4 treatment sessions for 25 minutes held at Physical Therapy Laboratory 8th floor, 2 days interval every treatment sessions at 10 am to 5 pm. Interventions were measured using numerical pain scale and neck disability index for pre-assessment and post-assessment to determine the level of pain. Using neck and upper back disability index mean scores of pre and post-test and their differences using dry needling had 17% difference of mean scores in NDI from 23% or moderate disability on pre-test to 6% or mild disability on post-test. Soft tissue mobilization with HMP had 11% difference of mean scores from 27% or severe disability pre-test to 16% or moderate disability post-test. In using numerical pain scale, dry needling intervention had a 3.2 difference of mean scores from 5.8 or moderate pain pre-test to 2.6 moderate pain post-test while the soft tissue mobilization with HMP intervention program had 1.7 difference of mean scores from 6.3 or moderate pain pre-test to 4.6 or moderate pain post-test. After four treatment sessions, the researchers came to the conclusion that dry needling is more effective than soft tissue mobilization with HMP in relieving pain among the office workers of St. Dominic College of Asia.

Biography

Er D Petil Jr is the Associate Professor III in Physical Therapy and Lecturer in Manila Central University, St. Dominic College of Asia, New Era University. He has completed his Master's degree in Special Education and Doctor of Philosophy at the University of The Philippines.

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The effect of upper extremities massages on reaction time and anticipatory skill in male athletes

Mohammadreza Kasnavi

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Introduction & Aim: Neurocognitive system has a crucial role in planning physical behavior and coordination, sports performance. Neurocognitive tasks such as measuring the reaction time and anticipation skills have been used in various studies. Therefore, in every sport and activity that the athlete needs accurate and rapid action used to make decision, boosting anticipation skills and reaction time can be effective in the improvement of motor control and central information processing. In addition, according to the effects of massage on the neurocognitive functions the effects of massage on reaction time and anticipation skills were studied.

Method: 30 men athletes participated in this study. According to the selection criteria, the participants were randomly divided to 2 experimental and control groups of 15 members with the experimental group being given a massage. The participants' reaction time of auditory choice, complex choice reaction times and visual choice, complex choice and high and low speed anticipation were checked with speed anticipation reaction computer test.

Findings: This study showed that there were significant differences between two groups in the mean difference of auditory choice, complex choice reaction times and visual choice, complex choice reaction times ($p < 0.05$). No significant differences between two the groups in high and low speed anticipation were observed ($P > 0.05$).

Conclusion: The massage therapy program used in this study helped the experimental group athletes have better and shorter time reaction compared to the control group. This study showed that applying massage techniques has positive effects on boosting and more proper function of cognitive nervous system. The above mentioned techniques can be used as valuable tools in physiotherapy in order to foster athletes' physical functions.

Biography

Mohammadreza Kasnavi has completed his MSc of Physical Therapy from Shahid Beheshti University of Tehran in Iran.

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November 27-29, 2017 Dubai, UAE

Proposing a needs-based rehabilitation program for patients with neurological conditions in Ibadan, Nigeria

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University of Ibadan, Nigeria

Knowledge of needs of patients with neurological conditions (NCs) assists rehabilitation professionals and patients in setting attainable goals of rehabilitation. Oftentimes, needs for rehabilitation services are perceived differently by patients and rehabilitation professionals. Considering that the patient is at the center of rehabilitation, it is important to assess needs from their perspectives. 105 patients with NCs participated in this cross-sectional survey. The needs assessment questionnaire (NAQ) was used to assess the needs of the participants while disability and QoL were assessed using the World Health Organization Disability Assessment Schedule 2.0 (WHODAS II) and WHOQoL-Bref, respectively. Data were analyzed using Spearman's rank correlation, Mann-Whitney U and Kruskal-Wallis tests at $\alpha=0.05$. 61 (58.1%) stroke survivors, 33 (31.4%) individuals with Spinal Cord Injury (SCI) and 11 (10.5%) individuals with brain injury were surveyed. Participants were aged 46.48 ± 15.91 years. There were significant differences in needs relating to mobility ($p < 0.01$), rehabilitation and medical ($p = 0.04$), social and recreational activity ($p = 0.03$), financial and government assistance ($p < 0.01$) and barriers to enjoying life ($p < 0.01$) across neurological conditions. Participants with SCI expressed the highest needs while stroke survivors expressed the least. There was a positive correlation between needs and disability in almost all the domains of the NAQ and WHODAS 2.0 ($p < 0.05$). A negative correlation was found between needs and QoL among the participants ($p = 0.01$). Our findings necessitate calls for rehabilitation programs for individuals with neurological conditions to be condition-specific and based on expressed needs of affected individuals. This could enhance quality of life among individuals with neurological condition.

