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9th INCPT AIIMS-2023

9th International Conference of Physical Therapy- AIIMS 2023

Theme: Innovation and Integration: "Shaping The Future of Global Physical Therapy"

SOUVENIR

23rd-24th DECEMBER, 2023

Organized By: **Physiotherapy Unit, Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, New Delhi**

Venue: **All India Institute of Medical Sciences(AIIMS), New Delhi**

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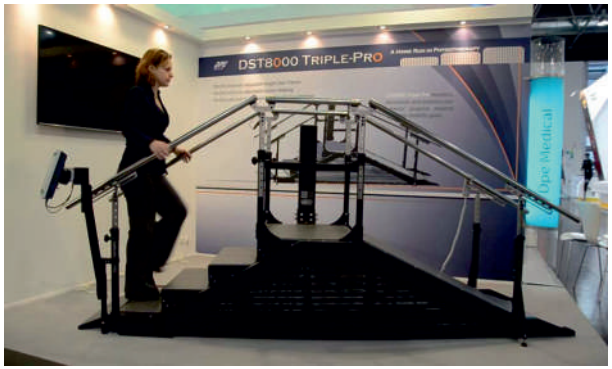

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प्रधान मंत्री

Prime Minister

MESSAGE

It is heartening to learn about the organisation of the 9th edition of the International Conference of Physical Therapy at AIIMS Delhi. The creation of a vital platform with the theme 'Innovation and Integration - Shaping the Future of Global Physiotherapy' is a commendable initiative.

Physical therapy with its emphasis on holistic wellness is pivotal in encouraging resilience among individuals. In the same light, physiotherapists also assume a much more significant role beyond providing treatments – they take up the mantle of being mobility mentors for their patients.

The eternal principles of balance, harmony and interconnectedness that form the bedrock of Indian philosophy are also features of physiotherapy-based interventions. Further, the efficacy of physical therapy is also dependent on bringing body, mind and spirit together. In this respect, concepts like Yoga, Meditation, or Pranayama are also becoming popular as aids to physiotherapy. There is a need to work towards seamlessly integrating these ancient doctrines with contemporary best practices.

Our government has recognized the important contribution of physiotherapists by bringing the National Commission for Allied and Healthcare Professions Bill, that has made it easier for physiotherapists to work in India, as well as abroad. The government has also added physiotherapists to the Ayushman Bharat Digital Mission network.

As our nation moves forward with the collective goal of a Viksit Bharat by 2047, our government has been steadfast in its efforts to realise the vision of holistic and comprehensive healthcare that is affordable for all and is equally accessible to all. By aligning inclusivity with the overarching theme of integration, we can ensure physical therapy becomes an integral part of comprehensive healthcare.

Given this backdrop, physical therapists and global forums such as the International Conference are potent instruments to take the message forward. As we engage in fruitful discussions, exchange cutting-edge research findings and collaborate on innovative practices, this initiative will help shape the future.

My best wishes for another definitive endeavour to explore the transformative potential of physical therapy in reshaping and reimagining the global idea of holistic healthcare.

Jai Hind!

(Narendra Modi)

New Delhi

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21st December, 2023

राजनाथ सिंह
RAJNATH SINGH

रक्षा मंत्री
भारत
DEFENCE MINISTER
INDIA

Date: 20.12.2023

Message

I am happy to know that the **physiotherapists of AIIMS, New Delhi** are organizing the **"9th International Conference of Physical Therapy"** on the theme of **"Innovation and Integration: Shaping the Future of Global Physiotherapy"** from 22nd to 25th Dec. 2023 in New Delhi.

Physiotherapy is an integral part of health care system. The government has enacted National Commission for Allied and Health Care Act, that will promote physiotherapy professionals to acquire more responsibility and stake in health care delivery system.

As geriatric population is rising as well as non-communicable disease in the society, so the role of non-pharmacological interventions like Physiotherapy has increased multi-fold. I appreciate Physiotherapists dedication to the field and look forward to the impactful outcomes that will arise from shared endeavours.

I hope that this conference will bring dynamic discussions and shared experiences to the table and further strengthen the collective wisdom.

With good wishes,

(Rajnath Singh)

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MESSAGE

I am delighted to learn that All India Institute of Medical Sciences (AIIMS), Delhi is organising 9th International Conference of Physical Therapy - AIIMS 2023 on 22nd & 24th of December 2023 in New Delhi.

The theme of this year's conference, "Innovation and Integration: Shaping the Future of Global Physical Therapy," is a testament to the evolving landscape of healthcare and the pivotal role that physical therapy plays in enhancing patient care and rehabilitation. The focus on innovation and integration underscores the need for a collaborative approach, blending traditional practices with cutting-edge research to optimise patient outcomes.

I really appreciate this initiative since last nine years has exhibited the commitment to excellence of AIIMS towards the power of holistic healing through physiotherapy by bringing forth the best global practices. I commend the organisers for their dedication and hard work in bringing together experts and practitioners from around the world.

This conference is not only a platform for knowledge exchange but also an opportunity to forge new partnerships and strengthen existing ones. I extend my best wishes for the success of the conference.

(Dharmendra Pradhan)

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दिनांक/Dated :...19-12-2023.....

MESSAGE

On behalf of AIIMS Delhi, I extend a warm welcome to all attendees of the 9th International Conference of Physical Therapy, taking place from 22nd to 25th December 2023, under the theme "Innovation and Integration - Shaping the Future of Global Physiotherapy."

It is a privilege to host such a gathering of brilliant minds committed to advancing the field of physiotherapy. Your collective expertise and dedication contribute significantly in shaping up the future of healthcare on a global scale.

I encourage, each of you to actively participate in the discussions, exchange ideas, and collaborate with fellow professionals. Together, let us explore innovative solutions and integrated approaches that will undoubtedly leave a lasting impact on the trajectory of physiotherapy.

(Prof. M. Srinivas)
Director

All India Institute of Medical Sciences
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Dr. Lokesh Kashyap
Professor & Head

12th of December, 2023

MESSAGE

It is with great pleasure that I extend my warmest greetings to all participants of the 9th International Conference of Physical Therapy at AIIMS Delhi, scheduled from 22nd to 25th December 2023.

As we gather under the theme "Innovation and Integration - Shaping the Future of Global Physiotherapy," I am confident that this conference will be a beacon for transformative ideas and collaborative efforts in the field. Your dedication to advancing physiotherapy is commendable, and your contributions undoubtedly shape the future of healthcare.

I encourage you to actively engage in the insightful discussions, share your expertise, and foster connections that will propel our discipline forward. Together, let us explore innovative approaches and integrated solutions Together, let us explore innovative approaches and integrated solutions that will redefine the landscape of physiotherapy on a global scale.

Wishing you a fruitful and inspiring conference.

Best regards,

Prof. Lokesh Kashyap
Head
Department of Anaesthesiology, Pain Medicine and Critical Care.

Dear Esteemed Colleagues and Fellow Physiotherapists,

It is with immense pride and pleasure that as a Chairperson of this esteemed gathering I, extend my warmest wishes and congratulations to each and every one of you on the occasion of the 9th Internationl Conference Of Physical Therapy (INCPT) AIIMS 2023.

This conference serves as a beacon of hope and progress in the ever-evolving field of physiotherapy. It is a platform where minds meet, knowledge is shared, and innovations take flight. As dedicated professionals, we come together not only to celebrate our achievements but also to collectively chart the course for the future of our noble profession.

May this conference be a springboard for groundbreaking ideas, collaborative endeavors, and unwavering commitment to our patients' well-being. Let us leave here more empowered, more informed, and more united in our mission to make a positive impact on the world through the power of physiotherapy.

On behalf of the organizing committee, I wish you all a productive, stimulating, and truly enriching experience.

With warm regards,
Smita Das
Chairperson
9th Internationl Conference of Physical Therapy (INCPT) AIIMS 2023.

Dear Esteemed Participants,

It is with great pleasure that I extend a warm welcome to each of you at the 9th International Conference of Physical Therapy 2023, hosted by AIIMS New Delhi. As the Organising Secretary, I am thrilled to witness the convergence of brilliant minds under the theme "Innovation and Integration: Shaping the Future of Global Physical Therapy."Over the course of the conference on 23rd and 24th December 2023, we anticipate engaging discussions, groundbreaking research presentations, and invaluable networking opportunities. Your participation is integral to the success of this event, and we are confident that together, we will pave the way for advancements in the field of physical therapy.

