inovine
Scientific Meetings

10th World Congress on

PHYSIOTHERAPY, PHYSICAL REHABILITATION

& SPORTS MEDICINE

MAY 20-21

2024

LONDON, UK

Hosting Organization:
Inovine Meetings LLC, 2C Pecan Hill Drive Clinton Mississippi, 39056 USA
Phone: +1-408-648-2233 | E-mail: contact@inovineconferences.com

Scientific Program

Day 1

May 20, 2024 Conferece Hall : Event Space 16&17

Scientific Program

08:00-08:45 @ **Registration**

08:45-09:00 @ **Opening Ceremony**

Keynote Forum

09:00-09:30

Title : Introduction to Fascial Manipulation

Emmett Hughes, University of Bridgeport School of Chiropractic, USA

09:30-10:00

Title : A Revolutionary Approach in Heart Failure Rehabilitation

Konrad J. Dias, California State University, CA, USA

10:00-10:30

Title : Symmetry of performance across lower limb tests between the dominant and non-dominant legs in controls

Hussain Saleh Ghulam, Najran University Faculty Housing, Saudi Arabia

Group Photo & Coffee Break 10:30-10:50 @ Foyer

Physical Therapy Science | Physiotherapy in Treatment & Care | Manual & Manipulative Therapy | Physical Medicine & Rehabilitation | Neurological Rehabilitation

Session Chair: Emmett Hughes, University of Bridgeport School of Chiropractic, USA

10:50-11:10

Title : Sacroiliac joint pain.the mis-diagnosed ghost

Mina Maher Morkos Aziz, MUC University, Egypt, Senior Physiotherapist - Cairo University Hospitals

11:10-11:30

Title :Y oga Health and Happiness

P. Madhusudhan Reddy, National Institute of Technology Warangal, India

11:30-11:50

Title : The impact of Yoga on stress incontinence: A case study of three young women

Najwa Alfarra, King Faisal Specialist Hospital & Research Centre, Saudi Arabia

11:50-12:10

Title : Utilizing Multi-planar Stabilization to Improve Functional Outcomes in Dropped Head Syndrome

Brianne Carroll, NYU Langone Orthopedic Center, New York, USA

Lunch Break @ 12:10-13:00

13:00-13:20

Title : Non-Surgical Method for the treatment of plantar deformation, hallux valgus, without recrudescence

Aleksandra Maksimovic, Master degree physiotherapist, ALVITA PLUS DOO, Belgrade, Serbia

13:20-13:40

Title : Role Of The Physical Therapy Intervention In Type 1 Spinal Muscle Atrophy: A Case Study

Samah Al-Harbi, Physical Rehabilitation, KFSHRC, Saudi Arabia

13:40-14:00

Title : Effects of manual therapy on the management of lumbosacral disorders

Mohamed Yossef Taha Abu Zahra, Faculty of physical Therapy Cairo University, Egypt

14:00-14:20

Title : Different physiotherapy approches for lateral epicondylitis

Hafizul Azad Malmintakam, Adam and Eve Specialized Medical Centre Abu Dhabi, UAE

14:20-14:40

EXHIBITORS -1

Presenters: Padraig Dennison, Precision Sports Technology, Ireland

14:40-15:00

EXHIBITORS -2

Presenters: Marina Lee, H Robotics-Smart Rehabilitation Solution, Republic of Korea

Coffee Break 15:00-15:20 @ Foyer

15:20-15:40

Title : Physiotherapy on patient with femoral paralysis, after total cystectomy (cancer blader)

Voaides Alin-Petre, Dr. Carol Davila Nephrology Clinical Hospital, Bucharest, Romania

15:40-16:00

Title : Assessment & Management of pregnancy related MSK conditions

Ambika Aravindan, The Tamilnadu Dr MGR Medical University, India

Poster Presentations

16:00-16:20

Title : Analysis of Postural Stability Following the Application of Myofascial Release Techniques for Low Back Pain-A Randomized-Controlled Trial

Piotr Ożóg, Nicolas Copernicus University in Torun, Collegium Medicum in Bydgoszcz, Poland

16:20-16:40

Title : Assessment of Changes in Postural Stability in Patients Operated on for Cervical Discopathy

Wojciech Smuczyński, Nicolas Copernicus University in Torun, Collegium Medicum in Bydgoszcz, Poland

16:40-17:00

Title : Feasibility of an intervention to increase physical activity levels among preschool children: Results of a cluster randomised controlled trial

Mosfer Alwalah, Queen's University Belfast College of Applied Medical Sciences, Taif University, Saudi Arabia

Panel Discussion & Certificate Falicitation

Day -1 Ends

Day 2

May 21, 2024 | Conferece Hall : Event Space 16&17

Introduction @ 08:45-09:00

09:00-09:30

Title :Walking speed following joint arthroscopy, arthroplasty and spinal arthrodesis

Saud M. Al-Obaidi, Dar Elshifa Hospital, Kuwait

09:30-10:00

Title : Diaphragmatic rehabilitation after weaning from mechanical ventilation – A study project

Emídio Jorge Santos Lima , Roberto Santos General Hospital – Salvador – State of Bahia – Brazil

Physical Therapy Science | Advancement in Physiotherapy | Physical Medicine & Rehabilitation | Physiotherapy in Sports Related Injuries |Yoga in physical therapy

Session Chair: Emidio Jorge Santos Lima , Roberto Santos General Hospital – Salvador – State of Bahia – Brazil

10:00-10:20

Title : Effects of flexion mobilization with movement on pain and range of motion in subjects with low back ache

Ankit Bhargava , Jayoti Vidyapeeth Women's University, Jaipur, India

Coffee Break @ 10:20-10:40

10:40-11:00

Title : JockeyMotion Tracker: Revolutionizing Posture and Balance Monitoring in Hippotherapy

Neha Vyas , Department of Physiotherapy , University of Engineering and Management (UEM) Jaipur, India

11:00-11:20

Title : Physical therapists in Saudi Arabia towards the use of dry needling on spasticity in patients with stroke

Bajran Mohammad Aldossari , Prince Sultan Military Medical City, Physical Therapy Department Riyadh, Saudi Arabia

11:20-11:40

Title : Frozen Shoulder (Adhesive Capsulitis): A comprehensive review of anatomy, etiology, stages, diagnosis, management, and complications

Mohammad Rafiqul Alam jewel , Cumilla Diabetic Hospital, Bangladesh

11:40-12:00

Title : Taking care of Respiratory Health and managing the respiratory conditions actively

Hira Shams , Sir Ganga Ram Hospital, Teerthanker Mahaveer University, India

12:00-12:20

Title : Mind body medicine interventions for physical rehabilation and mental wellbeing

Haywantee Ramkissoon , British Academy of Management ,UK

12:20-12:40

Title : Fitnophysio in the UK: A Collaboration between physical therapy services and gym

Ashbeel John Edgar, Primary Care Physio, England, UK

Panel Discussion & Certificate Falicitation

Virtual mode zoom meeting (GMT+1) Time in United Kingdom

14:00-14:20

Title : Scientific evaluate quantification of social and behavioral by scalp Acupuncture on children with autism spectrum disorder

Zhenhuan Liu, Nanhai Maternity and Children Hospital Affiliated to Guangzhou University of Chinese Medicine, CHINA

14:20-14:40

Title : Maximizing Neuroplasticity Across the Lifespan: Strategies for Enhanced Learning and Cognitive Function

Karl Sterling, NeuroRehabilition Specialist , NeuroMotor Training LLC, USA

14:40-15:00

Title : The challenges of translating and adapting outcome measures for different cultures

Neetu Mahapatra , MAEER's Physiotherapy College, Pune, India

15:00-15:20

Thalassemia: Impact of Physiotherapy

Dhanita Jadhav , MCGM – Comprehensive Thalassemia Care, Pediatric Hematology-Oncology & BMT Centre,India

15:20-15:40

Magnetic superinduction therapeutic efficacy ins osteoarticular pathologies

Enricomaria Mattia , Morrone Center Caserta , Italy

15:40-16:00

Title : Sustaining Occupational Health of Physiotherapists: Customizing Ergonomic Interventions for Optimized Performance

Deepti Majumdar, Defence Institute of Physiology and Allied Sciences Lucknow Road, India

16:00-16:20

Title : The effect of adding Dry needling of the Gluteus-Medius muscle to standard care for chronic low back pain - A randomized controlled trial

Gali Dar, Faculty of Social Welfare & Health Sciences, University of Haifa, Israel

16:20-16:40

Title : Neuro-Physiotherapy Regimen to Enhance the Functional Performance of Meningitis with Ventriculitis and Hydrocephalus: Case report

Theeb Naif S Alsalem , King Abdulaziz Medical City, Rehabiliation servcies department,Neuro Rehabilitation Unit Saudi Arabia

16:40-17:00

Analysis of anthropogenetic and morphofunctional parameters mongolian wrestlers and athletes

Gundegmaa Lkhagvasuren , National University of Medical Science, Ulan-bator, Mongolia

17:00-17:20

Title : Exploring Strain Counter strain techniques for management of Complex pain regional syndrome (CRPS).

Aditi Gupte, Select Physical Therapy, CA 94538, USA

17:20-17:40

Title : The brain, behaviour and the bladder interconnection in female athletes with urinary iincontinence – a narrative literature review

Jyothi seshan MPT (Ortho), Lecturer in Physiotherapy, NIEPMD, Inida

17:40-18:00

Title : Robotic neurorehabilitation in paraparesis after spinal cord injury

Ivet KOLEVA , Medical University of Sofia, Bulgaria

18:00-18:20

Title : Electromyograhic analysis of infraspinatus and supraspinatus muscle during Mugdar (Indian Club) swing

Komal Mehta, D Y Patil University, Mumbai, India

18:20-18:40

Title : Exploring psychological need satisfaction and motivation to exercise and physical activity in an Arab context

Banan Sawan , College of Health and Life Sciences, Hamad Bin Khalifa University, Qatar

Panel Discussion

Awards, Thanks giving & Closing Ceremony

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HYBRID EVENT

EXHIBITORS

H·ROBOTICS

PRECISION SPORTS TECHNOLOGY

H·ROBOTICS

Smart Rehabilitation Solution

rebless

rebless™ is an FDA-registered robotic, rehabilitation device for both upper and lower extremities, providing motion to the elbow, wrist, ankle, and knee joints.
With multiple operating modes, rebless™ allows for passive, active-assisted, active, and resisted motion, so that therapy can be customized based on each individual patient's condition and progress.

Multi-Joint Application

A single device for wrist, elbow, ankle, and knee.

Wide Rehabilitation Scope

Applicable for treating neurological and musculoskeletal movement disorders.

Smart Tele-Rehab Platform

Seamlessly review treatment data and communicate with patients for more efficient rehabilitation management.

Diverse Exercise Modes

Continuous Passive Motion (CPM) and Assist-as-Needed technology allow patients to change exercising modes depending on the patients' abilities.

Improve Patient Compliance

The rebless™ exercise device provides patients with access to therapy from the comfort of their home. And, with the ability to view activity and progress, the rebless app may increase patient's motivation and commitment.

Increase Efficiency in Your Clinic

With the rebless clinic app, providers can view patient data and provide consultation from anywhere. Telemedicine visits are scheduled and performed with patients through the click of a button.

Exercise Positions

rebless™ provides various exercise positions for both upper and lower extremeties.

Elbow

Neutral Flexion & Extension

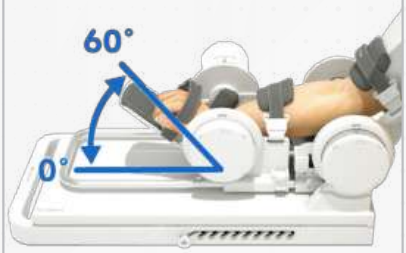
Flexion & Extension (Pronated)

Flexion & Extension (Supinated)

Wrist

Radial Deviation

Extension



Flexion

Knee

Flexion & Extension (Sitting)

Flexion & Extension (Supine)

Ankle

Dorsiflexion & Plantar Flexion (Sitting)

Dorsiflexion & Plantar Flexion (Supine)

rebless™ Tele-Rehab Solution

rebless

An FDA-registered robotic, exercise therapy device for both upper and lower extremities.