Biography

Olubukola A Olaleye has completed her PhD in Neurological Physiotherapy from the University of Ibadan, Ibadan. She is currently a Lecturer at the Department of Physiotherapy of the same University and the Coordinator of Clinical Training for physiotherapy students and the Sub-Dean of Physiotherapy and Nursing Programs of the Faculty of Clinical Sciences. She has published about 20 papers in peer-reviewed journals and has been serving as an Editorial Board Member for the *Journal of the Nigeria Society of Physiotherapy*.

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Effects of virtual reality on balance and postural control in people with multiple sclerosis: A systematic review

Mahsa Seydi and Mahyar Salavati

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Introduction: Multiple sclerosis (MS) has been shown to be associated with a wide variety of sensory and motor dysfunctions, resulting in symptoms originating from sensory, motor and cognitive impairments. Balance and mobility disorders are common life-threatening complications in patients with MS. The methods used in the rehabilitation of these patients require different physical therapy exercises and trainings. Virtual reality-based trainings provide MS patients repetitive practice, feedback and motivation which have been claimed to improve visual, auditory, tactile input and motor learning.

Objective: The purpose of this study was to investigate the results shown in previous studies on the effects of virtual reality on balance and postural control in people with MS.

Methods: Relevant literature in PubMed and Google Scholar were searched between 2000 and 2017. The keywords included the terms multiple sclerosis, virtual reality and balance. Only randomized control trial articles were considered in this review.

Results: After the duplicates were removed, we evaluated the title and abstract of each of the articles with the study inclusion criteria. From these, 23 articles were excluded based on the title and abstract. Finally, 11 articles were considered as included studies.

Conclusion: Balance training based on virtual reality gaming could be an effective method for patients with MS. Additional search is needed to support the rehabilitation protocol with virtual reality and to solve their limitations and increase the effect of treatment.

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The effect of tDCS on fatigue of multiple sclerosis patients: A systematic review of randomized controlled clinical trials

Atefe Ashrafi and Mohammad Ali Mohseni Bandpei

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Introduction & Aim: Fatigue is a common debilitating symptom in patients with multiple sclerosis (MS) affecting more than 75% of patients associated with functional disability. Despite the prevalence of this symptom in patients with MS, no general consensus exists on the effectiveness of available treatments. This study was conducted to systematically review published evidence to evaluate the effects of trans-cranial direct current stimulation (tDCS) as a new method on fatigue symptom in patients with MS.

Material & Methods: A comprehensive literature search of published studies from 2000 to 2017 in the PubMed and Google Scholar with key words: tDCS, multiple sclerosis and fatigue was performed. 235 studies were found with the defined criteria and 11 of them were chosen to be reviewed in this study.

Results: The results from the literature are contradictory in terms of the effectiveness of the method. About nine studies reported positive effects of tDCS on patients with MS and two reported no differences.

Conclusion: Regarding to the contradictory results among different studies it seems difficult to conclude that tDCS is an effective approach in the treatment of fatigue in patients with MS. However further large scale well designed studies are needed.

Biography

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Physium System: Negative pulse controlled pressure mecanotherapy profound fascial mobilization (PFM): Methodology, studies and cases

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Physium System (PFM) This is a new physiotherapy method to treat chronic pain of myofascial origin, joint or caused by fibrosis, preventing the patient coming or late much in doing so. Designed and developed in Spain in the last 8 years. It is a binomial between a methodology-valuation system and a controlled dose applicator device. It is a deep mechanotherapy of tissues, based on the controlled application of intermittent negative pressure, which mobilizes different layers of tissue, from superficial to deep, compared with manual therapy and suction cups. Treatment protocols are applied depending on the pathology and age of the patient. Treatment maneuvers are performed by the physiotherapist. It does not cause pain to the patient and no bruising. So far, physiotherapists could not quantify the amount of force of application of the different techniques with our hands. With this method, if we can quantify and apply the exact amount, and be able to carry out scientific research with a measurable, quantifiable and stable system. The method and the treatments have been standardized and are reproducible by any physiotherapist. The patient can be treated in different centers receiving the same type of treatment. Less physical wear of the physiotherapist and his hands without so many injuries. There is no loss of physical contact with the patients. Rapid response to treatment. Demonstrates efficacy in the improvement of acute and chronic pain and of biomechanical origin, postsurgical fibrosis, hyperalgetic and hypoesthetic scars, myofascial restrictions, limitation of articular movements, aid in sports recovery, Treatment and prevention of sports injuries, disappearance of muscle scars and some improvement against neurological spasticity . The mechanisms of action are equal to massage, with decreased pain and increased compartments, shown in hamstring, greater regeneration and management of collagen, demonstrated by mechano-transduction at the cellular level.