I look forward to the collaborative spirit that will define our time together. Let's embark on this journey of innovation and integration, leaving an indelible mark on the future of global physical therapy.

See you in New Delhi!

Best regards,

Arushi Kaul
Organising Secretary
9th International Conference of Physical Therapy 2023

SCHEDULE

TO COMPARE THE EFFECT OF METS WITH NECK STABILIZATION EXERCISES VERSUS STEREOTYPICAL KINAESTHETIC REHABILITATION IN NON -SPECIFIC NECK PAIN AMONG THE LAB PROFESSIONALS OF AGE 25-38 YEARS.

Ishika[1], Dr Zaki Anwer[2]
1 MPT student, 2Professor, LPU

Purpose: Working with microscopes requires accuracy and the capacity for sustained concentration. Users of microscopes in this profession frequently need to maintain a static work position, which puts strain on neck. To study whether neck pain is common among microscope users and lab professionals.
Methodology: An experimental study will be conducted on non-specific neck pain of the patients. There are total 60 participants in the study. The participants including both men and women aged 25 to 38 years were included following their signed informed consent. 60 participants will randomly be allocated into two groups in group
A: MET with neck stabilizer exercises was given and in group
B: Stereotypical neck stabilization exercises after assessment using NDI, VAS (visual Analog scale) and psychological well-being scale. The study excluded those with any neck pathology, recent trauma, or surgery. The exercises focussed on the deep muscles.
Results: Compared to pre-intervention, post - intervention, Muscle energy technique with neck stabilisation exercises is effective in managing pain, neck disability, poor posture but Stereotypical kinaesthetic rehabilitation has a better effect than a muscle energy technique with neck stabilisation exercises.
Keywords: non-specific neck pain, met with neck stabilization, laboratory technician, kinaesthetic rehabilitation

Fear Avoidance Beliefs, Kinesiophobia, and Disability Risk Among Indians with Spine Pain

Kriti Khanna[1], Shikha Jain[1], Gautam Shetty[2,3,5] , Nishtha Rahlan[1] , C. S. Ram[4]
1 QI Spine, Dwarka, New Delhi, 2 QI Spine Clinic, Mumbai, 3 AIMD Research, Mumbai
4 I.T.S College of Physiotherapy, Ghaziabad, 5 QI India Healthcare

Purpose To determine the burden of fear-avoidance beliefs (FAB), kinesiophobia, and risk of persistent disability among Indians with spine pain.
Methods Demographic and clinical data collected from 139 patients who attended a spine rehabilitation clinic for assessment and treatment of their spine pain were analyzed. Fear- avoidance beliefs, kinesiophobia, and risk of persistent disability were measured using the Fear- avoidance Beliefs Questionnaire (FABQ), Tampa Scale for Kinesiophobia (TSK), and the STarT Back Tool (SBT). A multivariate analysis was performed to determine the efect of pain, disability, age, gender, BMI, lifestyle, pain duration, and pain location on FAB, TSK, and SBT scores.
Results A majority of patients had medium to high-risk FAB-physical activities (FAB-P) (50.5%) and SBT (54%) scores. The percentage of patients with medium or high-risk FAB-P ($p=0.03$), FAB-work (FAB-W) ($p=0.03$), and SBT ($p=0.03$) scores were significantly higher in patients with pain score>7,, and the percentage of patients with medium or high-risk with FAB-P ($p<0.0001$), TSK ($p=0.0003$), and SBT ($p<0.0001$) scores were significantly higher in patients with severe, crippled or bed-ridden disability. Disability was the only significant predictor for FAB-W, FAB-P, and SBT scores.
Conclusion The prevalence of fear-avoidance beliefs and risk of persistent disability was signifcant among Indians and should be taken into account while planning treatment for their spine pain.
Keywords Fear-avoidance belief , Kinesiophobia, STarT Back Tool, Spine pain, Disability India

THE IMPACT OF ANTEROLATERAL FASCIAL ELONGATION TECHNIQUES VERSUS CROSS- HAND TECHNIQUES IN NON-SPECIFIC LOW BACK PAIN

Komal Jaiswal [1] , Arunmozhi R [2] , Reena Kumari [3] , Jasdeep Kaur [4]
1 Student Researcher, 2,3 Professor, 4 Asst Professor, Sardar Bhagwan Singh University, Dehradun.

Background: Nonspecific low back pain includes common diagnosis such as lumbago, myo-fascial syndromes, muscle spasm, mechanical low back pain, Thoracolumbar fascia is themost overlooked cause for non-specific low back pain. Therefore, this study includes techniques of Myofascial release used for diagnostic and treatment purpose for patients with non-specific low back pain. Thus, the present study compared the effects of anterolateral fascial elongation techniques and cross hand techniques in non-specific low back pain on pain.
Methodology: The experimental study enrolled 30 females of Mata Gujri girls hostel with a mean age of 21.08 + 1.2 and equally divided into one of the three group (Group 1: Anterolateral fascial elongation technique, Group 2: Cross hand Technique group and stretching group). Pain was the main outcome measures assessed at baseline, 8 th and 15 th day.
Results: The Post Hoc test was used to compare the results for VAS from baseline 8 th and 15 th day, the data analysis showed a significant difference between Group 1 Vs. 2 and in Group 1 vs. 3 whereas non-significant difference found between Group 1 vs. 3.
Conclusion: Both the techniques are equally effective in non-specific low back pain and in releasing the thoracolumbar fascia but for the reduction of pain group 1 is slightly better than Group 2 and Group 3.
Key Words: Myofascial release, Thoracolumbar fascia, Back pain.

WORK RELATED MUSCULOSKELETAL DISORDER AMONG SECONDARY SCHOOL TEACHERS-AN OBSERVATIONAL STUDY

Rasika Jadhav
Tilak Maharashtra Vidyapeeth college of physiotherapy, Pune

Introduction : Work related musculoskeletal disorder (WRMSDs) represent one of the leading cause of occupational injury and disability in developed and developing countries. The varieties of posture adopted by school teachers depend upon task performed, design of work place ,tool required to perform particular work and duration or frequency of work cycle. This leads to repetitive injury to tissue causing muscle fatigue ,myalgia ,tendinitis (of supraspinatus , bicep brachi ,lateral epicondylitis) and compression of nerve. So this study will help to find the prevalence and level of risk of work related posture among secondary school teachers.
Aim : To assess the level of risk of work related posture among secondary school teachers.
Methods: The present study was observational study. In which 310 secondary school teachers of age group 25-56 year were included as per inclusion and exclusion criteria. The subject were explain about study and consent form was taken .Standardized Nordic questionnaire was given to subject to evaluate discomfort experience by subject and rule out the subject who don't have musculoskeletal disorder. Then evaluated subject posture during teaching by using rapid upper limb assessment (RULA).
Result: This study shows a high prevalence of neck pain reported by 72.3%. Elbow and ankle pain were less prevalence then other complain , reported by 34.4% and 32.2% . Working with writing on board , overhead activity was the highest reported risk factor. (RULA score = 7) Conclusion: School teachers are susceptible to work related musculoskeletal disorder (WRMSDs) with a significance prevalence of neck , wrist , upper back ,shoulder pain. Prolong working nature like bending neck forward / backward or holding neck posture, hand above shoulder level , reaching with hand or arm and standing for long time are important factor which affected the work related musculoskeletal disorder.
Keywords: Work related musculoskeletal disorder (WRMSDs), Secondary school teachers ,posture , Prevalence .

TO SEE THE EFFECT OF MWM, PROPRIOCEPTIVE TRAINING AND CONVENTIONAL EXERCISES ON FUNCTIONAL, KINESIOPHOBIA AND POSTURAL SWAY IN PATIENT SUFFERING FROM GRADE II OA : A CROSS SECTIONAL STUDY

Anjali Kumari[1], Himanshu Mathur[2]
1MPT 2 nd Year, 2Asst Professor, Jaipur National University

Aim of the study: Knee osteoarthritis is a prevalent musculoskeletal condition affecting older people and is associated most commonly with symptoms of pain, inflammation, instability, decreased range of motion (ROM) as well as compromise in quality of life. The prevalence rate of 22 % to 39 % in India and is the most common cause of locomotor disability in the elderly. The objective of this study is to see the effect of MWM, Proprioceptive training and conventional exercises on function, Kinesiophobia and postural sway in patient suffering from Grade II OA

STUDY DESIGN- A cross sectional study

MATERIALS AND METHODS- In this cross-sectional study, patients with the diagnosis of osteoarthritis (OA) were randomly allocated into three groups. Group A received MC Connell taping, mulligan MWM, and conventional exercise (n=10) GroupB-received MWM, proprioceptive training, convectional exercise. (n=10) Group C-McConnel taping, proprioceptive training with convectional exercise. (n=10) NPRS, WOMAC, TSK, Calibrated Goniometer, FRT outcomes were assessed the pre and post treatment Intervention is given for 3 weeks.