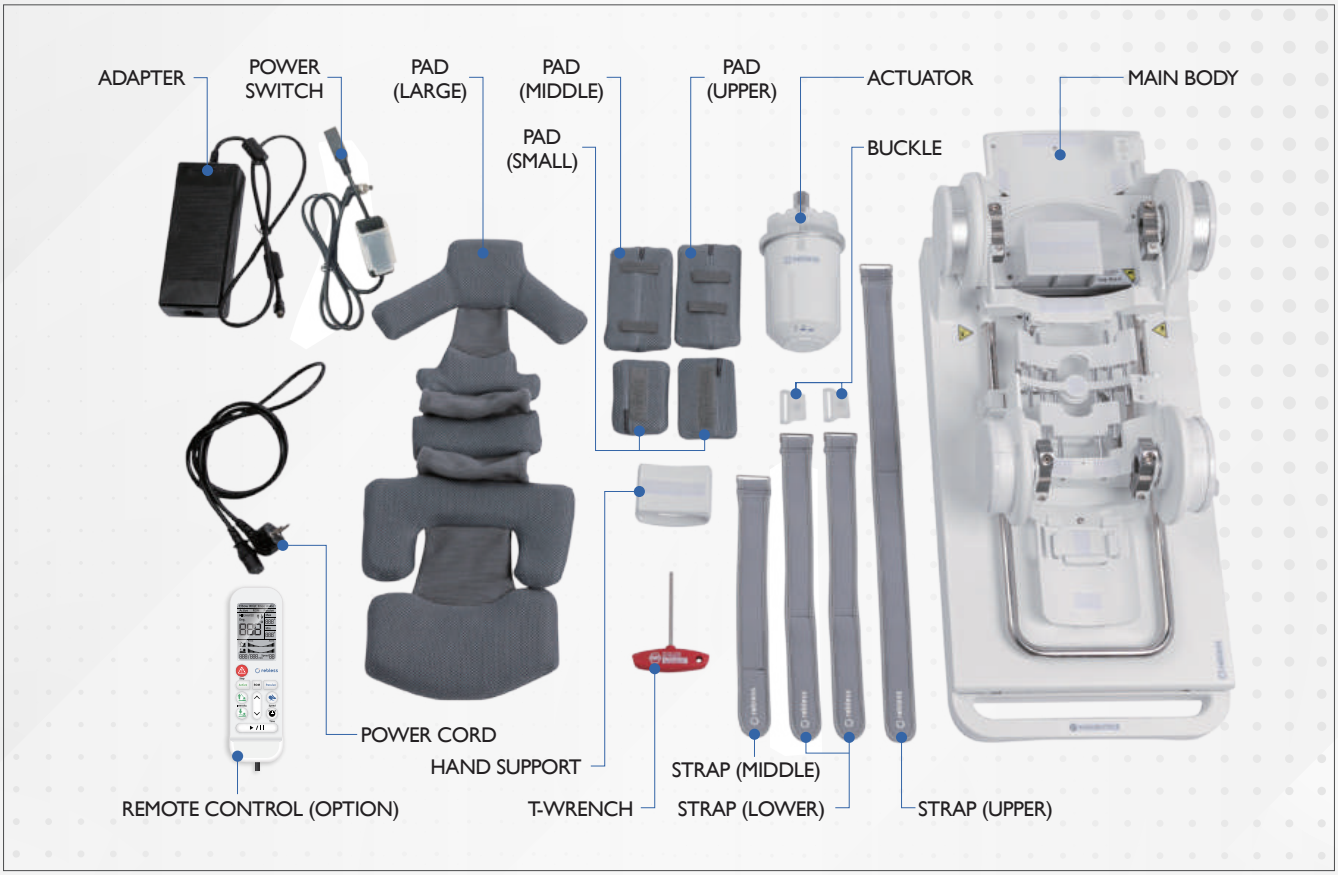
rebless app (for Patients)

Once downloaded onto the patient's mobile device, the rebless™ app is used to operate the device, track performance, and virtually connect with a provider.

rebless clinic (for Doctors and Therapists)

The rebless™ Clinic web-based platform is used by providers to prescribe exercise regimens, manage and export patient data, and perform telemedicine visits. The assigned therapy regimen is then accessed in the rebless™ mobile app for the patient to perform. All patient data is accessible on the provider's rebless™ Clinic app for seamless remote monitoring of activity and progress.

Components



Specifications	
Operating range	Elbow 0° ~ 140°
	Wrist 0° ~ 60°
	Knee (Supine position) 0° ~ 80°
	Knee (Sitting position) 0° ~ 60°
	Ankle 0° ~ 110°
Speed	40° ~ 400° per min
Patient sizing	Forearm: 9" ~ 11.7" (22.8 ~ 29.6 cm)
	Tibia: 14.2" ~ 18.3" (36.1 ~ 46.4 cm)
Patient weight	Max. 298 lbs (Max. 135 kgs)
Electrical Equipment Classification	Class II . Type BF. IP21
Rating	Input 100-240 VAC, 2.5-1.3A / 50-60Hz
	Output 24 VDC, 9.2 A,
	Max. 221 W
Maximum Torque	30 Nm
Product Weight	39.7 lbs (18 kgs)
Size	31.2" x 13.4" x 9.3" (79.2 x 34 x 23.7 cm)

Ordering Information	
SKU	Description
HPAD001	PAD SET (GREY)
HPAD002	PAD SET (BLUE)
HSTP001	STRAP SET
HBUK001	BUCKLE
HHLD001	HAND SUPPORT
HADO001	ADAPTER
HPWC003	POWER CORD
HPWS001	POWER SWITCH
HCOV001	COVER
HWRN001	T-WRENCH
RHRC-US	REMOTE CONTROL
HSLV001	SLEEVE (UPPER LIMB)
HSLV002	SLEEVE (LOWER LIMB)
HCSA001	REBLESS CARRIER

1 - Year Warranty

About H Robotics, Inc.

H Robotics develops, manufactures, and distributes state-of-the-art rehabilitation solutions, including medical robots and data-driven, telemedicine offerings for people who suffer from neurological and musculoskeletal conditions. By leveraging our strengths in software and robotic technology, we aim to create products and services that provide value to our customers and contribute to a healthier world and a happier life.

rebless

H Robotics, Inc.

Headquarters: #1210, 12F, 12, Gaetbeol-ro, Yeonsu-gu, Incheon, 21999, Republic of Korea

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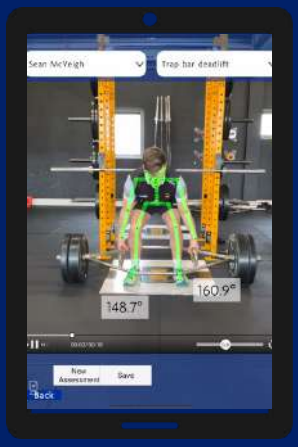
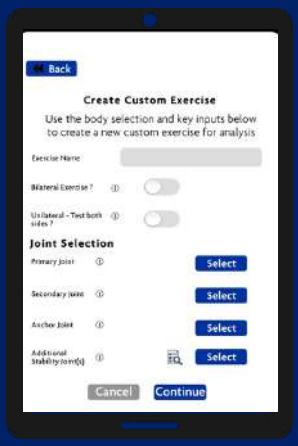
kinetikIQ

POWERED BY PRECISION SPORTS TECHNOLOGY



KinetikIQ delivers Real-time exercise feedback.

Record from any angle and harness objective, actionable metrics to deliver the best quality of services to your athletes, patients and clients.



KinetikIQ allows you to effortlessly create Custom Exercises tailored to your unique needs. These could be for general assessment, performance improvement or rehabilitation.

Achieve clinical goals through the power of automatic analytics, monitoring, and enhancement in a single system. Seamlessly integrate with other data streams for a holistic approach to musculoskeletal care.

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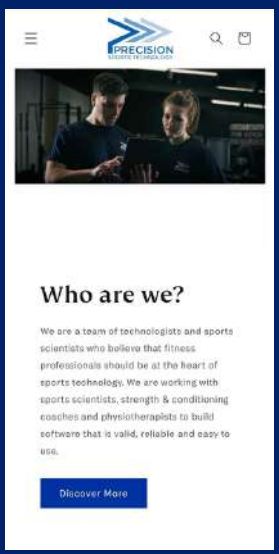

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HYBRID EVENT

KEYNOTE PRESENTATIONS

DAY 1

Emmett Hughes
Professor of Basic and Clinical Science
University of Bridgeport School of Chiropractic, USA

Introduction to Fascial Manipulation

Recent discoveries about fascia have highlighted its importance in pain, dysfunction, proprioception and coordination of function of the musculoskeletal system. Fascia is a 3-dimensional system that invests all tissues, providing an environment for communication, wound healing and proprioceptive input to the CNS.

Fascial manipulation seeks to find dysfunctions (densifications) in fascia due to past injuries and restore normal gliding, thus restoring normal proprioception and function to the musculoskeletal system. This is a manual therapy that employs specific anatomical points throughout the body to restore normal function.

This proposal is a hybrid, including a lecture on fascia and fascial manipulation as well as a demonstration of the technique.

Key words: fascia, densification, proprioception

Biography:

Emmett J. Hughes, DC, MS, Professor of Basic and Clinical Sciences, has been teaching at the University of Bridgeport School of Chiropractic for the past 27 years. He has taught classes in nutrition, neurology, immunology, endocrinology, histology and soft tissue techniques to name a few. Following a twelve year career as a special education teacher, he earned his Doctor of Chiropractic degree from the University of Bridgeport, graduating Summa cum laude and valedictorian of his class. Additionally, he has trained in Graston® technique, Fascial Manipulation (Stecco method), clinical nutrition, Optigate® system, musculoskeletal ultrasound, kinesiology taping, and classical homeopathy. He has taught post-graduate programs in Fascial Manipulation (Stecco method), post-isometric relaxation (PIR), post-facilitated stretching (PFS), Graston® technique, nutrition, and homeopathy. His research interests include fascia, nutrition, histology and soft tissue techniques. He maintains a private practice in Huntington, NY which includes chiropractic, nutrition, homeopathy, Graston® technique and Fascial Manipulation. He has published numerous articles on fascia and nutrition.

Konrad J. Dias
California State University, Sacramento, CA

A Revolutionary Approach in Heart Failure Rehabilitation

The increasing global prevalence of heart failure has a significant impact on morbidity, mortality, physical function, and quality of life. In recent years, the American Heart Association and the American Physical Therapy Association have individually published clinical practice guideline that emphasizes guideline directed care for patients with heart failure. However, applying these guidelines in routine practice is often extremely challenging. To assist with the application of heart failure research in practice, this session will accentuate a contemporary five step ABCDE framework that discusses the Assessment of Stability, Behavior Modification, Cardiorespiratory fitness testing, Dosing of Interventions, and Education considerations respectively. Through discussion of key concepts related to each component of this model, clinicians will be able to apply evidence in practice and be equipped with a novel approach in the contemporary management of patients with heart failure.

Learning Objectives:

1. Discuss key actions in the holistic management of patients with heart failure.
2. Implement patient-centered strategies related to assessment of assessment of stability, behavior modification, cardiorespiratory fitness examination, dosage of interventions, and education.
3. Apply a novel framework in management of heart failure across the continuum of care.

Keywords: Heart Failure, Cardiac Rehabilitation, Knowledge translation

Biography:

Dr. Dias is a board certified Cardiovascular and Pulmonary Clinical Specialist and Professor of Physical Therapy at California State University in Sacramento, California. Dr. Dias has maintained an advanced record of teaching, scholarship, and professional development and has disseminated contemporary physiotherapy practice in heart failure rehabilitation both nationally and internationally. Dr. Dias served as a co-author was on the "Physical Therapist Clinical Practice Guideline for the Management of Individuals with Heart Failure" published in PTJ in 2020, and the lead author on the 2021 PTJ publication entitled "A Knowledge Translation Framework for Optimizing Physical Therapy in Patients with Heart Failure."

Hussain Ghulam
Najran University, Najran University Faculty Housing, Najran 66241, Saudi Arabia,
Associate Professor, Chairman of the Medical Rehabilitation Department

Symmetry of performance across lower limb tests between the dominant and non-dominant legs in controls

To determine the functional limitations of the lower limbs or readiness to return to sport, most rehabilitation programs use some form of testing; however, it is still unknown what the pass criteria is. This study aims to investigate the differences between the dominant and non-dominant leg performances across several lower limb tasks, which are hop tests, two-dimensional (2D) frontal plane projection angle (FPPA) tests, and isokinetic muscle tests. This study also provides the reference values for the limb symmetry index (LSI) for the hop and isokinetic muscle strength tests. Twenty recreationally active participants were recruited, 11 males and 9 females (age 23.65±2.79 years; height 169.9±3.74 cm; and body mass 74.72±5.81 kg). All tests were undertaken on the dominant and non-dominant legs. These tests are (1) Hop tests, which include horizontal hop for distance and crossover hop tests, (2) Frontal plane projection angle (FPPA): 2D capturing from two different tasks, which are forward hop landing and squatting, and (3) Isokinetic muscle strength tests: four different muscles were tested: quadriceps, hamstring, ankle plantar flexor, and hip extensor muscles. The main outcome measurements were, for the (1) hop tests: maximum distance was taken when undertaking single/crossover hop for distance using a standard tape measure, (2) for the FPPA: the knee valgus angle was measured from the maximum knee flexion position using a single 2D camera, and (3) for the isokinetic muscle strength tests: three different variables were measured: peak torque, peak torque to body weight, and the total work to body weight. All the muscle strength tests have been applied in both concentric and eccentric muscle actions at a speed of 60°/sec. This study revealed no differences between the dominant and non-dominant leg performance, and 85% of LSI was achieved by the majority of the subjects in both hop and isokinetic muscle tests, and; therefore, one leg's hop performance can define the other.

Biography:

- Dr. Hussain Ghulam is currently an associate professor, consultant physical therapist, and chairman of the Medical Rehabilitation Department – Physical Therapy program at Najran University, Najran, Saudi Arabia.
- The head of the medical rehabilitation department at Medical Rehabilitation Hospital from 2005 to 2011 in Madinah, Saudi Arabia.
- In 2013, earned a master's in exercise and sports physiotherapy from Cardiff University, Cardiff, United Kingdom.
- In 2016, completed a doctorate (PhD) in health, sports and rehabilitation sciences from Salford University, Manchester, United Kingdom.
- From 2016 to 2018, the head of the training and academic affairs department at Medical Rehabilitation Hospital, Madinah, Saudi Arabia.