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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Patient satisfaction of physical therapy services in West Egypt Health Institutes

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Statement of the Problem: Most Egyptians believe that the care they receive is not the best that medicine and science can provide, despite the fact that our nation spends nearly 4 billion a year on health care, research shows that the quality of health care in Egypt is imperfect and deeply flawed. Quality problems fall into three broad categories underuse: Many patients do not receive medically necessary care, misuse: Each year, millions of Egyptians get the wrong care and are injured as a result, overuse: Many patients receive care that is not needed or for which there is an equally effective alternative that costs less money or causes fewer side effects. The purpose of the study was to determine the degree of patient satisfaction of physical therapy services in a sample of health institutes.

Methodology & Theoretical Orientation: About 1000 patient from different ages were selected randomly from physical therapy departments in different hospitals. Patients were asked to fill in a survey form to measure their degree of satisfaction of the services provided to them. The survey was in Arabic and included 10 questions about the appropriateness of the location of the institute, the location of the PT department, the session's cost, time, availability of equipment, degree of communication between staff members and patients and finally the patient's opinion of the service provided to them. Data were collected and percentage of patient's opinion of services was calculated for each parameter in the questionnaire.

Findings: Results of the study revealed that the most satisfying parameter to patients was the way therapist dealt with them (89%) while, location of health institutes (39%) and shortage of necessary equipment (31%), were the most un satisfying parameters to patients.

Conclusion & Significance: It can be concluded that physical therapy services in Egyptian governmental health institutes need more financial and administrative support from the Egyptian government or civil society in order to improve quality of health service provided to patients.

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Biography

Tayseer Younes has her expertise in rehabilitation and passion in improving the health, wellbeing and patient satisfaction. Her passion leads her to perform studies to find out specific barriers upon quality of health care in Egypt. She developed this passion to quality of health care after years of experience in rehabilitation, research, teaching and administration both in hospital and education institutions. As the manager of the out-patient clinic of her institute, finding out these barriers was very important as a step to improve quality of service and reach to optimum level of patient satisfaction. It also opened gateways to further research to generalize results in order to overcome obstacles facing health care in Egypt.

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The primary purpose of this study was to measure the prevalence of low back, shoulder and neck pain among students

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Purpose: The primary purpose of this study was to measure the prevalence of low back, shoulder and neck pain among students studying in senior semesters of medical departments of private university The University of Faisalabad.

Methods: Validated and Reliable Standardized Nordic Questionnaire was used to collect data from randomly selected one hundred and twenty three students out of one hundred and seventy seven students. Questionnaire riveted on shoulder, neck and low back pain in past year and past week.

Results: Mean age of respondents was (22.4 ± 1.3) years. 56.1% students reported low back pain, 52.0% students reported neck pain and 27.6% students reported shoulder pain during last 12 months. Students reported low back pain 39.8%, 28.5% students reported neck pain and 11.4% students reported pain in both shoulders during last 7 days. Low back pain reduced more level of work activity and leisure activity (36.6% and 35%) respectively as compare to neck pain (31.7% and 30.3%) and shoulder pain (13% and 10.6%). Results of independent sample t-test showed that Prevalence of neck and low back pain increases as their year of study increases or as they progress to higher grades ($p=0.014$, $p=0.000$) respectively. Prevalence of neck pain increases with the increasing age of students ($p=0.025$). However, there was no statistical significance ($p>0.05$) for average working hours, weight, height, body mass index and shoulder, neck and low back pain.

Conclusion: Low back and neck pain were relatively common among students from medical departments. Neck, low back pain reduced student's work and leisure activity markedly. Further assessment is needed to find out contributing factors and steps must be taken to prevent prevalence rate.