RESULT – The result of this study suggested the additional of MWM, Proprioceptive training and conventional exercises regime were effective in functional Kinesiophobia and postural sway in patient suffering from Grade II OA. NPRS, WOMAC, TSK, Calibrated Goniometer, FRT outcomes measure is measured pre and post intervention to see the results.

CONCLUSION- this study shows the effectiveness of all three groups but MWM, proprioceptive training along with conventional exercise regime for osteoarthritis shows significant improvement in functional kinesiophobia and postural sway, TSK, and FRT emphasizes their potential to enhance the postural sway and kinesiophobia.

KEYWORDS- osteoarthritis, MWM, proprioceptive training, McConnel taping.

EFFECTS OF CLOSED DYNAMIC VS CLOSED KINEMATIC EXERCISE WITH STRETCHING IN PERIARTHRITIS SHOULDER.

S.Mohamed Fazil Hussain

Background of the Study: PA shoulder is a condition characterized by stiffness and pain in the shoulder joint. It is a painful and disabling disorder of unclear cause in which the shoulder capsule, the connective tissue surrounding the shoulder becomes inflamed and stiff, restricting ROM and causing chronic pain.

Objective: To compare the efficacy of closed kinematic exercise and Closed dynamic exercise combined with stretching in PA shoulder with.

Methodology: This was an experimental study design with pre-post test was conducted in the outpatient physiotherapy department of Mahatma gandhi medical college hospital. The sample were divided into two groups by lottery method. Group-A (closed dynamic exercise with stretching) & Group-B (closed kinematic exercise with stretching). The Group-A (closed dynamic exercise with stretching) is given for 3 days, 1session per day for a duration of 20 minutes. The Group-B (closed kinematic exercise with stretching) is given for 3 days, 1session per day for a duration of 20 minutes. Both the techniques will be given for a period of 6 weeks. So totally there will be 18 sessions for each technique.

Outcome measure: the outcome measure is calculated by the spadi scale (shoulder disability index) and pain is assessed by (vas scale).

Results: On comparing the Mean values of Group A & Group B on VAS Score, it shows significant decrease in The post test Mean values but (Group A – Dynamic Exercise with stretching) shows (1.43) which has the Lower Mean value is more effective than (Group B Closed Kinematic Exercise with stretching) (3.88) At $P \leq 0.001$.

Conclusion: It has been concluded that the most effective technique is closed dynamic exercise compared to closed kinematic exercise along with stretching.

A NOVEL APPROACH FOR THE REHABILITATION OF CHONDROCALCINOSIS OF ANKLE JOINT: A CASE REPORT.

Vanshika Rajput[1], Himanshu Mathur[2]
1MPT 2 nd Year, 2Asst Professor, Jaipur National University

BACKGROUND: Chondrocalcinosis is a common crystal deposition joint disease in which calcium pyrophosphate dihydrate crystals deposit within the joint cartilage and fibrocartilage. It can lead to inflammatory changes and cartilage damage. An 18-year-old male came to physiotherapy department of JNU Hospital 21 days post the osteophyte excision surgery. Due to post-operative immobilisation of the ankle joint, the patient was experiencing difficulty with decreased ankle mobility, decreased flexibility and strength, and a decline in balance.

NEED OF RESEARCH: The purpose of this study is to analyse the effects of rehabilitation of chondrocalcinosis of ankle joint during post operative phase

METHODS: A comprehensive examination was carried out prior to the treatment, outcome measures- Cumberland ankle instability score (ICC =.96) to measure the severity of functional ankle instability & Star Excursion Balance Test (ICC= 0.89-0.93) to measure dynamic balance and postural control were taken along with VAS rating of pain. A five-week rehabilitation strategy that included manual therapy along with MET, ankle joint mobilisation, balance training, and associated muscle strengthening exercises were implemented. An informed consent was procured prior to the commencement of the study. Care checklist was followed according to the cope guidelines during the conduction of the study

RESULT: Readings were taken after 5 weeks for CAIT, SEBT and VAS which reduced significantly. Beneficial results were obtained.

CONCLUSION: The treatment improved mobility and strengthened ankle joint musculature, as well as outcome measures with a statistically significant difference between pre and post- intervention readings.

KEYWORDS: Chondrocalcinosis, Cumberland Ankle Instability Score, SEBT, Calcium Pyrophosphate

EFFECT OF MUSCLE ENERGY TECHNIQUE (MET) AND MULLIGAN MOBILISATION WITH MOVEMENT (MWM) ON RANGE OF MOTION AND FUNCTION IN PATIENT SUFFERING FROM FROZEN SHOULDER – A Randomized Controlled Trial

Puja Kumari Sharma[1], Himanshu Mathur[2]
1MPT 2nd Year, 2Asst Professor, Jaipur National University

Background – Frozen shoulder (FS) is a prevalent musculoskeletal condition characterized by an often prolonged pain, disability and limited active and passive range of motion (ROM).The objective of this trial was to observe the effect of MET and Mulligan MWM on ROM and function in patient suffering from Frozen Shoulder. Study design – A Randomized controlled trial

Material and methods –In this randomized control trial (RCT) patients with diagnosis of frozen shoulder were randomly allocated into MET, MWM along with conventional exercise (n = 15) as experiment group and conventional exercise regime (n=15) as control group. The shoulder pain and disability index (SPADI), Goniometric assessment of shoulder ROM and distance of acromion from plinth used as outcome measure.

Results- Result of the study suggested that addition of MET and MWM along with conventional exercise regime was effective in reduction of pain, improving ROM and function of shoulder joint. The SPADI scale, goniometry and distance of acromion from plinth used in this study as an outcome measure, is measured pre and post intervention to see the results.

Conclusion – This study shows the effectiveness of both MET and MWM along with conventional exercise regime for frozen shoulder . Significant improvement in ROM, SPADI scores, and acromion plinth distance emphasizes their potential to enhance shoulder mobility, reduce pain and improve functional outcome .

KEYWORD- MWM, MET, SPADI, VERNIER CALLIPER

EFFECT OF ADDITION OF MWM, MFR, AND MET OF TMJ TO CONVENTIONAL EXERCISES REGIME ON MOUTH OPENING, MANDIBULAR DEVIATION AND DISABILITY IN PATIENT SUFFERS FROM TMJ DYSFUNCTION: A Randomized Control Trial

Drishti Pachauri[1], Himanshu Mathur[2]
1MPT 2 nd Year, 2Asst Professor, Jaipur National University

Aim of the study: Temporomandibular dysfunctions are a heterogeneous group of conditions involving the temporomandibular joints (TMJs) and periarticular musculoskeletal structures This research aimed to investigate the effectiveness of MWM, MET and MFR to convectional exercises regime for Temporomandibular Dysfunction to improve mouth opening, mouth deviation and disability.
Design: A Randomized Control Trial
Methodology: This randomized control trial with two parallel treatment groups: 15 subjects in the experimental group that underwent MWM, MET and MFR with convectional exercises regime (chin tugs, kneading, mouth opening followed by extension of neck) and 15 subjects in the control group that underwent only convectional exercises(chin tugs, kneading, mouth opening followed by extension of neck).The participants were examined with proper assessment at baseline and re-examined after 21 days with one month follow up. TDI Scale, Vernier Callipers and NPRS outcomes were assessed the pre and post treatment (three weeks program).
Result: Participants from both groups improved all outcomes after the treatment but the experimental group show drastic changes in the reduction of pain, improvement in the mouth opening of patients and reduce deviation as compare to conventional group.
Conclusion: Physiotherapy treatments could maintain the functional state at the temporomandibular joint, thus contributing to increasing the quality of daily life. MWM, MFR and MET followed by convectional regime shows abrupt changes to the patient's condition of TMJ dysfunction.
Keywords: temporomandibular joint, manual therapy, physiotherapy treatment, dysfunction, orofacial area