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HYBRID EVENT

SPEAKER PRESENTATIONS
DAY 1

Sacroiliac joint pain. The mis-diagnosed ghost

Mina Maher Morkos, PT. MSc. PhD. Candidate

Assistant Lecturer of Musculoskeletal Physiotherapy and Sports Injuries – MUC University
Senior Musculoskeletal Physiotherapist
Founder & Tutor at Dr.Mina ORTHO ON educational platform

The sacro-iliac joint pain is a common musculoskeletal complaint that may interfer with many LBP cases or problems. As we know, the SIJ plays a critical role in load transfer to both lower limbs through essential form and force closure mechanisms during different functions and activities. It is an important but to somewhat a mysterious joint making that handling SIJ problems is like facing a ghost. Unfortunately, many LBP patients may be misdiagnosed and managed without considering the SIJ as a potential source of pain. The term "SIJ Dysfunction" has been repeatedly used referring to mobility/stability issues but actually doesn't cover the whole experience of pain and its actual cause or generator. So, there are many false concepts (myths) that need to be corrected or busted based on the recent available evidence-based knowledge. Clinically, several treatment options may be available with recommendation toward the conservative management and stabilization-based therapeutic exercises.

Biography:

Mina is a professional musculoskeletal physiotherapist with a master's degree and 10 years of clinical experience. Being a lecturer and senior physiotherapist allows him to teach, train and supervise many PT interns and clinicians. He enjoyed working in a multidisciplinary team as an effective member with the continuous development of performance in response to the latest guidelines and frameworks. He is the founder and tutor of "Dr.Mina Ortho ON" educational physiotherapy platform providing courses and training sessions. Also, he participated as a speaker at many renowned conferences both locally and internationally.

Yoga Health and Happiness

P. Madhusudhan Reddy
Physical Director, National Institute of Technology Warangal – 506004 Telangana India

Yoga is one of India's oldest and most comprehensive universal traditions, which has developed a vast arsenal of physical and mental techniques geared to gain control over the nervous system in order to achieve, at will, conscious and superconscious states of transcendence.

Traditionally, Yoga was not intended for the imbalanced or sick individual but for the normal person interested in, and capable of, pursuing – universal values. Yoga is not physical or psychological therapy—even though it contains a therapeutic element—but a tradition of psycho-spiritual growth leading to inner peace and freedom.

While Yoga's comprehensive methodology includes many techniques that serve the popular goals of enhancing or restoring fitness and health, its real potency lies in the domain of psychospiritual maturation, notably at the higher levels of self-transcendence.

Yoga therapy is of modern coinage and represents a first effort to integrate traditional yogic concepts and techniques with Western medical and psychological knowledge. Yoga therapy aims at the holistic treatment of various kinds of psychological or somatic dysfunctions ranging from back problems to emotional distress. Both approaches, however, share an understanding of the human being as an integrated body-mind system, which can function optimally only when there is a state of dynamic balance.

Yoga therapy is a growing field in integrative healthcare, based on the research into yogic therapeutic benefit. Yoga therapists use the tools of yoga to empower individuals toward wellbeing.

Yoga understands health and wellbeing as a dynamic continuum of human nature and not a mere state to be attained and maintained. In fact, Yoga is a preventive healthcare system.

As a proponent of preventive medicine, Patanjali advises us to prevent that which can be prevented so as to avoid future pain and suffering – Heyam Dukham Anagatam.

Biography:

Dr. P. Madhusudhan Reddy did Ph.D. from Pandit Ravishankar Shukla University Raipur and working as a Physical Education Teacher at National Institute of Technology and training and coaching the Institute athletes in sport fitness and health.

The impact of Yoga on stress incontinence: A case study of three young women

Najwa Alfarra
King Faisal Specialist Hospital & Research Centre, Saudi Arabia

Background The International Incontinence Society (ICS) define the symptoms of urinary incontinence as the "complain of involuntary loss of urine" (Haylen, 2010). However, there is limited evidence from randomized control trials (RCT's) regarding the use of Yoga for the management of urinary incontinence in women. The aim of this study is to assess and explore the effectiveness and safety of yoga for the treatment of UI in young woman with focus on patient symptoms and quality of life.

Case description: Three women were referred to Physical Rehabilitation department by the Family Medicine physician. The first participant is 34 years old of age presented with a history of two years "stress incontinence", had two children, normal delivery, second informant was a 30 years old had a history of six months stress incontinence after normal delivery of the first baby, the last participant was 50 years old with a history of four years of stress incontinence, after four normal deliveries.

Management and outcomes: Three participants received yoga training once per week for four weeks, followed by unsupervised Yoga home exercises program for six weeks (total of 5 sessions). After the completion of six weeks they were seen at the clinic for reassessment and discharge. Outcomes as suggested by the International Incontinence Society (ICS), which included observation, quantification of the woman's symptoms, the clinician's observations, and the women's quality of life.

Result: Significant effects in urinary incontinence were reported following supported Yoga training by the three participants with significant improvement from the baseline to week 10.

Conclusion: Yoga poses intended to address the pelvic floor and core muscles were found to have better outcomes in terms of improving stress incontinence.

Biography:

Senior physical therapist with 33 years of experience, currently the assistant head of physical rehabilitation in KFSH&RC. The first Saudi therapist who initiated the women's health program under the umbrella of physical therapy since 2005 in Kingdom of Saudi Arabia, and teach the course in different regions inside the Kingdom and Gulf, mentor physiotherapists under the same program from the gulf and kingdom of SA. Published 16 research in the women's health field and presenting nationally and internationally.

Utilizing Multi-planar Stabilization to Improve Functional Outcomes in Dropped Head Syndrome

Brianne Carroll
NYU Langone Orthopedic Center 333 East 38th Street, 5th floor, New York, NY 10016

Dropped Head Syndrome (DHS), primarily resulting from cervical paraspinal extensor weakness post-radiation, often in Hodgkin's Lymphoma treatments, lacks extensive research in Physical Therapy (PT) management. Existing studies focus on cervical bracing, with limited information on therapeutic exercises (therex). This case introduces an innovative DHS management approach using therex and neuromuscular re-education to bolster multi-planar postural stability in the upper quarter.

Case Description A 68-year-old female (she/her) experienced neck pain and instability for 30 years after treatment for Hodgkin's Lymphoma. Her significant extensor weakness limited functional activities such as forward bending, stand to sit, and eating in public. Despite previous PT and a home exercise program (HEP) focusing on cervical flexion and scapular strength she had minimal functional improvement and continued poor postural stability, necessitating manual head repositioning efforts.

Interventions included strengthening side bending via isometric holds in sitting and side lying for postural stability during functional mobility and transitional movements. The aim was to avoid rapid head drop, improve comfort and reduce apprehension. Treatments progressed to static and reactive balance in standing and walking with changes in speed and direction to challenge cervical stability.

At discharge, Neck Disability Index improved from 20% to 16%. Her cervical flexor endurance improved from 21 to 30 seconds. Improvements in scapular musculature strength were also noted, but not considered significant. She reported improved confidence eating in public, less discomfort with washing and drying hair and improved dynamic head control during bed mobility, transfers and during gait.

Discussion: Due to the functional improvements observed in chronic case of DHS, it might be prudent to consider isometric strengthening in the frontal plane and dynamic cervical stabilization in addition to traditional upper quarter strengthening to improve cervical postural stability. This approach may offer additional benefits over traditional methods focusing solely on upper quarter strengthening.

Biography:

Dr. Brianne Carroll, PT, DPT, OCS is a senior physical therapist at the NYU Langone Orthopedic Center. She is a certified clinical specialist in orthopedic physical therapy by the American Board of Physical Therapy Specialities (ABPTS). Clinically, Dr. Carroll is experienced in treating neurological, orthopedic and medically complex patients. Outside of her clinical interests, Dr. Carroll is an avid snowboarder, and has completed several marathons and half marathons.

Non-surgical method for the treatment of plantar deformation, hallux valgus, without recrudescence

Aleksandra Maksimovic
Master degree physiotherapist
ALVITA PLUS DOO, Belgrade, Serbia

Purpose: The technique reported here has the purpose of providing integrative method to arrive at the definitive resolution of a clinical condition which, if left untreated, it can become severely disabling. The total absence of recrudescence, in all cases examined and treated, provides a reason for its application.

Methods: The technique proposed arises from the synergistic combination of few manual and acupressure techniques with physiotherapy. The application of these methods, combined with the newly developed nanotechnological creams helps to resolve the state of chronic-degenerative inflammation and tissue resorption, contribute to completing the application framework of this techniques.

Results: The aforementioned technique, applied to a cohort of 30 subjects, divided into 5 groups according to: age, sex and type of plantar deformation(unilateral or bilateral), has provided a spectrum of results, having a marked statistical significance, in terms of: reduction of the volume of the plantar deformation ($r < 0.0001$; ****), reduction of the pain stimulus ($r < 0.0001$; ****), and absence of recurrence, over a period of 36 months, post treatment, applied for 10 weeks, at the frequency of one session per week ($r < 0.0001$; ****).

Conclusion(s): On the basis of the results obtained, the combination of techniques reported here has a high operative efficacy. We therefore suggest extending the research on this technique to larger cohorts of patients, within a specific and registered clinical study.

Implications: The validation of one clinical technique, would imply opening the way to a new vision of the treatment of Hallux Valgus, with unavoidable implications in the economies of the centers that could apply it and also second degree, in the sale of footwear, separators and gadgets made for plantar deformations.

Role Of The Physical Therapy Intervention In Type 1 Spinal Muscle Atrophy: A Case Study

Samah Al-Harbi
Pediatric PT, Msc, Physical Rehabilitation, KFSHRC, Saudi Arabia

Background: Spinal Muscle Atrophy Type 1 (SMA1) is a hereditary neuromuscular disorder that affects the motor neuron, leading to sever muscles weakness and limited motor function. Zolgensma therapy has emerged as potential treatment option for SMA1, offering hope for improved outcomes and quality of life for affected infants. However, the effectiveness of the therapy in promoting physical development in SMA1 remains unclear1. This case study aim to explore the role of physiotherapy in improving the developmental milestones of an infant with SMA1 following gene therapy. Additionally, will utilize the Chop Intend assessment tool to assess and track the changes in infant's motor function, strength, and over all physical development.

Case discerption: 7 weeks new borne girl referred from neurology department to physical rehabilitation department, with history of SMA1.

Management and outcomes: The baby was seen twice/week, assessed by CHOP-INTEND assessment tool and followed by active ROM exercises, stretching exercises and Neuro-developmental therapy for the last two years. Outcomes was measures by CHOP-INTEND assessment, which improved from 45 to 64.

Result: This study highlights the significant benefits of physiotherapy in improving motor milestones in patients with SMA1.

Keywords: SMA type 1; NDT; Chop Intend Assessment

Biography:

Samah has completed her master degree from Brighton University, UK. She is a senior therapist in the physical therapy department at King Faisal Specialist Hospital Riyadh SA. She worked with brachial plexus injuries post surgery since 2012, and specialse in pediatric area

Effects of manual therapy on the management of lumbosacral disorders

Mohamed Yossef Taha Abu Zahra
Faculty of physical Therapy Cairo University, Egypt

Low back pain is one of the most comon problems in the daily life activities and it is one of the immprtant signs of the musculoskeletal disorders. Manual Therapy schools are used markedly in The management of these disorders either in assessment or treatment. In this study we used combination of different schools of manual Therapy on alarge sample of patients about 400 patients to detect The real cause of dysfunctions and how to treat The deep cause of the problems not only The signs of the problems. We used passive physiological intervertebral movements And passive accessory intervertebral movements as atool of assessment and reassessment and treatment in addition to neurodynamics to assess nerve mobility and improve nerve flexibilty in addition to openning foramen techniques. In our programe of treatment we use combination of manual Therapy and active exercises and life style modifications using ergonimcs rules. We found great progress in pain scale, pain behavoir, radicular pain, active range of motion, passive range of motion, quality of movements.,radicular pain. In addition to functional improvement there is great improvement in radiological results which means structural changes not only symptomatic changes

Biography:

Mohamed Yousef has completed his B.Sc at the age of 24 years from Cairo University , received post graduate diploma in Neurology at the age of 27 years and completed his Dpt from Cairo University at the age of 37 years . Mohamed received certificates in manual therapy from Sheffield Uk , manual therapy diploma from Winston-Salem US , he is certified Mulligan practitioner from Mulligan institute in New Zealand , Maitland practitioner from IMTA institute in Switzerland and Schroth practitioner from SBP Germany . Mohamed is the owner of Abu Zahra physical Therapy centers with its 3 branches in Cairo Egypt.

Different physiotherapy approches for lateral epicondylitis

HAFIZUL AZAD MA

BPT, MSc Acupuncture, PGDip In Physiotherapy, , Fellow Ship in Osteopathy and Manipulation, Certified Kinesio , Mulligan, Dry Needling, Orthopedic Manual Therapy and Cupping Practitioner
HOD Physiotherapy and Rehabilitation
Adam and Eve Specialized Medical Centre Abu Dhabi

Introduction: Lateral epicondylitis, also known as tennis elbow, is a tendinopathy that affects 1-3% of individuals aged 35-50 years. It is an overload injury of the extensor tendons of the forearm, specifically at the point where they connect to the lateral epicondyle. Although it is typically self-limiting, up to 20% of people may experience symptoms for over a year. The pain is usually felt over the anterior extensor tendon pathways rather than at the extensor muscle origin.