Keywords: Low back pain, Neck pain, Shoulder pain, Students, Faisalabad

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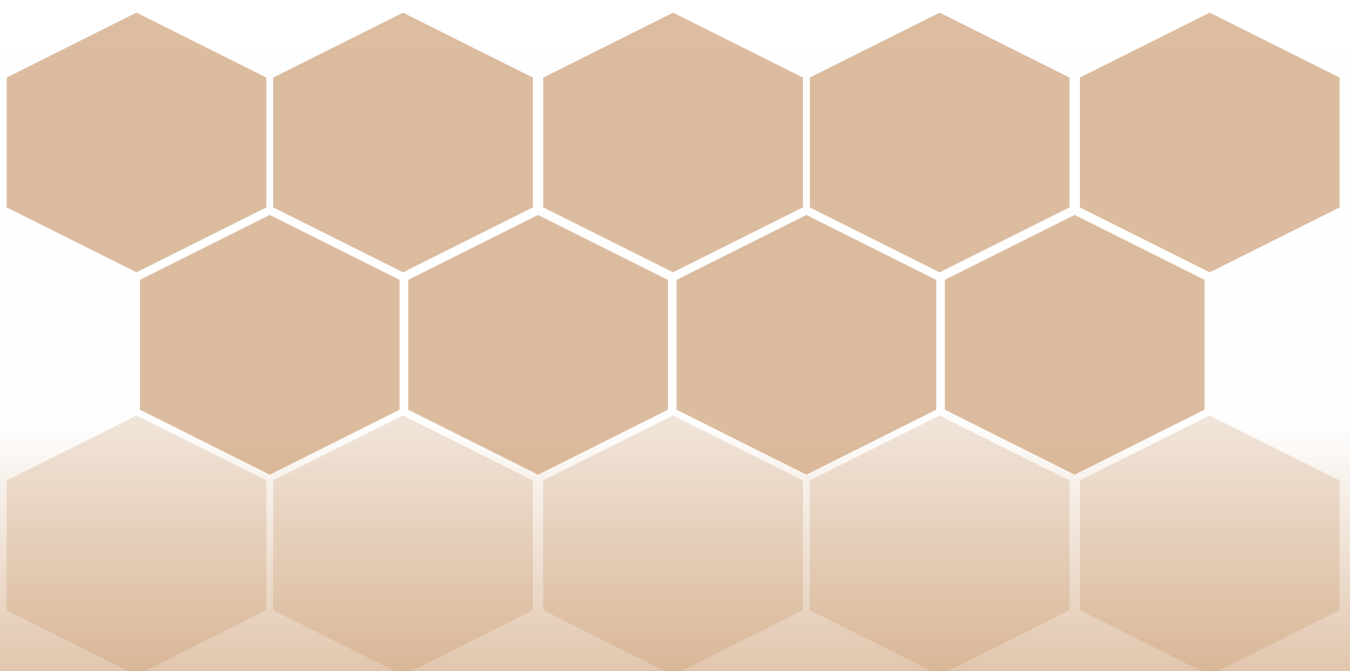
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Transcending clinic walls: Physical therapy transforms society through community engagement

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Our educational programs teach professionalism, advocacy, evidence-based engagement and community engagement. The vision statement of the APTA calls us to transform society. How is it possible to teach and learn skills of societal transformation when there is so much else to learn? The SEED-SCALE model involves the ability to learn to adapt and innovate across a broad spectrum of human experiences. It is the truest definition of evolutionary progress and societal transformation. SEED-SCALE standardizes a process for evolving locally specific solutions. Many of the worsening conditions of peoples' lives today are the result of earlier well-intentioned actions. Community and development programs may stimulate economic growth, but often do not benefit all people. These programs lift some or most, but often these programs thrive on disparity, benefitting only a few. Fundamental change happens in our lives because of what people do, making use of what they have, where they are today! Community action has the potential to scale up global solutions by integrating with systems of governance, technical expertise and cultural expression. Community-based growth occurs quickly as people teach each other, hold each other accountable and enact localized adaptive decisions in an iterative manner to respond to opportunities. Genuine human progress involves the use of human hands, hearts and minds to do what we can with what we have here, today. Empowerment is what people do using partnerships with structures of authority, outsiders and communities using bottom up, top down and inside out collaborations. By utilizing the World Health Organization's International Classification of Function (ICF) Model, physical therapists can analyze and understand the influence of racism, ableism and structural oppression as environmental factors that create poor health and inhibit participation in important life activities. Strategies to facilitate full participation are by becoming effective agents of change to eliminate injustice and marginalization.

Biography

Susan G Klappa is a Professor in the Doctor of Physical Therapy Program at Briar Cliff University, USA. She has completed her PhD in Education, Curriculum and Instruction from the University of Minnesota with a focus on community engagement and obtained her Masters of Physical Therapy degree from St. Catherine University. she is a PT educator and clinician who has practiced physical therapy internationally. She has a special interest in global and local public health. She has worked in outpatient clinics, at a Level I trauma center and in disaster relief tent hospitals with patients with neurological, cardiopulmonary, integumentary and other problems. Her research interests explore how inter-professional collaboration, global health work and international community engagement influence the formation of professional identity among physical therapists.

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