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN MUSCULOSKELETAL CONDITIONS: A REVIEW OF LITERATURE

Afif [1], Saumya Srivastava [2]
Nitte Institute of Physiotherapy

BACKGROUND: Artificial intelligence systems monitoring patient's motion aid musculoskeletal rehabilitation by incorporating quantitative movement data, reducing supervision, improving patient adherence, and reducing costs, thus enhancing therapeutic results and making rehabilitation programs more accessible. AI-enabled devices improve treatment of musculoskeletal conditions, and physiotherapists benefit from machine learning techniques for data collection, movement capture, and categorization. These technologies may significantly impact service delivery in the next century.
OBJECTIVE: To determine the use of AI in the different musculoskeletal conditions
METHODOLOGY: This review includes relevant 15 articles over the last ten years from year 2013- 2023, that were found in databases such as Scopus, Google Scholar and PubMed.
DISCUSSION: AI in musculoskeletal rehabilitation has improved outcomes and progressed significantly. Wearable sensor technologies collect and analyse vast data, tailoring healthcare plans to patients' needs and socioeconomic landscapes. Vision-based human activity recognition, a systematic method involving AI, biomechanics, machine vision, image processing, and pattern recognition, is becoming popular for clinical evaluation and rehabilitation.
CONCLUSION: AI technologies are transforming the health system and will have a big impact on how services are delivered in the next century. AI technologies have been heavily utilised in medical rehabilitation. AI drives down the time taken to perform a task. It enables multi-tasking and eases the workload for existing resources AI is having a big impact on how technology is developing.
KEYWORDS: Artificial Intelligence, Machine Learning, musculoskeletal conditions, wearable sensors, physiotherapy

EFFECT OF MEDICINE BALL TRAINING ON THROWING ACCURACY AND HAND-EYE COORDINATION IN ADULT CRICKET PLAYERS

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STUDY DESIGN: Randomized Controlled Study
AIM: To find the effect of Medicine Ball Training on Throwing Accuracy in Adult Cricket Players
BACKGROUND: In the sport of cricket, one of the most crucial skills in the game is fielding, which entails taking the ball away and accurately and quickly returning it to the bowler or wicketkeeper. Cricketers frequently throw the ball overhead as part of their repetitive overhead activities, in which throwing components like throw speed and throw accuracy are included. In cricket, the relationship between speed and accuracy is particularly crucial because a throw with high velocity is useless if speed increases at the expense of accuracy.
METHODS: 36 players with age 21.91± 2.10 years (mean ± SD) were randomly chosen and divided into two groups i.e., the Control Group and the Experimental Group. The Experimental Group performed an 8-week Medicine Ball Training while the Control Group performed their routine training. The Throwing Accuracy was measured by the Functional Throw Performance Index (FTPI).
RESULTS: Results revealed a significant difference in throwing accuracy between the control and experimental group with F (2,34) = 31.86 with p = 0.006. Pairwise comparison showed a significant difference between 0-week (0.388 ± 0.032) and 4-week (0.515 ± 0.042) with p = 0.001*. Also, a significant difference was seen in 0-week (0.388 ± 0.032) and 8-week (0.488 ± 0.036) with p = 0.008.
CONCLUSION: We conclude that the Functional Throw Performance Index scores were significant in the Training Group with the Throwing Accuracy as the contributing factor for fielding performance for the cricketers.

EFFECT OF CORE TRAINING USING BOSUBALL ON DYNAMIC BALANCE IN PROFESSIONAL MALE VOLLEYBALL PLAYERS

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STUDY DESIGN: Randomized Controlled Study
AIM: To find the effect of core training program using bosuball on dynamic balance in professional volleyball players.
BACKGROUND: Balance is very much important in proper and safe landing and to prevent injury during landing. Core strength is intimately related to balance, because good stability of the core is needed to have safe and effective movement at the hip, knee and ankle. A strong core allows a person to complete transfer of forces generated from the bottom through the lower extremities, the torso, and finally to the upper extremities. Core training practices has been recommended to athletes and coaches to increase volleyball performance.
METHODS: 26 players with age 17.92± 0.86 (mean ± SD) were randomly chosen and divided into two groups i.e., the Experimental Group and Control Group. The Experimental Group performed an 8-week Bosuball Training while the Control Group performed their routine training. The Dynamic Balance was measured by the Star Excursion Balance Test (SEBT). Pre data was recorded on the baseline of study. After the experiment the data was recorded and analysed at the end of 4 th & 8 th week.
RESULT: These results illustrated that there is significant differences in the scores for pre- test and post-test of all direction according SEBT in the experimental group. An independent sample t-test was conducted to compare experimental and control group (F=2,24) = 43.57 with p=0.001).
CONCLUSION: The findings of the study concluded that core training using bosuball has a significant effect on improving dynamic balance in professional volleyball players. As dynamic balance being the contributing factor for volleyball players.

ASSOCIATION OF DESCRIPTIVE ANALYSIS WITH ENDURANCE TESTING AND RUNNING PERFORMANCE IN PROFESSIONAL SOCCER PLAYERS OF DELHI

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STUDY DESIGN: Observational study
AIM: The study aimed to identify association between endurance testing and running performance in professional soccer players and to compare Yo-Yo testing scores and running performances among soccer playing positions.
BACKGROUND: Football players' combination of technical, tactical, and physical play during a match determines how well they perform. Therefore, performance analysis of the players is important component in evaluation of their achievement. One of the most important aspects of performance analysis is termed as "running performance", which is now demonstrated by Global Positioning Software systems(GPS).
METHODS: 36 Players with age (mean±sd) = 23.91± 2.10 years were classified into 3 playing positions (forwards (n= 12), mid fielders (n= 12) and defenders(n= 12)), as measured by GPS systems, Endurance testing was done by Yo-Yo Intermittent testing while Running Performance as measured by global positioning system, included average speed, total distance covered , total no. of sprints, total number of acceleration, game time, top speed, work rate, sprint distance, total number of deceleration, total distance, total speed.
RESULT: Results revealed a significant difference among three positions only for Yo- Yo testing with F (2, 33) = 3.677 with p= 0.037. Post hoc test showed significant difference between forwards (16.76± 0.48) and mid- fielders (17.84± 1.04) with p= 0.039.
CONCLUSION: We conclude that the yo yo intermittent test scoring were significant among players, which defines different requirement of players specific to their position and aerobic capacity as contributing factor for performance in a soccer game.

EFFECTIVENESS OF SPINE MOBILITY EXERCISES AND CRYOTHERAPY TO RELIEVE PAIN AND DISCOMFORT CAUSED DUE TO POSTERIOR PELVIC TILT IN ATHLETES.

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BACKGROUND: The posterior tilt of the pelvis that occurs towards the bottom of the squat. When this occurs, it causes the lumbar spine to round and go into flexion. The research will aid in the prevention of low back problems. The athletes will benefit from the physiotherapy regimen created for this study to avoid low back pain, strengthen their weak core muscles, and lessen hamstring tightness. Additionally, this supports posterior pelvic tucking and keeps the pelvis in a neutral position.
AIM : To find effectiveness of spine mobility exercises and cryotherapy to relieve pain and discomfort caused due to posterior pelvic tilt in athletes.
Method & Material: In Pre-Post Experimental study design, There were 50 participants involved in this study by convenient sampling method according to the inclusion criteria and exclusion criteria. Subjects with age group between 18-30 years were selected for the study. Both male and female athletes with low back pain were included in this study. The study duration was 3 months. The outcome measure for the study was VAS ,30 seconds sit to stand test, SLR (straight leg raise) test, Oswestry disability index scale
DISCUSSION: As P-value for VAS is <0.05 and P-value for Sit to stand test is <0.001 So, this study mainly focused on low back pain and use of cryotherapy in athletes shows greater improvement in strength as well as reduced disability and pain in intervention group which was significant.
CONCLUSION: So the spine mobility exercises and cryotherapy to relieve pain and discomfort caused due to posterior pelvic tilt in athletes is effective.