Physiotherapy Treatment Methods: Treatment for both acute and chronic management is available. In the acute stage (2-3 months), transcutaneous electrical nerve stimulation (TENS), ultrasound (US), joint mobilization, and extensor tendon trigger point release are commonly used. If the pain persists and moves to the subacute stage (4-5 months), additional treatment options such as shock wave therapy (once per week), Mulligan manipulation and tapping, fascial taping, extensor strengthening exercises, LASER, and extensor muscle dry needling may be used. If the pain persists for more than 6 months, it is considered chronic, and the treatment options are acupuncture needling with electricity (which has shown significant results), shock wave therapy (once per week), postural fault correction, manipulation with a drop table, and exercise.

Key Words: Lateral epicondylitis, tennis elbow, MENS, transcutaneous electrical nerve stimulation (TENS), ultrasound, joint mobilization, extensor tendon trigger point release, shock wave therapy, Mulligan manipulation, Mulligan tapping, fascial taping, extensor strengthening exercises, LASER, extensor muscle dry needling, acupuncture needling, postural fault correction, manipulation with a drop table.

Results: While some techniques such as ECSW may increase pain for some patients, the combination of dry needling and other modalities with preventative measures may provide better outcomes.

Conclusion: In conclusion, lateral epicondylitis or tennis elbow is a prevalent tendinopathy, but with the right physiotherapy treatment methods, it can be managed effectively. The treatment options range from TENS and joint mobilization in the acute phase to dry needling and acupuncture with electricity in the chronic phase. By combining these modalities with preventative measures, patients can achieve better outcomes and ultimately recover from this condition.

Physiotherapy on patient with femoral paralysis, after total cystectomy (cancer blader)

Voaides Alin-Petre, Dr.Grasu George Alexandru
"Dr. Carol Davila" Nephrology Clinical Hospital, Bucharest, Romania

D.R., 73 years, with bladder cancer is operated for total Cystectomy. During the operation because of the volume and density of the tumor, the femoral nerve is "damaged" with the LigaSure pensa and the patient loosened his knee extension.

We know that, the patient needs to use an urostomy bag because of bladder was removed thatswhy it is not so easy to work with this kind of patient because of the physical situation, also because they are very pessimistic in that they have the tendency to refuse treatments. After functional evaluation, we found no patellar tendon reflex, the femoral muscle with force1, with no possibility of staying in bipodal, only in the right leg. We decide use Physiotherapy like: physical therapy, electrotherapy (tecar, russian stimulation); TECAR was performed not after protocols, it was followed the patient rections, statement and his potential of movement. As we know, some are agree and others not, using electrotherapy after cancer, but we've seen no modification after therapy, and this was followed with objective indicators, through specific analyzes performed every 4 months. We are using Electrotherapy to our pacients, with no recidivas.

Biography:

Voaides Alin Petre is on second year on PhD at the age 40 years from University of Pitesti, He is Principal Physiotherapist at Clinical Hospital of Nephrology Dr Carol Davila. He was present with a presentation on Fascia Research Congres 2022 in Montreal-Canada, also lecturer in National Congreses organised in Romania.

Assessment & Management of pregnancy related MSK conditions

Ambika Aravindan
The Tamilnadu Dr MGR Medical University, India

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POSTER PRESENTATIONS

DAY 1

Analysis of Postural Stability Following the Application of Myofascial Release Techniques for Low Back Pain-A Randomized-Controlled Trial

Piotr Ozog, Magdalena Weber-Rajek, Agnieszka Radzimińska and Aleksander Goch

Department of Physiotherapy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, 85-067 Bydgoszcz, Poland

Introduction: Low back pain (LBP) is one of the most frequently observed disorders of the musculoskeletal system in the modern population. It's suggested that myofascial disorders in the highly innervated thoracolumbar fascia (TLF), reported in patients with LBP, may be an underlying cause of the ailment. Research confirms that LBP patients demonstrate poorer postural stability compared with individuals without symptoms. Myofascial release techniques (MFR) are additional therapeutic options that complement existing therapies and help provide a more holistic treatment for chronic LBP (CLBP).

Objective: Evaluation of changes in postural stability following single MFR intervention applied to CLBP subjects immediately after therapy and after a month. It was hypothesized that postural stability is going to aggravate immediately after the MFR intervention and improve one month after treatment compared with the baseline results before the treatment.

Methods: 113 patients with CLBP participated in a randomized-controlled trial. The experimental group (n = 59) received single MFR intervention, whereas the control group (n = 54) did not receive any intervention. Posturography was performed to determine experimental group's immediate response to the therapy and to evaluate the experimental and control groups' responses to the therapy one month after the intervention.

Results: Only 2 out of 12 comparisons of stabilometric parameters demonstrated reliable effects that are in line with our research hypotheses. Even though both comparisons were observed for therapy outcomes within the experimental group, no reliable differences between the groups were found.

Conclusions: A single MFR treatment in the TLF did not affect postural stability in CLBP patients in the experimental group. Further studies are needed to extend the findings by performing a series of holistic MFR treatments applied to a larger area of the body surface that would induce more general tissue changes and thus having a greater impact on postural stability.

Keywords: low back pain; myofascial release; postural stability.

Biography:

Dr Piotr Ożóg - Master of Physiotherapy and specializing in the diagnosis and therapy of chronic pain and orthopedic rehabilitation. Academic teacher - assistant profesor at the Department of Physiotherapy at Collegium Medicum UMK in Bydgoszcz. In 2020, the obtained doctoral degree in medical sciences and health sciences in the discipline of health sciences after defending the doctoral dissertation entitled "Analysis of posture stability and muscle activity after the use of myofascial relaxation techniques in pain syndromes of the lumbosacral spine" - at the Faculty of Health Sciences, Collegium Medicum Nicolaus Copernicus University in Bydgoszcz.

Assessment of Changes in Postural Stability in Patients Operated on for Cervical Discopathy

Wojciech Smuczyński[1], Krystyna Smuczyńska[1], Piotr Ożóg[1], Agnieszka Radzimińska[1], Magdalena Weber-Rajek[1], Agnieszka Nowacka[2], Maciej Śniegocki[2]

[1]Department of Physiotherapy, Nicolas Copernicus University in Torun, Collegium Medicum in Bydgoszcz, Poland
[2]Department of Neurosurgery, Nicolas Copernicus University in Torun, Collegium Medicum in Bydgoszcz, Poland

Introduction: The paper presents the potential of using one of the methods for assessing postural stability in order to objectively evaluate the changes occurring before and after cervical spine discopathy surgery.

Methodology: The research was conducted on a tensometric mat, where two measurements were taken before the surgical procedure and two after the surgery, on the first and second day of the patient's verticalization following the operation. The study included 34 patients. All patients underwent surgery in the cervical section for the first time. The tests were carried out in a standing position, with eyes open.

Results: The median parameter for the difference in load between the right and left lower limb (%) measured before the procedure was 12.0% and was significantly higher ($z = 3.91$, $p < 0.001$) than the result obtained after the procedure, which had a median of 6.00%.

The median parameter for the difference in contact area between the right and left lower limb with the ground (%) measured before the procedure was 7.98% and was significantly higher ($z = 2.97$, $p = 0.004$) than the result obtained after the procedure, which had a median of 4.65%.

Conclusions: The study found differences in postural stability of patients after surgical treatment of cervical discopathy. In the group of patients studied, a balance in the contact area of the feet with the ground was observed. There was also an improvement in the percentage loading of the lower limbs, where after the surgery, the described group of patients achieved an improved distribution of loads.

The results indicate an improvement in postural stability after surgery, which allows the use of the tensometric mat to be considered a promising element of objective diagnostics in the assessment and planning of the rehabilitation process.

Keywords: postural stability, cervical discopathy, tensometric mat

Biography:

dr Wojciech Smuczyński - Master of Physiotherapy, bachelor of Nursing. Academic teacher - assistant profesor at the Department of Physiotherapy at Collegium Medicum UMK in Bydgoszcz. In 2016, the obtained doctoral degree in medical sciences in the discipline of medical biology after defending the doctoral dissertation:"Spectrophotometric analysis of the nucleus pulposus of the intervertebral disc in patients operated on due to osteoarthritis of the spine" - at the Faculty of Medical, Collegium Medicum Nicolaus Copernicus University in Bydgoszcz.

Feasibility of an intervention to increase physical activity levels among preschool children: Results of a cluster randomised controlled trial

Mosfer A. Al-walah[1,2*], Michael Donnelly[1], Adel A. Alhusaini[3] and Neil Heron[1,4]

[1]Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast
[2]Department of Physical Therapy, College of Applied Medical Sciences, Taif University, Taif, Saudi Arabia
[3]Department of Rehabilitation Sciences, College of Applied Medical Sciences, King Saud University, Riyadh, Saudi Arabia
[4]School of Medicine, Keele University, England

BACKGROUND Low physical activity in children is linked to poor health. Most children do not meet physical activity recommendations. Preschools are promising settings to implement obesity prevention interventions in the early years. This study aimed to assess the feasibility, acceptability, and fidelity of a randomised controlled trial of "I'm an Active Hero" (IAAH) intervention.

METHODS Two preschools in Taif city, Saudi Arabia, were randomised to either the IAAH intervention (n = 1) or the usual curriculum control group (n = 1). Participants were 3-5-year-old children. The 10-week intervention ran from February to April and included practitioner-led physical activity and sedentary behaviour sessions in preschools, plus an interactive home component. Primary outcome measures were intervention fidelity, recruitment and attrition rates, and compliance with trial procedures. Secondary outcomes were BMI z-score and objective physical activity and sedentary time measured via the ActiGraph GT3X accelerometer. Process evaluation involved focus groups with practitioners, interviews with participating parents and pre/post practitioner logbooks and parental questionnaires.

RSULT The preschool component of the intervention had high fidelity (89%), while the home component's fidelity was low (61%). Cluster recruitment rate was 11.6%; individual recruitment rate was 36% (52/143 children, mean age 4.17 years, 44% girls). Attrition was 67%. Compliance was highest for BMI (90%); 67% provided valid accelerometer data at baseline and follow-up, and parental questionnaire response was 55%. Post-intervention, the intervention group had a small BMI z-score decline, while the control group had a slight increase. Similarly, the intervention group showed increases in time spent in moderate- to vigorous-intensity physical activity (MVPA) of 7.3 minutes per day, took 1,125 more steps per day, and reduced sedentary time by 18 minutes per day compared to the control group. A process evaluation has recently been conducted and results will be presented at the congress.

CONCLUSION and CONSIDERATIONS for PRACTICE Overall, the IAAH intervention was feasible and acceptable in Saudi preschools. More efforts to maximise participant recruitment, retention, and adherence to accelerometer protocols should be implemented in any future efficacy or effectiveness trials.

Key words: physical activity, preschool children, Feasibility, intervention, Randomised controlled trial.

Biography:

With a deep commitment to advancing pediatric physical therapy, I hold both bachelor's and master's degrees in the field and am currently pursuing a Ph.D. My professional journey has transformed into that of a dedicated researcher, blending extensive clinical experience with a passion for pushing knowledge boundaries. Throughout my academic and professional pursuits, I have sought to bridge the gap between theory and practice. As a Ph.D. candidate, my focus is on contributing new insights to pediatric physical therapy, driven by an unwavering dedication to enhancing patient health in this specialized domain.

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KEYNOTE PRESENTATIONS

DAY 2

Saud Al Obaidi
Dar Elshifa Hospital, Kuwait

Walking speed following joint arthroscopy, arthroplasty and spinal arthrodesis

Walking speed is now considered as functional vital sign, a reliable predictor for future adverse health problems, therefore, it is importance from a safety and clinical perspective , to continue monitoring and assessing the customary walking speeds (CWS) and the ability to sit to stand (STS) for individuals underwent surgical procedures involving their spine, the joint of upper or lower extremities to insure that their walking speed remain within the normative references value.

Objectives: To investigate the impact of arthroscopy, Arthrodesis & Arthroplasties on CWS and the ability to STS .

Statistical Methodology: Descriptive statistics, mean and standard deviation, Analysis of Variance (ANOVA) and regression analysis were utilized in the data analysis . The significance level was set at $p < 0.05$ for all analyses.

Results: A total of 106 male and female participant, with average age, height, weight , body mass index (BMI) of the participants were (60.6 ± 11.5 years, 162.3 ± 10.8 cm, 80.1 ± 12.3 kg , 30.4 ± 4.3) respectively. The average post operative duration was 4.3 ± 1.9 years with a rang (1 -9) years. Averaged walking speed was calculated and normalized over 6 meter . ANOVA finding revealed a statistically significant difference in CWS, and STS30sec across the different surgical and anatomical location P<. 0.001. Patients with upper limb surgeries demonstrated high CWS (1.2 m/s ± 0.4), significantly differing from those with lower limb (0.9 m/s ± 0.2) and spine arthrodesis (0.9 m/s± 0.3) as well as high repetition of STS30 sec (13, ± 0.2) P<.001. Regression analysis model, showed several significant predictors explaining 53.8% of the variance in CWS ($R^2 = 0.538$)..

Discussion The most significant decline in CWS and STS was noted among individuals underwent surgeries to their hips, knees and lumbar spine than those underwent cervical or shoulder procedures.\

Conclusions Our results demonstrate the important of continued monitoring and assessing walking speed following major joint and spine surgeries to prevent future decline in health and quality of life.