3D KINEMATIC ANALYSIS OF PELVIS FROM STATIC STANDING TO DYNAMIC WALKING- A PILOT STUDY

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Background: The human pelvis comprises the sacrum, coccyx, and two os coxae, exhibiting gender differences such as the wider, less prominent ischial spines in females and the longer, narrower subpubic arch in males. During gait, the pelvis undergoes motions in all three axes, with magnitude influenced by walking speed, serving to decrease the movement of centre of mass in vertical and horizontal directions. The orientation of the pelvis offers valuable insights into the coordination of pelvic movements with adjacent body parts during gait.
Purpose: The study aims to explore pelvic kinematics in healthy individuals during standing and gait, while also investigating any correlation between pelvic width and movement during walking.
Methodology: This pilot study investigates 10 healthy individuals aged 20 to 25 years. Participants, with normal BMI and no lower limb or pelvic injuries in the past year and no diagnosed orthopaedic condition hampering the pelvic movements, were recruited from degree colleges in north Karnataka, providing informed consent. Data collection utilized BTS engineering's Simple Helen Hayes gait protocol.
Results: The study's results from 7 males and 3 females (mean age 22.40±0.97; height 168.95±7.07; weight 65.84±9.76) revealed a significant difference in pelvic orientation degrees between standing and gait for both limbs, as determined by paired t-tests. However, Karl Pearson's correlation coefficient identified no correlation between pelvic width and orientation during gait.
Conclusion: The study revealed no correlation between pelvic width and its orientation parameters, for instance pelvic tilt, obliquity and rotation during gait.
Keywords: gait, Simple Helen Hayes, BTS, pelvis, kinematic

ASSESSMENT OF HAMSTRING FLEXIBILITYIN RECREATIONAL WEIGHTLIFTERS

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BACKGROUND: As weightlifting is a sport that involves great physical strength, youngsters who receive no professional guidance while playing recreationally are exposed to a wide array of musculoskeletal injuries due to lack of awareness of proper stretching, warming up and cool down techniques. It is important to maintain flexibility of hamstring muscles as these are under greater usage while lifting weight our study involves assessment of hamstring flexibility in recreational weightlifters by using Sit and Reach Test and Active Knee Extension Test.
AIM: To assess the hamstring flexibility of recreational weight lifters
MATERIALS AND MMETHODOLOGY: Total 30 participations including both male and female were included according to inclusion and exclusion criteria by using Sit and Reach test and Active Knee Extension test.
RESULT: The result of study shows that out of 30 recreational weightlifters which were assessed,17 participants is having positive active knee extension test whereas 13 weightlifters is having negative sit and reach test and 15 participants is having negative active knee extension test and 15 weightlifters is having positive sit and reach test. shows the percentage of active knee extension test and sit and reach test in male and female weightlifters, where 56 % of recreational weightlifters is having positive active knee extension test and 50% of recreational weightlifters is having positive sit and reach test whereas 43% of weightlifters is having negative active knee extension test and 50% of weightlifters is having negative sit and reach test.
CONCLUSION: The study shows that there is greater incidence of hamstring tightness.
KEY WORDS: Hamstring flexibility, recreational weightlifters, Active Knee Extension Test, Sit and Reach Test.

ASSESSMENT OF LEVEL OF PHYSICAL FITNESS AND LEVEL OF MENTAL STRESS IN YOUNG STUDENTS

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Background: Physical fitness is a set of attributes a person has or achieve, which is linked to the person's capability to do physical activity. Measures of health-related physical fitness are closely allied with disease prevention and health promotion and can be modified through regular participation in physical activity and structured exercise program. Stress express as simply reaction to a stimulus that disturbs physical or mental equilibrium of individual.
Aim: To assess the level of physical fitness and level of mental stress in young students.
Materials and methods: 100 participants, both male and female students were included in the study and were categorize according to inclusion and exclusion criteria and level of physical fitness and mental stress was assessed using Modified Harvard Step Test and perceived stress scale respectively.
Result: The present study showed that there was significant decrease in level of physical fitness and level of mental stress in young students.
Conclusion: Exercise and physical activity is necessary in order to improve level of physical fitness and to help in decreasing the level of mental stress.
Key Words: Physical fitness, Mental stress, Young Students, Modified Harvard Step Test, Perceived Stress scale.

THE EFFECT OF ADDITION OF BALLISTIC SIX EXERCISE TRAINING COMBINED WITH CONVENTIONAL REHABILITATION PROTOCOL ON SHOULDER PERFORMANCE IN BADMINTON PLAYER HAVING GIRD – A CASE STUDY

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Background: Glenohumeral (GH) internal rotation deficit (GIRD) is an adaptive process in which the throwing shoulder experiences a loss of IR. The purpose of this study is to see the effect addition of ballistic six exercise training combined with conventional rehabilitation protocol on shoulder performance in badminton player having glenohumeral internal rotation deficit.
Methodology: Single participant study with the history glenohumeral internal rotation deficit was taken for the intervention period of 21 days with ballistic six exercise training program in progression of phases combined with conventional protocol. Supervision by a single therapist throughout the rehabilitation time.Y balance test UQ and KJOC score, SMBT test outcomes were assessed the pre and post treatment (three weeks program).
Result: Y-BT for UQ, KJOC, SMBT test were used as an outcome measure to assess Pre and Post reading. These outcome measures show significant improvement in the shoulder performance of the participant.
Conclusion: From the result obtained we can conclude that the addition of ballistic six exercise Training with Conventional protocol were effective in increasing the shoulder performance of the shoulder joint in glenohumeral internal rotation deficit participant.
Key words: SMBT, YBT UQ, Badminton, Ballistic six exercises, Shoulder performance, GIRD.

DOES BODY MASS IN DEX IN FLUEN CE FITN ESSGRAM'S CURL-UP TEST IN SCHOOL GOIN G CHILDREN

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BACKGROUN D: This paper describes about bow body mass index (BMI) influences the curl-up test in school going children both male and female aged 5 to IO years. As studied have showed that BMI influence's children physical fitness. 48 children from different school in the Mangaluru city were assessed for FITNESSGRM'S curl-up test who had low, normal and high BMI on the basis of WHO growth standards.
OBJECTIVES: This study aims to evaluate the influence of FITNESSGRAM'S curl-up test on BMI in school going children.
METHODOLOGY: 48 children were asked to perform curl-up on mats with knees flexed at 140^0, feet flat on the floor, arms parallel to the trunk with hands resting on the mat. The children were asked to curl up slowly in the mat for one minute.
RES UL TS: Pearson Correlation coefficient was used to correlate BMI, age and curl- up respectively with- gender. Among females, curl up score was positively correlated ($p<0.05$) with age and BMI. Among males, curl up score was positively correlated ($p<0.05$) with BMI but not with age ($p>0.05$)
CON CLUSION : This study gives us an information about how BMl is Correlated with curl-up test in school going children and provides us information about the role of BMI in physical fi1ness of children.
KEYWORDS: Curl-up test, FITNESSGRAM, WHO growth chart, body mass index.

ASSESSMENT OF DYNAMIC BALANCE IN BASKETBALL, VOLLEYBALL AND FOOTBALL PLAYERS USING STAR EXCURSION BALANCE TEST

Manoj Jagannath Patil

BACKGROUND: Traumatic and overuse lower extremity injuries are common in team sports where dynamic balance is desirable for stability while athlete is moving and quickly reacting to changing circumstances. Clinicians often use various methods to assess dynamic balance and star excursion balance test (SEBT) is one of the reliable and feasible methods to assess dynamic balance as it challenges a person's ability to maintain a stable base of support simultaneously performing reach movement
AIMS AND OBJECTIVES: To determine the dynamic balance of basketball, football and volleyball players using star excursion balance test. To compare the dynamic balance between basketball, football and volleyball players.
METHODOLOGY: A cross sectional study was conducted among 60 participants aged 18-25 years (n=20 in each group), included on basis of inclusion and exclusion criteria. After taking the consent from the participants, demographic data were taken and the dynamic balance was measured using SEBT.
RESULTS: Statistical analysis was carried out using repeated measures ANOVA along with post hoc analysis in SPSS version 21, where significant level was kept at $p<0.05$. There was significant difference in dynamic balance among volleyball, football and basketball players among Right: anterior, posterior, posterolateral, lateral and Left: anterior and posterolateral.
CONCLUSION: From the study it can be concluded that there was significant difference in dynamic balance among all the players, but dynamic balance was found to be more in the volleyball players compared to basketball and football players.
KEYWORDS: Star Excursion Balance Test, SEBT, Volleyball, Football, Basketball, Dynamic Balance

EFFECT OF HIGH-INTENSITY INTERVAL TRAINING ON NEUROPATHIC PAIN AND QUALITY OF LIFE IN PERSON WITH PARAPLEGIA

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Objective: This study aims to evaluate the effectiveness of high-intensity interval training on neuropathic pain and quality of life (QoL) in individuals with chronic paraplegia. Study design: single-blinded, single-arm experimental study design.
Methodology: Ten individuals with chronic paraplegia with the neurological level of injury from T2 to L2 were recruited based on the inclusion criteria. All participants received high- intensity interval training (HIIT) using an arm ergometer based on their peak heart rate achieved during aerobic exercise testing. The intervention was delivered as 30-minute sessions, four times a week for 6 weeks.
Results: Median pain intensity ratings for neuropathic pain decreased from 7 on a 0–10 numerical rating scale at baseline to 3 at the end of the study. QoL in all four domains showed significant improvement with a median score of 5, 5, 4, and 5 at baseline for satisfaction with life as a whole, satisfaction with physical health, psychological health, and social life to 6, 6, 7, and 5.50 at the end of the study respectively. Whereas, the mean 6MPTD improved from 331.20 ± 85 at baseline to 360.00 ± 77 at the end of the study. None of the participants developed pain or reported any unwanted side effects during or after the intervention.
Conclusion: Considering the promising effects and safety of HIIT, it can be used for treating neuropathic pain and improving QoL effectively in individuals with chronic paraplegia.
Keywords: paraplegia, neuropathic pain, aerobic exercise, high-intensity interval training

EFFECT OF INSPIRATORY MUSCLE TRAINING ON FUNCTIONAL SITTING BALANCE IN PEOPLE WITH SPINAL CORD INJURY

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Study Design: The study is a single-blinded, parallel, two-group randomized clinical trial.
Aim: To evaluate the efficacy of inspiratory muscle training on functional sitting balance (FSB) in individuals with SCI.
Background: Impairment of FSB affects the functional activities of people with SCI. Strength and function of diaphragm has been linked to posture and balance in healthy and populations with medical conditions. The effect of training inspiratory muscles, particularly the diaphragm, on FSB in people with SCI has not been investigated.
Methods: 21 participants (aged 18-60) with an injury between C4-T6 (AIS A-C) were recruited and randomized to the experimental or control group. Both groups received conventional respiratory care and experimental group received flow-resistive IMT in addition to conventional respiratory care for 4 sessions/week for 6 weeks. FSB was assessed using Function in Sitting Test-SCI (FIST-SCI) scale. Assessment was performed at baseline and after six weeks of training. (CTRI Registration No.: CTRI/2023/06/054586)
Result: We observed a significant difference in FSB post IMT training in the experimental group (Median=9) than control group (Median=3) with z= -3.257 with p=0.001.
Conclusion: The study emphasises the postural role of respiratory muscles.

EFFECTS OF MODIFIED CONSTRAINT INDUCED MOVEMENT THERAPY ON MOTOR PERFORMANCE AND DAILY FUNCTIONS IN PATIENTS WITH SUB-ACUTE STROKE

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BACKGROUND: Stroke is a major public health concern. Currently more than 6.5million people living who have had stroke. Of these 50 to 70% will be functionally independent and 15 to 30% will live with permanent disability. Modified Constraint induced movement therapy is intended to help stroke patients overcome 'learned non- use' of the paretic arm by discouraging the use of the unaffected or less affected arm in combination with intensive training of the paretic arm.
OBJECTIVE: The main objective of the study is to evaluate the motor performance and changes in daily functions in patients with sub-acute stroke.
METHODOLOGY: This is a Quasi-experimental study of interventional design. 30 sub-acute stroke patients were selected conveniently and divided into MCIMT group and a control group. The sample was allocated using lottery method. The study was conducted for 10 weeks and the intervention was given for 6weeks. The outcome measures used was FUGL-MEYER assessment and Barthel index.
CONCLUSION: After statistical analysis P-value was less than .003 and considered to be significant. Hence the study concluded that Modified constraint induced movement therapy produced significant effects on motor performances and daily functions in patients with sub- acute stroke.
KEY WORDS: sub-acute stroke patients, motor performance, daily functions, constraint induced movement therapy.

VALUE OF H amp /M amp RATIO FOR FLEXOR CARPI RADIALIS MUSCLE IN NORMAL HEALTHY INDIVIDUALS – A CROSS SECTIONAL STUDY.

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Background: H reflex is a widely used clinical tool in assessment of neuromuscular disorders. It is also commonly used experimentally to assess changes in motorneuron excitability in response to some form of treatment. H amp /M amp Ratio of Flexor carpi radialis(FCR) is used to assess upper limb spasticity. H reflex of FCR is also present at rest in normal healthy individuals. Reference Value of H amp /M amp ratio of FCR has not been published as per author's knowledge. So, a cross sectional study was conducted on 65 normal healthy individuals with age group of 20 to 24 years. First Height, Weight, Temperature and Limb length were measured. Then H reflex was taken by stimulating the 130 median nerves of 65 normal healthy individuals at elbow and recording from FCR muscle at rest and again with voluntary contraction of FCR muscle in upper limb. H amp /M amp ratio was measured.
Analysis: Statistical analysis was done by software SPSS 25.0 version. Percentile method was used to check the distribution of data at particular percentile.
Result: Mean and Standard deviation of H amp /M amp at rest is 0.0499 ±0.0393 and at voluntary contraction is 0.087±0.077. The range for H amp /M amp ratio at rest is 0.02 to 0.12 and at voluntary contraction is 0.06 to 0.23.
Conclusion: These values can be used as reference values.
Keywords: FCR, H reflex, Normal healthy individuals, Value of H amp /M amp ratio.

EFFECT OF EPLEY MANEUVER AND SEMONT MANEUVER IN PATIENTS WITH BENIGN PAROXYSMAL POSITIONAL VERTIGO

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BACKGROUND: Vestibular conditions may have a negative impact on the daily activities of patients. It mainly affects their quality of life in physical, emotional and functional activities. Benign Paroxysmal Positional Vertigo is a symptom of rotating dizziness caused by sudden change in position of the head and it is characterized be short lived episodes of vertigo usually lasting from few seconds to minutes. To alleviate the symptoms positioning maneuvers (Epley and Semont maneuver) were used.
OBJECTIVE: Objective of the study is to find out the effect of Epley maneuver and Semont maneuver in patients with benign paroxysmal positional vertigo (posterior canal)
METHODOLOGY: This is a Quasi Experimental study,40 patients diagnosed with benign paroxysmal positional vertigo were selected for the study. A Dix Hallpike test is performed to confirm the diagnosis. The selected participants were allocated into two groups by odd or even method, group A (Epley maneuver) and group B (Semont maneuver). The pre and post- test values were assessed by Dizziness Handicap Inventory and Motion Sensitivity Quotient and the participants were treated according their groups for 6 weeks.
CONCLUSION: The participants who received Epley Maneuver showed highly significant mean improvement P=0.01 when compared to Semont Maneuver. Thus the study concludes that Epley Maneuver is effective in treating posterior canal BPPV.
KEY WORDS: Dizziness, Benign Paroxysmal Positional Vertigo, Epley maneuver, Semont maneuver.

A PILOT STUDY TO FIND OUT THE EFFICACY OF RehabRelive ACTIVE GLOVE TO IMPROVE HAND FUNCTION IN STROKE PATIENTS.