Biography:

Prof. Saud received his Ph.D. in physical therapy from New York University 1991. Prof. Saud have 36 years of clinical experience, in the management of pain and musculoskeletal dysfunction. Currently he is working as professor of and consultant of physical therapy in DarElshifa Hospital

He was the ex Dean of Faculty of Allied Health Sciences, at Kuwait university (2007-2017) His research area included management of acute and chronic pain and dysfunction, focusing on the consequences of selected biopsychosocial factors including; anticipation and fear of pain, exaggerated pain perception, pain avoidance behavior, life stress, coping strategies, self-efficacy on human performances. Prof. Saud have published many articles in prestigious international journal and served as a reviewer for many local and international journal including ; Journal of Physical Therapy Theory and Practice, Annals of Human Biology, Physiotherapy Research International, clinics and practice, International Journal of General Medicine, Kuwait Medical Journal, and Saudi Medical Journal.

Emidio Jorge Santos Lima

Roberto Santos General Hospital – Salvador – State of Bahia – Brazil

Diaphragmatic rehabilitation after weaning from mechanical ventilation – A study project

Forty eight percent of patients in ICUs will be treated by mechanical ventilation (MV) 1. It's a lifesaving strategy 2 but it's associated with complications, such as: pneumonia, barotrauma, volume-trauma, tracheal stenosis, prolonged MV and death 3. One cause of MV and weaning failure is diaphragmatic dysfunction (DD), which occurs up to 63% of patients during MV 4. Considering this complication I hypothesized that the use of high-flow oxygen through nasal cannula (HFONC) among patients after weaning from MV with DD could decreases the incidence of weaning failure. HFONC is scientifically approved noninvasive strategy for treating patients with moderate to severe hypoxemic respiratory failure (RF) 5. HFONC among patients with RF is associated with less 90- day mortality compared with noninvasive MV and standard oxygen therapy 5.

Method A study for testing the hypothesis that HFONC could decreases the rate of weaning failure among mechanically ventilated patients extubated with DD, identified by ultrasound.

Inclusion

Adult patients

Patients with RF treated by MV (more than 48 h) and extubated after successfully spontaneous respiratory trial

Lung and diaphragm ultrasound before the extubation

Exclusion

COPD

Palliation

RF due neuromuscular syndromes

Absent echography window

The patients will be, before the extubation, evaluated by lung ultrasound 6 and diaphragm ultrasound 6. Those patients will be randomly assigned in two groups: control and intervention. Patients in the control group or with normal diaphragmatic function will be treated without HFONC but by the usual post-extubation management. Patients in intervention group with DD6 will be treated by HFONC.

Biography:

Emídio Jorge Santos Lima has completed his PhD in 2011 from Federal University of Bahia-Brazil (UFBA) and Critical Care Medicine Fellowship in 2012 from Pierre and Marie Curie University, Paris 6. He is the director of Intensive Care Unit at PROHOPE Hospital (Brazil), and Professor at UNIME University and Roberto Santos General Hospital (Brazil). He has published clinical researches about Mechanical Ventilation, Echography Pulmonary, and Echocardiogram in reputed journals.

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SPEAKER PRESENTATIONS
DAY 2

Effects of flexion mobilization with movement on pain and range of motion in subjects with low back ache

Ankit Bhargava
Jayoti Vidyapeeth Women's University, Jaipur, RJ, India

Background: Low Back Pain or lumbago is one of the most common musculoskeletal disorders. It has been estimated that 60% to 80% of all adults experience low back pain (LBP) at some point in their lives, although not all seek medical care. LBP can be treated by using wide variety of treatment approaches including manual therapy. Mulligan pioneered a relatively new concept in manual therapy, the spinal techniques are known as mobilization with movement (MWM) or as SNAGs an acronym for Sustained Natural Apophyseal Glides and NAGs an acronym for Natural Apophyseal Glides. There is a limited evidence for Flexion MWMs on relieving pain and improving lumbar ROM.

Objective: This study is to investigate the effects of flexion Mobilization with Movement on spinal Pain & Range of motion in subjects with Low Back pain.

Methods: A small scale study was conducted using pre and post experimental control design. After assessment, 30 subjects with low back pain belonging to an age group of 18-35 years with pain on lumbar flexion were selected and divided into two groups treated with MWM intervention (experimental group) and a placebo intervention (control group) with a frequency of 3 sessions with 10 repetitions in each session. Lumbar spinal flexion and pain were recorded before and after immediate treatment intervention, using inclinometer and visual analogue scales respectively. The data analysis was done using student 't' test.

Results: Mean pain scores ($p<0.05$) reduced significantly with the MWM intervention, as compared with the placebo. Mean lumbar spine ROM ($p>0.05$) with MWM intervention did not showed any significant difference compared with placebo.

Conclusions: Flexion MWM's produced statistically significant reduction in pain level when compared with Group B but there was no significant difference in lumbar spine ROM. Based on the final outcome, it can be concluded that flexion MWM's may be a useful intervention to relieve pain in patients with low back pain.

Keywords: Low back pain. MWM's, Inclinometer. Range of Motion. VAS.

Biography:

Dr Ankit Bhargava has completed his PhD in Physiotherapy at the National University of Singapore. He is the Dean-Faculty of Physiotherapy & Diagnostics at Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India and the Founder & Director of ABHIAHS, a premier Healthcare organization & Medical Institute. He has been associated with many renowned International and national organizations. He is the only physiotherapist in India who got awarded the Govt. of India, Govt. of Rajasthan awards & Presidential medal for his services in Physiotherapy. He is the only physiotherapist who served in the Himalayas for 50 days at a height of 18000 feet. He is also a TEDx Speaker and also nominated for Padma Awards 2024, India's highest civilian awards by Government of India.

JockeyMotion Tracker- Revolutionizing Posture and Balance Monitoring in Hippotherapy

Neha Vyas
Department of Physiotherapy, University of Engineering and Management, Jaipur, India

Hippotherapy, a therapeutic approach utilizing horseback riding, has garnered attention for its potential benefits in improving posture, balance, and overall well-being in individuals with various physical and cognitive challenges. However, monitoring and assessing the effectiveness of hippotherapy sessions have traditionally relied on subjective observations, lacking quantifiable data. This pilot study introduces the JockeyMotion Tracker, a novel wearable device designed to revolutionize posture and balance monitoring during hippotherapy sessions. The JockeyMotion Tracker integrates state-of-the-art sensors and machine learning algorithms to capture and analyze key metrics related to posture and balance in real-time. This wearable technology offers a non- intrusive and objective means of evaluating the effectiveness of hippotherapy interventions by providing accurate and actionable data to therapists and caregivers. In this pilot study, a cohort of individuals undergoing hippotherapy sessions will wear the JockeyMotion Tracker during their sessions. The study aims to assess the feasibility, accuracy, and usability of the device in monitoring posture and balance parameters. Additionally, subjective feedback from therapists, caregivers, and participants will be collected to evaluate the overall acceptability and utility of the JockeyMotion Tracker in a clinical setting. Preliminary results from this pilot study are expected to demonstrate the potential of the JockeyMotion Tracker in enhancing the monitoring and evaluation process in hippotherapy. By providing objective insights into posture and balance, this innovative technology has the potential to optimize therapeutic interventions, personalize treatment plans, and ultimately improve outcomes for individuals undergoing hippotherapy.

Biography:

Neha Vyas is Pursing her PhD from Nims University, Jaipur. She is the Associate Professor at University of Engineering and management, Jaipur, India. She has published more than 39 papers in reputed journals and has more than 50 Copyrights and 10 Patents Published under IPO India.

Physical Therapists in Saudi Arabia towards the Use of Dry Needling on Spasticity in Patients with Stroke

Bajran Mohammad Aldossari
Prince Sultan Military Medical City
Physical Therapy Department, Saudi Arabia

Introduction: Studies that describe spasticity and development of contractures are scarce; however, a permanent loss of joint range of motion was observed to be reported 3–6 weeks after the occurrence of stroke. The prevalence of spasticity in paretic patients has been reported to be 27% at 1 month, 28% at 3 months, 23% and 43% at 6 months, and 34% at 18 months. Various approaches, such as exercises, splinting, and medication have been used to treat spasticity with moderate improvements in the long-term range. Aim: To assess the knowledge, attitude, and practice among physical therapists in Saudi Arabia toward the effectiveness of dry needling on spasticity in patients with stroke. Method: A cross-sectional study was conducted using a close-ended questionnaire that was distributed among physical therapists in Saudi Arabia to convey the main objective of the study. The questionnaire was distributed on different media platforms.

Biography:

Bajran Aldossari, Prince Sultan Military Medical City, KSA. Start working as physiotherapist 2003; has MSc 2011 ; Senior Physiotherapist and clinical supervisor of Neuro-Rehabilitation unit

Frozen Shoulder (Adhesive Capsulitis): A comprehensive review of anatomy, etiology, stages, diagnosis, management, and complications.

Mohammad Rafiqul Alam
Cumilla Diabetes Hospital, Bangladesh

Frozen Shoulder, also known as Adhesive Capsulitis, is a debilitating condition characterized by pain and restricted range of motion in the shoulder joint. This abstract provides a concise overview of the anatomical aspects, epidemiology, etiological factors, disease stages, pathological mechanisms, diagnostic approaches, management strategies, and potential complications associated with Frozen Shoulder.

Anatomy of the shoulder joint is introduced as a crucial foundation for understanding the condition. The glenohumeral joint's intricate structure involving the humerus, scapula, and clavicle, along with its surrounding ligaments, muscles, and synovial capsule, contributes to the joint's remarkable mobility and susceptibility to adhesive capsulitis. The definition, epidemiology, and etiology of Frozen Shoulder are elucidated, underscoring the condition's prevalence, primarily in middle-aged individuals, and its association with systemic conditions such as diabetes and thyroid disorders. The disease's progression through three distinct stages—painful, frozen, and thawing—is explained in relation to the hallmark symptoms of pain and limited mobility. The abstract delves into the pathological mechanisms underlying Frozen Shoulder, involving inflammation, fibrosis, and capsular contracture, resulting in the characteristic adhesions that restrict joint movement. The diagnostic process is outlined, encompassing clinical evaluation, imaging modalities like X-rays and MRI, and exclusion of other shoulder pathologies.

Management approaches encompass conservative and intervention-based strategies, including physical therapy, anti-inflammatory medications, corticosteroid injections, and, in severe cases, surgical interventions like arthroscopic capsular release. The potential complications of Frozen Shoulder, such as chronic pain, muscle atrophy, and functional impairment, are discussed.

In conclusion, this abstract provides a comprehensive over view of Frozen Shoulder, encompassing its anatomical basis, epidemiological context, etiological factors, disease progression, pathological mechanisms, diagnostic methods, management options, and associated complications. A clear understanding of Frozen Shoulder is essential for healthcare practitioners to deliver accurate diagnoses, appropriate treatments, and improved patient outcomes. Further research is needed to optimize therapeutic strategies and alleviate the substantial burden that Frozen Shoulder places on individuals and healthcare systems.

Biography:

Dr. Mohammad Rafiqul Alam (PT) has completed Bachelor of Physiotherapy (BPT) from Singhania University, India. He also completed MPH (Master of Public Health) from Atish Dipankar University of Science and Technology (ADUST) Bangladesh. He is working as Chief Physiotherapist and Orthopedic Nursing lecturer for Cumilla Diabetic Hospital, Bangladesh, since 2002 till now. He has been a special guest, speaker at many conferences in India and France. He obtains a Fellowship Diploma in Stroke Rehabilitation from the London Academy of Sports and Health Sciences, UK.

Taking care of Respiratory Health and managing the respiratory conditions actively

Hira Shams
Sir Ganga Ram Hospital, New Delhi, India
Teerthanker Mahaveer University, India

Prioritizing respiratory health and actively managing respiratory conditions is paramount. My firsthand experience in COVID wards illuminated the critical significance of lung care. Adequate oxygen intake not only sustains respiratory function but also enhances the performance of other bodily systems. Leveraging my expertise in pulmonary rehabilitation, I advocate for every individual to prioritize their respiratory health.

Observing the outcomes of patients, I've noted that those with a history of practicing breathing exercises tend to experience faster recovery compared to those without such a background. This underscores the effectiveness of proactive respiratory care in mitigating the impact of respiratory illnesses. Therefore, I urge everyone to incorporate regular respiratory exercises and techniques into their daily routines to strengthen lung function and resilience.

Furthermore, raising awareness about the importance of respiratory health is essential. By emphasizing preventive measures, early intervention, and comprehensive management strategies, we can empower individuals to take proactive steps in safeguarding their respiratory well-being. Whether through lifestyle adjustments, adherence to treatment regimens, or participation in pulmonary rehabilitation initiatives, every individual plays a crucial role in promoting respiratory health.

In conclusion, actively managing respiratory health is indispensable for overall wellness, especially amidst the challenges posed by respiratory illnesses like COVID-19. By prioritizing lung care and adopting proactive measures, we can bolster our capacity to combat respiratory ailments and lead healthier lives.

Biography:

Hira Shams, a dedicated physiotherapy professional, earned her bachelor's degree in India and began her career amid the COVID-19 pandemic. Working in COVID wards, she exhibited exceptional commitment and skill, treating thousands of patients and aiding in their recovery. Her expertise in respiratory management proved instrumental, leading to recognition by Indian News Channel, India Times, for her innovative approaches. Hira's achievements earned her acclaim as a guest speaker, where she shared insights on COVID management and respiratory health with aspiring physiotherapy students. Her journey exemplifies dedication and skill in the face of adversity, inspiring others in the field.