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BACKGROUND AND NEED OF THE STUDY: Stroke, a significant global public health challenge attributable to an array of disabilities it causes alongside an impairment in hand dexterity. Advanced therapy options such as application-based therapy provides repetitive training, which may be beneficial for improving fine motor function. Rehabrelive active glove is a sensor assisted device which is developed by Galanto Innovations Private Limited to improve motor functions of upper limb. This study aims to evaluate the effect of this Rehabrelive glove therapy to improve hand dexterity in stroke survivors.
METHOD: In total, 17 individuals with stroke were divided randomly into two groups. Both the groups received total 12 sessions of physical therapy. Group A received conventional therapy; Group B received Rehabrelive glove therapy along with conventional therapy. All participants were assessed for Chedoke Arm and Hand Activity Inventory, Fugl-Meyer Assessment of upper extremity, Box and Block test, and subjective perception of improvement at the beginning and after completion of 12 sessions.
RESULT: Individuals in group B significantly improved in Chedoke Arm and Hand Activity Inventory and Fugl-Meyer Assessment of upper extremity scale. There is no significant difference noted in comparison of all 4 outcomes between group A and group B.
CONCLUSION: Rehabrelive glove therapy and conventional therapy both are equally effective in improving hand functions in stroke patients.
KEYWORDS: Rehabrelive glove, Chedoke Arm and Hand Activity Inventory, Fugl-Meyer, Box and block

EEFFECT OF VESTIBULAR REHABILITATION EXERCISES ON RELIEVING DIZZINESS IN PATIENTS WITH VISUAL VERTIGO

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BACKGROUND: Vestibular decompensation-induced chronic dizziness is caused in part by a vicious cycle of vertigo. One of the treatment for patients with vestibular decompensation is vestibular rehabilitation exercises that apparently improved postural stability, gait speed, and dynamic visual acuity in many randomised trails.
AIM: The purpose of this research was to determine whether vestibular rehabilitation exercises relieved dizziness in patients with visual vertigo.
METHODOLOGY: Patients with visual vertigo (n = 59) were randomly allocated into two groups: experimental (n=28) and control (n = 26). Patients in experimental group were received vestibular rehabilitation exercises for 3 months. Before and after the intervention, patients completed dizziness and unsteadiness questionnaires including Jacobson and Newman's "Dizziness Handicap Inventory" and were given a grade from 1 to 5.
RESULT: The experimental group's dizziness improved significantly, much more than the control group's after the second month of intervention.
CONCLUSION: Regular (weekly) and medium-term (3-month) PT-guided vestibular rehabilitation exercises can significantly alleviate subjective dizziness in these patients.
Key words: vestibular rehabilitation exercises, dizziness, visual vertigo, dizziness and unsteadiness questionnaries.

Comparison of reliability of full outline is unresponsiveness(FOUR) score and simplified evaluation of consciousness disorders(SECONDs) scale on comatose patients-an observational study"

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AIM - To assess reliability by comparing the Full Outline of Unresponsiveness (FOUR) and Simplified Evaluation of Consciousness Disorders (SECOND's) scale in Comatose patients.
MATERALS and METHODS- This is a cross-sectional study conducted between November 2022 and April 2023 at tertiary care hospital, Belagavi. A total of 96 patients who were treated for less than 24 hours in intensive care unit and who were in coma were included in the study. FOUR SCORE scale and SECONDS scale were administered on patients with a gap of 45 mins in first and second evaluation. Shapiro-Wilk Test normality test was applied for non-continuous variables, Cronbach's Alpha was used to assess the reliability and validity of both the scales and SPSS 20.0 version software was used for data analyses.
RESULTS- The reliability and validity of FOUR score's overall Cronbach's Alpha value is 0.742 which is statistically significant and SECONDS SCALE's Overall Cronbach's Alpha value is 0.556 which is not statistically significant.
CONCLUSION- The reliability and validity test have indicated significant outcome that FOUR score is better outcome measure in assessment of COMA patients and patient who are dependent on mechanical ventilation.
Keywords- Loss of Consciousness, Full Outline Of Unresponsiveness, Four Score, Simplified Evaluation of Consciousness Disorders, Second's Scale, Reliability, Comatose.

EEFFECT OF VESTIBULAR REHABILITATION EXERCISES ON RELIEVING DIZZINESS IN PATIENTS WITH VISUAL VERTIGO

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Background: Patients who have been in a coma have been effectively treated with dorsal column electrical stimulation of the cervical spinal cord. Following stimulation of the median nerve, there is response in ipsilateral primary somatosensory cortex corresponding to around BA2 and 5 which can be beneficial for arousal of the comatose patients.
Objectives: To assess the effect of left median nerve stimulation and comparing the effect of right and left median nerve stimulation on comatose patients using Glasgow coma scale (GCS) and Coma recovery scale- revised (CRS).
Methods: Twenty patients with minimally consciousness state of GCS score<8 or =8 were recruited and were randomly allotted into 2 groups. The Experimental group (EG) received median nerve stimulation on the left forearm whereas the Control group (CG) received on the right forearm with faradic type of current of amplitude of 10-20 mA and intensity was adjusted until visible contractions. Pre and post assessment was taken of both the groups with GCS and CRS- revised for the level of consciousness.

Results: Within group analysis of EG and CG was done using Paired t test, while for between group analysis independent sample t test was used. There was statistically significant difference seen within group and between group analysis with p-value <0.05.
Conclusion: The study concluded that right as well left median nerve stimulation on comatose patients is beneficial. However, as right median nerve stimulation has better benefits.
Keywords: Comatose patients, Left median nerve stimulation, Glasgow coma scale, Traumatic brain injury.

FUNCTIONAL PROGRESS IN OBSTETRIC BRACHIAL PLEXUS PALSY: A 3-YEAR-OLD PATIENT'S CASE REPORT

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BACKGROUND: Obstetric Brachial Plexus Palsy is an injury in new-born babies that is often associated with increased force on the neck during passage through the birth canal. This puts excessive strain on the brachial plexus and causes nerve injury.
NEED OF RESEARCH: To analyse the effect tailored physiotherapy protocol in functional progress in Obstetric brachial plexus palsy for 3 year old child.
METHOD: A 3-year-old child with obstetric brachial plexus palsy (OBPP) and a right clavicular fracture sustained at birth. An informed consent was obtained and Active Movement Scale and Modified Mallet Score (1/5) were assessed before initiating the treatment protocol. PNF approach and ROM exercises for wrist, elbow and shoulder were administrated. The therapeutic intervention commenced on 6 th July 2020 and remained ongoing. Care checklist was followed according to the cope guidelines during the conduction of the study.
RESULT: The tailored physiotherapy protocol led to a significant improvement in the patient's active movement scale, resulting in a Modified Mallet score of 4.
CONCLUSION: It can be concluded that the tailored physiotherapy protocol led to significant improvement in Obstetric brachial plexus palsy.
KEYWORDS: OBPP, Active movement scale, modified mallet score, brachial plexus

EFFECT OF SPRINTER AND SKATER PATTERN OF PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION ON TRUNK CONTROL AND POSTURAL BALANCE IN INDIVIDUALS WITH STROKE

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Background and purpose- Stroke is the most frequent life-threatening neurological disease leading to motor dysfunction that result in asymmetric posture of the body, abnormal balance of trunk and deficits in ability to transfer weight. The study purpose was to test response of PNF-based coordination exercise on trunk control and postural balance in persons with stroke.

Methods- 10 subjects (>6 months after stroke) were selected according to inclusion criteria and given proprioceptive neuromuscular facilitation-based coordination training using sprinter and skater patterns). All subjects were treated 6 times per week for 3 weeks. The primary outcome measure used to assess pre and post scores were trunk impairment scale (TIS), trunk control test (TCT) and postural assessment scale for stroke (PASS).

Results- After the intervention, there was a statistically significant difference between the pre-test and post-test scores of all three outcome measures (TIS, TCT, and PASS), TIS t-value was scored to be 4.58 and $p<0.02$ representing strong evidence, similarly T-value for PASS was scored to be 4.36 with $p<0.02$.

Conclusion- Skater and Sprinter pattern exercises using Proprioceptive Neuromuscular Facilitation (PNF) techniques demonstrated effectiveness in improving trunk control and postural balance. While the study's sample size is limited to a small group of stroke patients, it suggest that PNF exercises can be incorporated into rehabilitation programs to specifically target trunk muscles.

Key words- stroke, trunk, trunk control, PNF, sprinter, skater, postural control

QUESTIONNAIRE TO ASSESS THE KNOWLEDGE, ATTITUDE, AND AWARENESS REGARDING COMA AMONG THE INFORMAL CAREGIVERS OF COMATOSE PATIENTS -AN OBSERVATIONAL STUDY.

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BACKGROUND:- Comatose is a perilous state that is contemplated as a medical emergency. Coma impacts the primary caregiver's daily living that has debilitating effects. Informal caregivers of comatose patients experience emotional symptoms or grief due to the prolonged illness of an individual. As there is a lack or deficient awareness and knowledge regarding the condition that the attitude towards the condition or grief could be a contributory factor. Considering these factors, the Knowledge, Attitude, Awareness –Comatose Caregiver Questionnaire (KAA-CCQ) was developed for evaluation purposes.