Mind body medicine interventions for physical rehabilation and mental wellbeing

Haywantee Ramkissoon
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[4]Visiting Professor, Centre for Innovation in Tourism, Taylor's University, Selangor, Malaysia

Mind Body Medicine (MBM) interventions are gaining more interest from healthcare practitioners, behavioural scientists and scholars as the need for an integrated model of healthcare is what is required to alleviate the pressures on the system and promote people's physical and mental wellbeing. MBM combines traditional healing systems with modern biomedical treatment demonstrating the interaction between brain, mind, body and behaviour. MBTs have been evidenced to improve wellbeing and quality of life. MBTs physical techniques encompass physical activity (e.g., nature sports, martial arts), yoga, mindfulness, music, dance, relaxation techniques, nutrition, psycho-social and psychoeducation. These MBM interventions also referred to as 'integrative medicine' builds on salutogenesis focusing on health and well-being. Evidence suggests MBM improves physical wellbeing, builds resilience, reduces stress; this can in turn promote mental wellbeing. The range of studies investigating mental and emotional stress and the neurology of emotion and cognition calls for a deeper understanding of MBM interventions. There is also a need to further explore the physical rehabilitation outcomes resulting from MBM interventions. This has important implications to reduce chronic diseases, promote healthy ageing and brings potential to reduce the costs associated with social and health care bringing important quality-of-life outcomes. A multi-stakeholder engagement approach is essential. Collaborative efforts from clinicians, physiotherapists, neuropsychologists, integrative healthcare professionals and the community and government are required in exercising thoughtful and deliberate planning to promote MBT for physical rehabilitation and mental wellbeing. This study aligns with the United Nations Sustainable Development Goals.

Keywords: Mind Body Medicine (MBM) interventions; Physical Rehabilitation; Neuropsychology; Physical wellbeing; Mental Wellbeing; Quality-of-life; Sustainable Development Goals

Biography:

Haywantee (Rumi) Ramkissoon, Ph.D. is a Fellow of the Peer Review Council at the British Academy of Management, UK. She is a Professor at UniSA Business at the University of South Australia. She is also affiliated with the College of Business & Economics, South Africa, and Centre for Research and Innovation in Tourism at Taylor's University, Malaysia. Her scholarship in sustainability research across domains of public health, wellbeing and quality-of-life and sustainable community development, has gained international significance evidenced by media coverage, prestigious awards and academic and industry keynotes. She serves on several editorial advisory boards of top-tier journals and as a reviewer across disciplines. She is a double doctorate and recognised as one of the world's most cited highly cited researchers (2021, 2022, 2023) - Clarivate Analytics and is also listed in Stanford World's top 2% most cited world scientists (2021, 2022, 2023). She engages in collaborative research with national and international academic and industry partners for the benefits of individuals and society.

FITNOPHYSIO in UK: A Collaboration between physical therapy services and gym

Ashbeel John Edgar
Primary Care Physio, England, UK

Fitnophysio is a new programme initiated by Dr. Ashbeel John Edgar. It is a collaborative endeavour that combines gym facilities and physical therapy clinics to provide optimal health and wellness for the general population in the UK. The UK has seen a rise in gym memberships, reflecting a national interest in health and wellness. However, this increase is accompanied by a potential increase in exercise-related injuries and musculoskeletal problems generally occurring in gyms. Access to physical therapy services within the gyms has certain benefits, such as immediate pain and injury management experienced while working out. A physiotherapist can collaborate with a personal trainer at the gym to develop a personalised exercise plan that is goal-specific, efficient, and safe. This leads to exercise routines that minimise musculoskeletal injury risk and accelerate recovery from existing injuries. Fitnophysio will substantially reduce the reliance on external physical therapy services, as they may not be readily accessible immediately and may prolong recovery that could be quickly taken care of if treated immediately. Fitnophysio will promote widespread health and wellness awareness and make it easy for the general population to access wellness and fitness with confidence in outcomes. One of the challenges for this endeavour would be accommodating physical therapy space within gyms, as this might require modifications in existing layouts and can be costly. However, introducing collaborative business models should be able to manage these challenges, as the potential benefits of this collaboration are of great importance to the health and wellness of the general population of the UK.

Biography:

Dr. Ashbeel John Edgar began his career in physiotherapy in Pakistan after completing his Doctor of Physical Therapy (DPT) in 2015 from the renowned Ziauddin College of Rehabilitation Sciences, Ziauddin University. He started his clinical journey at one of Pakistan's most reputable hospitals, the Aga Khan University Hospital. Driven by a desire for broader knowledge and impact, Ashbeel furthered his education in the UK. In 2022, he earned a Master's in Public Health from the University of Bedfordshire. This additional expertise complements his clinical experience and allows him to contribute to public health initiatives. Ashbeel has eight years of physiotherapy experience and research publications and works as a first-contact physiotherapist in Primary Care Physio UK. He is the founder and CEO of Fitnophysio, a hybrid fitness gym and physio clinic he initially established in Pakistan.

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Scientific evaluate quantification of social and behavioral by scalp Acupuncture on children with autism spectrum disorder

Zhenhuan Liu Bingxu Jin Yong Zhao
Nanhai Maternity and Children Hospital Affiliated to Guangzhou University of Chinese Medicine CHINA

Autism spectrum disorders (ASD), a severe and pervasive heterogeneous neurodevelopment disorder, is characterized by impaired social interaction and communication, repetitive behavioral patterns, and restricted interests. Many aspects of ASD are still debatable, with elusive and complex etiologies, and no effective therapy exists. At present, many studies have verified the effectiveness and safety of acupuncture in the treatment of autism. However, the results should be explained cautiously due to methodological weakness. In order to obtain powerful evidence of the effectiveness and safety of acupuncture in the treatment of ASD, it is worth designing a study with higher methodological quality. We summarize the potential mechanism of acupuncture in the treatment of ASD. We found the mechanism of acupuncture treatment of ASD is still unclear. On the one hand, due to the complex etiology and biochemical changes of ASD, it is a neurodevelopmental disorder syndrome with a variety of biological factors. On the other hand, there are few basic researches on the mechanism of acupuncture in the treatment of ASD. There is still a long way to go to reveal the secret of this mechanism. Acupuncture has a short history in the treatment of autism, but the application of scalp points has achieved remarkable curative effect. There are different kinds of scalp acupuncture therapy in clinic. Thus, we put forward "Xingnao Kaiqiao scalp acupuncture therapy"and bring forth the need for well-designed, rigorous clinical and experimental studies to provide formidable scientific evidence validating the efficacy and safety of acupuncture in the treatment of ASD.

Key words : Acupuncture; Autism spectrum disorders; Xingnao Kaiqiao scalp

Maximizing Neuroplasticity Across the Lifespan: Strategies for Enhanced Learning and Cognitive Function

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The human brain exhibits remarkable plasticity from infancy through early adulthood, with its peak moldability occurring before the age of approximately 25 years. During this period, the brain's capacity to adapt and form new neural connections facilitates effortless learning across various domains, including language acquisition, motor skills development, and cognitive abilities. This early phase of life underscores a critical window where exposure alone can significantly influence developmental trajectories in skills such as walking, feeding oneself, reading, musical instrument proficiency, and bicycle riding. However, as individuals age beyond this window, the intrinsic plasticity of the brain wanes, making the learning process more challenging and necessitating a more deliberate and structured approach.

This presentation delves into the neurobiological underpinnings that account for the diminishing ease of learning with age and proposes a two-step learning process designed to enhance neuroplasticity in older adults. By integrating recent advancements in neuroscience with practical learning strategies, we will explore how individuals can continue to effectively learn, improve movement, augment memory, and boost cognition despite the natural decline in brain plasticity. Emphasis will be placed on actionable techniques and interventions that can be applied to everyday learning scenarios to foster continued cognitive growth and neural adaptability.

Our discussion aims to demystify the processes of neuroplasticity across different life stages and provide insights into optimizing lifelong learning and mental agility. Attendees will gain a comprehensive understanding of how to approach learning events post-25, ensuring that they can maximize their brain's potential for plasticity, thereby enhancing their quality of life and cognitive reserve well into later adulthood. This presentation is poised to contribute significantly to the fields of neuroeducation, cognitive psychology, and gerontology, offering a blueprint for harnessing the enduring power of the human brain's adaptability.

The challenges of translating and adapting outcome measures for different cultures

Neetu Mahapatra
MAEER's Physiotherapy College, Pune, India

In an increasingly globalized world, ensuring the validity of clinical trials, research studies, and healthcare interventions across diverse populations is crucial. However, translating and adapting outcome measures—questionnaires, scales, or tools that capture patient experiences and treatment efficacy—poses unique challenges. These measures are often built on Western-centric concepts and language, potentially leading to misinterpretation and inaccurate data when used in different cultural settings. Implementing culturally sensitive outcome measures is essential for ethical, equitable, and impactful healthcare and research on a global scale. This presentation aims to equip professionals with the tools and understanding to navigate this complex area and ensure their work meaningfully resonates across diverse populations. This presentation will address the core issues in translating and adapting outcome measures, including Linguistic Equivalence: Going beyond literal word-for-word translations to achieve conceptual and functional equivalence of terminology. Cultural Adaptability: Addressing value systems, beliefs, and social norms that may influence how respondents interpret and answer questions. Construct Validity: Ensuring the translated measure accurately assesses the intended psychological or health-related concept in a new cultural context. Practical Considerations: Strategies for collaborative translation processes, pretesting, and working with diverse stakeholders. Learning Objectives: Participants will: a) Understand the multi-faceted complexities involved in translating and adapting outcome measures for different cultures. b) Gain familiarity with best practices and guidelines for ensuring linguistic and cultural equivalence. c)Develop strategies for mitigating the risk of bias and improving the validity of assessments in cross-cultural settings.

Biography:

Dr Neetu Mahapatra (PT) is pursuing her PhD from Gujarat University and completed her Master of Physiotherapy from Pune University. She is the Professor & Head of Department, at MAEER's Physiotherapy College. She has teaching experience of 18 years. She has a book published in her name with Lambert Publishing House. She holds the Copyright of the Indian Hand Function Assessment Scale. Her areas of interest in the field of research are Rheumatoid Arthritis and, Spine. She is a Certified Mulligan Practitioner. She has completed Post Graduate Diploma in Hospital and healthcare management from Pune University.

Thalassemia: Impact of Physiotherapy

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Background: Patients with thalassemia often complain of pain, fatigue and breathlessness. Studies have shown that these patients have reduced muscle mass, are at higher risk for osteoporosis and engage in significantly less physical activity. Significant cardiac iron overload also decreases their exercise capacity further. However, there is dearth of literature studying the impact of physiotherapy on bone health and overall wellbeing in thalassemia. Therefore the current study aimed at studying the impact of physiotherapy in management in individuals with thalassemia.

Materials and Methods: The records of 160 patients reporting at Comprehensive Thalassemia Care Centre, from June 2017- June 2018 were retrospectively analyzed. 145 of these were transfusion dependent thalassemia (TDT) and 15 were non-transfusion dependent thalassemia (NTDT) from 5 to 30 years of age. They underwent systemic examination (ROM, Tightness, Manual muscle testing) followed by management (pain management, strengthening exercises, aerobic exercises and pulmonary rehabilitation) as per their complaints. Assessment was done using Visual Analogue Scale (VAS) for pain and fatigue. Symptom of breathlessness was assessed by New York Heart Association (NYHA) grades.

Effect of physiotherapy on categorical variables (pain, fatigue, dyspnea) was evaluated using paired 't' test.

Results: Of the 160 patients, 97 were males and 63 were females. Among the symptomatic patients, 92 had bony pains, 21 had dyspnea and 31 complained of fatigue. 16 patients were asymptomatic. After physiotherapy there was significant improvement in pain ($p < 0.001$), dyspnea ($p < 0.001$) and fatigue ($p = 0.001$) in TDT patients. Though the number of NTDT patients was small, NTDT patients too showed significant improvement in pain ($p < 0.001$), dyspnea ($p < 0.05$) and fatigue ($p < 0.001$).

Conclusion: Our study shows that inclusion of physiotherapy in management protocol of patients with thalassemia has significant positive impact on their symptoms. Thus, we recommend ongoing physiotherapy regime as an essential part of comprehensive thalassemia care.

MAGNETIC SUPERINDUCTION THERAPEUTIC EFFICACY INs OSTEOARTICULAR PATHOLOGIES

Mattia E, Ciucci M, Di Modica V, Autieri E, Izzo S, Sabbato M, Sabbato V, Romeo F, Corbo M
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Background: Joints are body structures designed to connect two or more bones in the skeleton together in order to provide stability and allow movement. To prevent wear and tear, this joining is not direct but mediated by cartilage, fluid (synovial) or fibrous tissue. Joints can be affected by a variety of rather painful and sometimes disabling conditions due primarily to trauma or inflammatory processes that degrade articular cartilage. The most common as well as the most disabling arthropathy with degenerative character, however, is arthrosis.

The symptomatology of arthropathies is variable. The patient may initially experience discomfort, fatigue and generalized musculoskeletal pain that only later involves the joints (primarily those of the hands, feet, wrists, ankles, elbows, knees) making them stiff and painful. Other symptoms, depending on the pathology, are bony outgrowths and ossification of tendons and ligaments resulting in permanent stiffness of the affected joint; stiffness, lumbago, fasciitis, peritenosynovitis ; acute pain.

Aim: The goal was to reduce pain and edema, recover strength and mobility of the affected segment, and eliminate muscle imbalances caused by asymmetrical loading.

Methods: We used a high-intensity electromagnetic stimulation device (BTL-6000 Super Inductive System, BTL Industries Ltd.) in a comprehensive physiotherapy procedure of 20 sessions. The examination included pain assessment with the Verbal Numerical Rating Scale and a range-of-motion assessment performed with a goniometer. We used functional training and basic principles of developmental therapeutic exercise to recover strength and mobility in the affected segment and to correct muscle imbalances causing pain in other areas of the body.

Results: We reduced the estimated recovery time of 3 months to 1.5 months. Pain and edema at the surgery site decreased. At the end of treatment, we recovered satisfactory strength and mobility in the affected segment. Muscle compensation patterns causing pain were minimized.

Conclusions: Improvement of signs and symptoms with high-intensity electromagnetic stimulation enabled us to achieve an excellent quality of life.

Sustaining Occupational Health of Physiotherapists: Customizing Ergonomic Interventions for Optimized Performance

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Physiotherapists help to manage pain and improve physical health in the people who are suffering due to injury, illness, or disability. While ameliorating the patients' health issues, these service providers are often exposed to different sources of stresses, e.g., standing on their feet for long periods of time, lifting and moving patients, performing manual therapy techniques, etc., as per the demands of the task at hand, and may need to hold certain awkward postures for varying duration of time. An inadequate response to such stressful situation may result in early onset of fatigue, musculosketal injuries and may also trigger burnout syndrome. Therefore, for mitigating the physical and mental health issues of the Physiotherapists, it is necessary to consider the inherent limitations and capabilities of the target population, and apply human centric approach of assessing the working conditions, procedures, maneuvers and equipment used in this occupation. The science that deals with such human-machine-environment interfacing issues is known as Ergonomics. Under the aegis of Ergonomics and Human Factors research, holistic evaluation needs to be carried out for understanding the physical, mental and occupational status of these service providers. It may result into modifications in standard operating procedures and maneuvers, design and development of ergonomic interventions for enhancing compatibility of the target population with workspaces under respective environments, eventually reducing the risk of injury. Incorporating ergonomics principles under this scenario will ensure the sustainability of health and enhanced performance of the Physiotherapist and make them more engaged and productive.

Keywords: Physical Therapy Maneuvers, Musculoskeletal Disorders, Human Centric Approach, Overuse Injuries, Ergonomics Interventions

Biography:

Dr Deepti Majumdar is presently working as Scientist-'F' in the Department of Human Factors Engineering & Military Ergonomics, Defence Institute of Physiology and Allied Sciences, Defence R&D Organization, M/o Defence, GOI, Delhi, India. In her carrier spanning about 3 decades, she has rigorously practised military ergonomics with special reference to biomechanics of human gait, load carriage and proactive ergonomics as applied to military scenario. She has 8 product patents and about 35 publications in peer-reviewed International and National journals of repute and 5 book chapters. She has reviewed articles for several journals of repute, e.g., Gait and Posture, International Journal of Industrial Ergonomics, etc.

The effect of adding Dry needling of the Gluteus-Medius muscle to standard care for chronic low back pain - A randomized controlled trial

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Background: Individuals with low back pain (LBP) often exhibit weakness and the presence of trigger points in their Gluteus Medius (GMe) muscle.

Objective: To examine the effectiveness of active exercises combined with dry needling for the GMe muscle in patients with chronic LBP.

Design: A randomized control trial.

Methods: Twenty subjects with chronic non-specific LBP (age range: 31-55 years) were randomly divided into two groups: intervention and control groups. Both groups received active physical therapy including exercises for 6 treatments. In addition, at the end of each session, the intervention group received deep dry needling to their GMe muscle, and the control group received sham needling. Level of pain (using VAS scale), function (Oswestry disability index), and range of motion (ROM) (forward flexion and schober tests) were measured pre and post-intervention.

Results: Following intervention both groups improved in pain, function, and ROM. The research group showed greater improvement in pain level compared with control. Greater improvement in function was found among individuals with a higher disability who received dry needling compared with the control. No significant differences were found between research groups in range of motion.

Conclusions: When dry needling is added to physical therapy treatments for chronic non-specific low back pain, patients experience a reduction in pain and improved function.

Biography:

Prof. Dar is a physical therapist (B.PT) and has completed her M.Sc and PhD from the Department of Anatomy, Tel-Aviv University, Israel. She is a full member of the Department of Physical Therapy at Haifa University, Israel being the head of the department since 2019. Her research focuses on the musculoskeletal system to better understand function, injuries, and treatment. Her main research areas are: orthopedic and sport injury rehabilitation, pelvic floor muscle function, low back pain rehabilitation, sacroiliac joint and dry needling effect on muscle function, and for musculoskeletal problems.

Neuro-Physiotherapy Regimen to Enhance the Functional Performance of Meningitis with Ventriculitis and Hydrocephalus: Case report

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Background & Purpose: Prolonged immobility following acute meningitis often contributes to diminished strength, endurance, and balance as well as an increased risk of secondary problems such wounds, contractures, and respiratory infections. The purpose of this case report is to describe the progress from acute course toward a subacute and chronic phase of rehabilitation of a patient with a severe meningitis with ventriculitis and hydrocephalus plus emphasize the role of physical therapy in preparing the patient for the next level of care.

Case Description: 15-year-old male on 3ed of Oct 2022 before two weeks of admitting he was complaining about ear pain and sore throat, taken to private clinic and diagnosed with otitis media which he was started on antibiotics. He was only taken it for two days then he felt better so he stopped it altogether. Four days later he developed fever reaching to 40 degrees along with severe headache and multiple episodes of vomiting. As per his family he became confused and hallucinated about where he was but did not seek any medical advice at the time. By 3ed of October 2022 admitted to an advanced hospital where he had a prolonged hospitalization complicated by bilateral arm tonic posturing with facial deviation and frothy salivation, he was brought by ambulance car. His Glasgow Coma scale level was 11/15(opening eye, moving all limbs, mumbling) however he was agitated but following commands. This happens first time to him as per his family denying loss of consciousness no history of recent trauma, febrile seizure, aphasia and body weakness. In the Emergency department assessment found him to have laryngeal spasm and so intubation for his airway protection was made. Brain imagines was made showed extensive meningitis, empyema in supra and infratentorial ventricles as well as left thalamic, basal ganglia and internal capsule ischemic change. Patient underwent External Ventricular Drainage (EVD) insertion on 4th of October 2022 and removal on 19th of November 2022. He is then gone for another EVD insertion on 1st of December 2022 then shifted to Ventriculoperitoneal (VP) shunt insertion on 14th of December 2022. He went for prolong Intensive Care Unit (ICU) due to complications such as muscle spasms mainly laryngeal spasm. Physical therapy interventions started when patient admitted to ICU during the acute toward chronic hospitalization as inpatient, he was admitting to Neuro rehabilitation unit (NRU) were included positioning, bed mobility, range of motion, transfers as before but then advance training in balance and gait training to enhance the functional performance was given in NRU.

Outcomes: The patient received daily treatment for 14 months during his hospital stay, then once weekly treatment until he reached the subacute phase. On October 8, 2023, the patient was accepted into an intensive physiotherapy program, receiving two sessions of physical therapy along with the placement of measurement scales, such as the Functional Independence Measure (FIM), the Modified Ashworth Scale (MAS), and the Manual Muscle Test (MMT).

Discussion: Using FIM, MAS, and MMT, physical therapists are essential in the subacute recovery of severe meningitis because they increase functional mobility and reduce the risk of secondary problems

from prolonged immobility. Using standard functional evaluation and measuring methods throughout the patient's entire course of therapy, this example highlights the value of early mobilization and the application of progression.

Conclusion: It is generally acknowledged among researchers that the most effective treatment approaches are multidisciplinary, goal-oriented, involve all members of the healthcare team early and frequently, and emphasize family commitment and education. Further studies are vital to uncover the efficaciousness of particular physical therapy therapies in promoting motor recovery and, eventually, functional recovery within the population of meningitis survivors.

Biography:

Mr. Theeb Alsalem holds Bsc in physical therapy from Semmelweis University, Hungary Budapest. Presently working as Physical therapist with King Abdulaziz Medical City. National Guard Health Affairs, Riyadh KSA. Studying master of health administration at Saudi Electronic University, Riyadh, Saudi Arabia. Interested in physical therapy treatment and assessment more specialised in neurological cases. Start to study health administration for more education about management and administration in health care field.

ANALYSIS OF ANTHROPOGENETIC AND MORPHOFUNCTIONAL PARAMETERS MONGOLIAN WRESTLERS AND ATHLETES.

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Introduction . In recent years the global sports arena has observed a persistent struggle for the establishment of new records. Athletes are close to the limits of their physical abilities. Obviously it is becoming increasingly difficult for athletes to surpass existing records . This research is aimed at assisting in the selection of individuals for professional sports. Our study of anthrop genetic and morph functional characteristics assists in the identification of potential candidates for particular sports. In Mongolia, the physical development of athletes is not a focus and thus is extremely inadequate. In this regard, our study is of great theoretical and practical interest. The relevance of this study is determined by the fact that this is the first study of its kind [3,4,6].

Objective: The purpose of this study is to determine the level and dynamics of morphological and functional indicators in Mongolian youth engaged in various sports. It will also analyze the range of variations of genotypes of ACE gene in Mongolian athletes and its relationship to athletic ability (speed endurance, explosive strength, agility and flexibility).

Materials and methods: Were examined 157 athletes (103 Mongolian national wrestlers and 54 track athletes), 18-23 years of age, who were enrolled at the National Institute of Physical Education (NIPE) of Mongolia. Each athlete was measured in 39 anthropometric and functional parameters by standard methods [Bunak, 1941]. They also performed five tests. The test results determined the physical qualities. Buccal samples to determine polymorphisms gene ACE were collected [2,4,6]. Genome DNA was taken using the alkaline extraction technique. Genotypes were determined using the mini sequencing technique which was followed by MALDI-TOF detection. Statistical analysis was performed using the STATISTICA 8.0 software program.

Results: Average parameters of Mongolian athletes: body length of wrestlers national struggle 172.3 cm, girth of chest 97,05 cm, girth of shoulder 34.33 cm, girth of buttocks 102.9 cm, body weight 72.9 kg; body length of athletes - 167 2 cm, 86.6 cm girth of chest, girth of shoulder 27.25 cm, girth of buttocks 91.6 cm, body weight 62 kg.

In the present study produced molecular typing of genetic material, totaling 133 people (79 wrestlers and 54 runners) (Table 1).

Table 1.

The genotype frequencies of ACE gene wrestlers and athletes of NIPE Mongolia

Genotypes of gene ACE	wrestlets		runners		The total sample	
	№	%	№	%	№	%
DD	32	41	27	50	59	45.25
ID	26	33	12	22	38	27.56
II	21	27	15	28	36	27.19
Total	79	100	54	100	133	100.00

Table 1 shows that there are more athletes with DD genotype than ID and II. These results are consistent with the characteristics of gene ACE. That is, genotype DD indicates power and strength while II indicates endurance. Wrestlers require power and strength while track athletes require power and speed [2,4,6].

Discussion: We wrestlers greatest morphological dimensions and functional parameters of the body with those of track athletes with reliable significance ($p < 0.05$). Runners are characterized by the development of better speed-strength (jumping from a standing position 2.2 cm more), agility (performing in the shuttle run - 3 x 10 m - 0.55 seconds faster) and endurance (running 1000 meters 10.87 seconds faster) than wrestlers. Wrestlers performed better in power abilities. They moved up to 9.27 times more and their compression strength of both hands was 3.97 kg more than the performance of track athletes.

Athletes with DD genotype had the highest rates of body weight and dimensions of girth and showed good results in explosive strength. Athletes with II genotype had the greatest performance speed and strength endurance. Athletes with genotype ID had good results in flexibility.

Conclusions :

- The study shows that exercise affects the level of physical development of athletes. It also demonstrated significant differences in body development depending on sports specialization.
- Wrestlers had the largest body size and the best results in power qualities.
- Track athletes had more developed endurance and speed.
- There are differences in body size and level of physical fitness in carriers of different genotypes of ACE gene in Mongolian athletes.

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Exploring Strain Counter strain techniques for management of Complex pain regional syndrome (CRPS).

Aditi Gupte
Select Physical Therapy, CA 94538 USA

Complex regional pain syndrome (CRPS) presents as a chronic condition characterized by persistent and often debilitating pain.It encompasses symptoms beyond pain, including swelling, changes in skin temperature and color, and limited mobility. Despite extensive scientific research, CRPS lacks a definitive cure, and current treatment options primarily focus on symptom management to enhance functional outcomes. Physical therapy has emerged as an optimal approach in CRPS management.

One promising technique within physical therapy is strain counterstrain (SCS). SCS is a gentle manual therapy method that has demonstrated efficacy in addressing pain and improving function in various musculoskeletal conditions. Its gentle nature makes it particularly suitable for individuals with CRPS, who may be sensitive to more aggressive treatment methods. By incorporating SCS into a comprehensive physical therapy program, clinicians can target specific areas of dysfunction and alleviate pain while promoting mobility and function.

The benefits of integrating SCS into CRPS management extend beyond pain relief. SCS works by identifying and treating tender points or trigger points in muscles and connective tissues, which can help reduce muscle tension and improve overall tissue function. This approach aligns with the multifaceted nature of CRPS, addressing not only pain but also the underlying tissue dysfunctions contributing to the condition.

SCS can complement other physical therapy techniques commonly used in CRPS management, such as desensitization exercises, graded motor imagery, and progressive loading exercises. By combining these approaches, therapists can create tailored treatment plans that address the unique needs of each individual with CRPS improving their quality of life.

In conclusion, incorporating strain counterstrain (SCS) into a comprehensive physical therapy program holds promise for individuals with CRPS. Its gentle nature, coupled with its e ectiveness in addressing pain and improving function, makes it a valuable addition to the array of treatment options available for this challenging condition.

The brain, behaviour and the bladder interconnection in female athletes with urinary iincontinence – a narrative literature review

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Purpose – This reviewed article reveals that most of the female population are suffering with urinary incontinence especially pelvic floor dysfunction, either working women or housewife or athlete female (player in any sports activities), after pregnant women (post-natal), menopause attained women, etc. Most of the research review revealed that, the brain and the bladder is interconnected. Other articles revealed that, the behavior (emotional disorders) changes and the bladder is interconnected due to pelvic floor dysfunction result in stress or depression and anxiety among females. The goal of this review article is to be proved that the brain, behavior and the bladder is interconnected for female athletes with urinary incontinence by using more reviewed articles relevant to this study.

Methods- these research databases were searched to identify relevant articles by using – Cochrane library, PubMed, Web of science, Scopus, Elsevier, Medline, etc.

Result – the review articles stated that female athletes with urinary incontinence were affected with emotional changes or disorders due to pelvic floor dysfunction. Further study articles are referred for future study is to improve self-support or self-motivation for female athletes with urinary incontinence.

Keywords: female athletes, urinary incontinence, pelvic floor dysfunction, behavioral changes, emotional disorders.

Robotic neurorehabilitation in paraparesis after spinal cord injury

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Traumatic spinal cord injuries (SCI) demonstrate increasing frequency and high level of disability and alteration of quality of life of paraparetics.

The introduction of information and communication technologies (ICT) in rehabilitation, especially in neurorehabilitation (NR), requires actualization of the algorithms for care of patients.

The use of neurorobots and virtual reality in NR accelerates the process of functional recovery and ameliorates the autonomy in everyday life of paraplegics.

We explain our own experience in the field of NR (including ICT-based NR) of patients after spinal cord injury, consequence of a traffic accident. We will present clinical case reports and results of robotic NR – using Exoskeleton and Lokomat Pro devices. We consider that robotic NR can excite neuroplasticity and stimulate mirror-neurons.

The application of neuro-robots in clinical neurorehabilitation is compulsory for amelioration of independence in activities of daily living (ADL) and the quality of life of neurological patients. The complex NR-algorithm for paraparetics after SCI must include: physiotherapy (based on proprioceptive neuromuscular facilitation); occupational therapy (especially balance and gait exercises); robotic training; preformed physical modalities for motor stimulation (e.g. functional electrostimulations).

Keywords: neurorehabilitation, neurorobots, paraparesis, spinal cord injury

Biography:

Prof. Ivet KOLEVA is a medical doctor, specialist in Neurology and in Physical & Rehabilitation Medicine (PRM), with 30+ years of clinical practice and 3 dissertations: 2 PhD thesis and 1 thesis for Doctor-es-Medical Sciences. Actually, she works as professor in PRM at the Medical University of Sofia, Bulgaria. Borislav YOSHINOV is a medical doctor, actual trainee in Neurology. Nadezhda ZVETKOVA is a medical doctor, actually – trainee in PRM. Radoslav YOSHINOV is an engineer, bachelor and master in Information technologies (IT), actually – PhD student in IT.

Electromyograhic analysis of infraspinatus and supraspinatus muscle during Mugdar (Indian Club) swing

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Introduction: One of the widely popular forms of physical exercise in Asian times in 19th and early 20th centuries was Indian Club swinging.(1)) It was one of the physical training tools that has been invented in India in early eleventh century had also been used for athletic performance during medieval period. (2,3) ." Results has shown that not only it work for shoulder purpose but it also simultaneously work on core stability, grip strength, forearm muscle. (6,7,8)

Features and Applications of Indian Club: - Club bell shape is unique compare to other weight training. Tip is heavy, (9) weight portion lies mostly away from hand. Indian club has been formed in such a way that design itself as centre of mass extent beyond hand. (9) One of the versatile features of this is movement can be done in multiple planes. (4) Can be used in dynamic warm up according to necessity of specific sports. (7) Can be used in everyday lifestyle. (7) Light club swing for shoulder mobility, coordination training, (7) while heavy club for strength and power. (7)

Basic Method to do swing: - One of the principles of club for position is that there should be equal squareness of shoulder and body in front. (8) Heel should be in line closed to body, knees straight, arms and elbow closed to the sides, body straight, head erect and eyes straight to the front. (8)

Significance of rotator cuff muscles: - Shoulder is considered as one of the most mobile joint and according to different position muscular performance varies. (11) Stability of humeral head in scapular glenoid during shoulder motion can be maintained by rotator cuff muscle. (11) Dynamic stability for shoulder joint is maintained because of compression due to rotator cuff muscle contraction. (12) Rotator cuff muscle work efficiently and changes the force according to arm held at different angle and in different planes. (12) During swinging movement with club bell rotator muscle works. (7) One of the most recognised methods for investigating the changes in muscle activity can be done by Surface electromyography (SEMG). (13) It provides information regarding activation of muscle how much and how often. (16) For appropriate profile of muscle activation and level of contraction SEMG is used. (13) Therefore, our purpose is to analyse and compare recruitment of muscle activity such as Infraspinatus and Supraspinatus muscle during Mugdar swing. As there are paucity of research available in modern era for beneficial of Indian club swinging, so this research will help in contributing in field of Indian club swinging.

Methods:

Subjects: Thirty-three subjects whose age ranged from 18 to 30 years participated in this study with a Mean Age of (21.15 ± 2.54) years, Height (173.82 ± 7.53) cms., Weight (69.93 ± 13.40)kgs., BMI (23.22 ± 3.18) kg/m2. Subjects were recruited only if they are without any pain or any injury in the last 6 months. Institutional ethics committee (IEC) approval was taken prior to the study and subject consent was taken before initiating the study.

Surface EMG: Electromyographic signal data was collected from the muscles (Infraspinatus/ Supraspinatus) of the dominant shoulder of each subject. The subjects was first prepared for the EMG

electrode placement by cleaning the skin with alcohol wipes in order to maximize the electrode adherence to the skin and skin impedance.

Electrodes were placed according to Criswell (2010) guidelines (20).

For Infraspinatus: -Electrodes was placed 2 finger breadth below the lower spine of scapula.

For Supraspinatus: - Electrodes was placed over the supraspinatus fossa.

Test procedure:

- A Maximum voluntary isometric contraction was recorded with 5 sec. hold and average of the three was taken. MVIC manoeuvre description for infraspinatus and supraspinatus was followed as described below. For Supraspinatus: - Shoulder abducted at neutral and elbow flexed at 900. The cervical spine is positioned into ipsilateral side flexion, contralateral rotation and extension. The participation is requested to perform an isometric contraction of shoulder abduction. (21)
- For Infraspinatus: - Shoulder abducted to 00, neutral humeral internal rotation and elbow flexed to 900. The arm is maximally and isometrically externally rotated as resistance is applied at the wrist. (22)
- Verbal encouragement was given during each MVIC recording to achieve a maximum muscle contraction. Subject were then explained posture for mugdar swing. Subject posture: The subject was in standing position. Heel closed to the body, knee straight, arms and elbow closed to sides, body straight, head erect and eyes straight to the front. The researcher then demonstrated and explained the swing. Subjects performed three repetitions of the swing, each swing should be completed in time period of 5 sec. To ensure proper swing technique, each subject was allowed one good practice task prior to data collection inorder to get the correct method of mugdar swing. One minute of rest was given between each performance of mugdar swing task.If the subjects did not display satisfactorily performance i.e., completed too early / too late (<5sec/>5sec) during swing, the trial was not documented and repeated. The average recruitment was then divided by MVIC to yield percentage MVIC of infraspinatus and supraspinatus for that subject. Muscle recruitment Surface EMG data was analyzed as compared to percentage MVIC of Infraspinatus and Supraspinatus muscle.

Data Processing:

Statistical Analysis: All results are presented as Mean ± SD. Data analysis was performed in excel using Instat GraphPad. The data was checked for normality using Kolmogorov-Smirnov test. The data did pass the normality test and showed a parametric distribution. Paired T test was used to compare the data of average root mean square of Infraspinatus and Supraspinatus. Recruitment of two muscle and average percentage MVIC were also compared by Paired T test. P value less than 0.05 was considered significant with a confidence interval of 95%.

Results:

Discussion: Rotator cuff play a critical role in stabilizing the glenohumeral joint specifically in overhead athletes. One of the high risks for shoulder injury could be weakness of rotator cuff muscles For Normalization of EMG, MVIC was done for Infraspinatus and Supraspinatus as shown in Table 2. In our study during swing analyses, for recruitment of muscle activity it was found out that there was statistically significant results between Supraspinatus and Infraspinatus. There was higher activation of Supraspinatus compared to Infraspinatus as shown in Table 3, Graph 1. Analysing percentage recruitment compared to their MVIC of Supraspinatus and Infraspinatus during mugdar swing, Our study shows higher %MVIC of Supraspinatus compared to Infraspinatus as shown in Table 3 and Graph 2. The % MVIC resulted 25.83% for Infraspinatus while 37.49% for Supraspinatus respectively. In our study, as the swing position shows dynamic movement initially shoulder in

neutral with 900 of elbow flexion. Then arm position moves towards contralateral shoulder which starts with abduction and shoulder elevation leading to overhead activity. During overhead activity there was external rotation movement moving towards an ipsilateral side and the last phase includes downward movement as shown. Thus, in our study, probably there has been more movement in scaption, abduction including more of elevation as there is overhead activities. Thus, statistically it has observed that Supraspinatus has higher recruitment than Infraspinatus. The high level of MVIC may be attributed because of movement may contributing in abduction and scaption plane which leads to higher activation. Even elevation exercise with loads has higher activation of Supraspinatus compared to Infraspinatus. Thus, this could be the factors that could be leading to higher activation of Supraspinatus than Infraspinatus during Indian club swing. Previous studies also found out that external rotation in flexion plane have higher activity of Infraspinatus and lower activity of Supraspinatus. It also resulted that higher activity of Supraspinatus has shown in abduction and scaption movement at 300 and 900 while higher activity of Infraspinatus muscle has been found in flexion at 900 only including different loads.(9) Studies also found out that Supraspinatus has higher activity at 900 and 1500 compared to 300 for elevation. It resulted higher activation in abduction plane> scaption plane> flexion plane. While Infraspinatus has higher activation in 900 elevation compare to 300. It resulted higher activation in flexion plane >scaption plane>abduction plane. (10) Thus, Indian club swinging can be used for recruitment of Supraspinatus and Infraspinatus. Specifically exercise that are done in scaption plane could be thought to improve overhead activities by increasing muscle activation recruitment that are specific to task.

Conclusion: In our study during Mugdar swing, Supraspinatus muscle shows significantly higher activation than Infraspinatus. On comparison of recruitment to their MVIC Supraspinatus shows 35% of MVIC while Infraspinatus shows 25% of MVIC.

Exploring psychological need satisfaction and motivation to exercise and physical activity in an Arab context

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Background: Promoting physical activity (PA) requires an understanding of PA behavior, its correlates, and its determinants. This study aimed to understand the associations between self-determination theory (SDT) based motivational processes and PA behavior.

Methods: This cross-sectional study used an anonymous online questionnaire within Qatar comprising demographic questions, the International Physical Activity Questionnaire Short Form (IPAQ-SF), the Behavioral Regulation in Exercise Questionnaire (BREQ-3), and the Psychological Need Satisfaction in Exercise (PNSE) scale. Results: Respondents (N=347; 246 females) were 21.6% non-Arab expats, 63.7% Arab expats, and 14.7% Qatari nationals. Sixty-six percent of respondents reported completing ≥600 MET·min per week in the previous seven days, according to the IPAQ-SF criteria. Males (=1808.16±2517.47 MET·min·wk-1) were significantly more active than females (=1049.40±1717.31 MET·min·wk-1; P=0.001), and reported more autonomous forms of regulation (identified=2.86, integrated=2.33, intrinsic=2.64) than females (identified=2.58, integrated=2.01, intrinsic=2.36; P<0.05), as well as higher perceived competence satisfaction (=3.89) than females (=3.49; P=0.025). Bivariate correlations showed that total PA and moderate to vigorous physical activity (MVPA) were positively associated with autonomous forms of regulation (P<0.01), namely, identified (rtotal_PA=0.16, rMVPA=0.15) integrated (rtotal_PA=0.26, rMVPA=0.25), and intrinsic (rtotal_PA=0.20, rMVPA=0.18) regulation, as well as perceived competence in exercise (rtotal_PA=0.21, rMVPA=0.18; P<0.01).

Conclusion: The bivariate correlation results were consistent with the theoretical tenets of SDT, supporting the application of SDT constructs in predominantly Arab populations. The observed gender gap in physical activity levels is consistent with previous research in Arab populations. Future research could target SDT constructs to promote PA behavior in Arab women through culturally sensitive interventions.

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