METHOD: -The Knowledge, Attitude and Awareness – Comatose Caregiver Questionnaire(KAA-CCQ) was developed in 2 stages. Stage 1-Development of the questionnaire consisted of inclusion of conceptualization and item generation. Stage 2: - Expert review for round 1 and round 2 were considered and on the basis of reviews content validity was calculated. Items were modified after content validity index score.

ANALYSIS: - The content validity index (CVI) score for round 1 and round 2 was analyzed by using Microsoft Excel sheet 2013.

RESULTS: - The computed content validity index (CVI) final score after 2 rounds of expert validation for the questionnaire was 0.91.

CONCLUSION: -The Knowledge, Attitude and Awareness – Comatose Caregiver Questionnaire(KAA-CCQ) developed to assess the knowledge, attitude and awareness regarding coma in informal caregivers of comatose patients achieved a statistically strong content validity that is considered as a suitable method for assessment in informal caregivers of comatose patients.

KEY WORDS: -Informal caregivers, Comatose, Unawareness, KAA-CCQ

EFFECTS OF COGNITIVE BEHAVIOURAL THERAPY (CBT) IN ADDITION TO NEUROBICS ON COGNITION AND MOBILE PHONE ADDICTION IN MODERATE NOMOPHOBIC COLLEGIATE STUDENTS: A PILOT STUDY

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Background:- It is acknowledged that mobile phones are an essential component of our everyday life. In the modern era, a mobile phone addiction can cause serious issues including anxiety and forgetfulness on both a personal and professional level.
Aim:- To determine the effects of Neurobics with addition to cognitive behavioral therapy in moderate nomophobic collegiate students.
Design :- Pilot study
Methodology:- Based on standards for inclusion and exclusion criteria ten students were randomly chosen for two groups- Experimental and control group. The experimental group (n = 05) received Neurobics in addition to cognitive behavioural therapy, whereas the control group (n = 05) received only cognitive behavioural therapy. Outcome measures -MPIQ and MOCA were taken on day 1 and after completion of 6 weeks of intervention protocol for cognition and mobile phone addiction.
Result:- Both experimental and control groups showed significant Improvements however, the experimental group showed more improvement.
Conclusion:- Our results conclude that Neurobics in addition to Cognitive behavioural therapy is more beneficial than only cognitive behavioural therapy on cognition and mobile phone addiction in moderate nomophobic collegiate students.
Keywords:- Nomophobia , Neurobics, Cognitive Behavioural Therapy, Mobile Phone, Neuropsychological, Frontal Lobe Dementia

PELVIC ALIGNMENT'S IMPACT ON FUNCTIONAL RECOVERY AFTER STROKE: UNRAVELLING THE CONNECTION – A SCOPING REVIEW

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Background: An essential component of posture, balance, and well-coordinated movement is the pelvis, a fundamental structure in the human body. After a stroke, alterations in pelvic alignment may have a significant impact on a person's capacity to carry out daily tasks and regain independence.
Objective: To delve into the intricate relationship between pelvic alignment and the overall functional rehabilitation of individuals who have experienced a stroke.
Methodology: This Scoping review comprised of studies from the year 2015 to till date which are explored in the databases like Pubmed, Clinical key, Scopus and science direct using relevant search techniques. Out of 865 articles which were screened and after removal of duplicates 6 articles primarily emphasizing on inclusion criteria were included in the review
Results: Research explored how alterations in pelvic alignment post-stroke affect gait, balance, and overall mobility. Anatomical changes, muscle imbalances, and compensatory strategies related to pelvic alignment were examined and possible conclusions given.
Discussion: Studies in this field often investigate the relationship between biomechanics, posture, and functional recovery after a stroke. The pelvis, being a central structure in the body, plays a crucial role in maintaining balance and coordinating movement.
Conclusion: We would like to conclude with our research that pelvic alignment should be taken into consideration while rehabilitating stroke individuals. More high-quality studies needed to see the impact of pelvic alignment training.
Keywords: Pelvic alignment, Balance, Coordination, Trunk Control, Functional recovery, Stroke

PREVALENCE OF COMATOSE PATIENTS AND DISABILITY STATUS IN RELATION TO THE LEVEL OF CONSCIOUSNESS IN BELGAUM CITY- AN OBSERVATIONAL STUDY

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BACKGROUND: Coma, is defined as deep sleep. The neuronal failure brought on by a reduction in the blood's brain supply of glucose/oxygen is acknowledged as the pathophysiology of a coma. There is paucity concerning the prevalence of comatose patients in India. To comprehend the impact of a condition, it is necessary to understand the percentage of individuals who are affected.
OBJECTIVE: The purpose of this study is to find the prevalence of comatose patients and disability status in relation to the level of consciousness in Belgaum City.
METHOD: The data was collected by accessing the consciousness level using the FOUR score and disability status using the DRS at a tertiary care hospital.
RESULTS: The prevalence of comatose male patients(65%) were more than female patients (35%). The level of consciousness commonly graded according to the FOUR Score is 1 while disability status by DRS on day 7 is 24.
CONCLUSION: The study concludes that there is a high prevalence of comatose patients in Belgaum city with an alarming death rate and high disability among the surviving individuals. This study highlights why physical rehabilitation should be initiated in comatose patients as early as possible.
KEYWORDS: Coma, FOUR score, Prevalence, Disability Rating Scale, Disability status

ASSOCIATION OFAEROBIC CAPACITY, RESPIRATORY FUNCTION AND HEART RATE VARIABILITY IN INDIVIDUALS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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3 National Institute of Tuberculosis and Respiratory Disease

Study Design: Cross-sectional study.
Aim: This study aims to investigate the correlation between aerobic capacity, respiratory function, and heart rate variability in individuals with chronic obstructive pulmonary disease.
Background: The American Thoracic Society (2021) documented the impact of chronic obstructive pulmonary disease on respiratory function and aerobic capacity. The literature documents that the disease in the later stage develops cardiac autonomic dysfunction. Cardiac dysfunction is associated with increased sympathetic tone than the parasympathetic tone. This might contribute to increased morbidity and mortality in individuals with COPD.
Methods: A total of 12 participants (age: 40-60) with diagnosed COPD undergoing pulmonary rehabilitation were recruited in the cross-sectional study. The respiratory function, aerobic capacity, and cardiac autonomic function were assessed using PImax, six-minute walk distance, and heart rate variability.
Result: We observed a positive correlation of a six-minute walk distance with RMSSD (correlation coefficient= 0.727). RMSSD is the time domain measure of the parasympathetic nervous system.
Conclusion: Improvement in the physical capacity of COPD individual with pulmonary rehabilitation is associated with improvement in cardiac autonomic dysfunction.

IMPACT OF MODERATE INTENSITY INTERVAL TRAINING AND HIGH INTENSITY INTERVAL TRAINING ON BODY MASS INDEX AND LIPID PROFILE ON OVERWEIGHT MIDDLE AGE MEN.

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BACKGROUND: Due to lifestyle changes such as inactivity and malnutrition, increasing obesity is a social-medical problem in developed and developing countries. High levels of low-density lipoprotein increase the risk of cardiovascular disease and high levels of HDL are considered as a protective factor.
OBJECTIVE: 1).To find the impact of high intensity interval training is effective in lipid profile and BMI among **overweight men. 2**).To find out the moderate intensity interval training is effective in lipid profile and BMI among **overweight men. 3**).To compare the effects of high intensity interval training and moderate intensity interval training on the lipid profile and BMI among adult overweight men.
METHODOLOGY: This is a Quasi-experimental study. A number of 30 men (age 35–60 years) with overweight/obesity volunteered to participate in the study. The subjects were divided into two matched group according to measurement of Body mass index. The subjects of experimental groups participated in the selected interval training for eight weeks. The first blood sampling was performed within 48 hours prior to the first training session and the second samples were obtained 48 hours after the last training session.
CONCLUSION: The pre and post test data were collected and compared to obtain the results.
KEY WORDS: Obese individuals, moderate and high intensity interval training, lipid profile.

A COMPARATIVE STUDY TO EVALUATE THE EFFECTIVENESS OF MYOFASCIAL RELEASE AND KINESIO TAPING TO IMPROVE DYSPNOEA, FUNCTIONAL CAPACITY AND QUALITY OF LIFE IN COPD PATIENTS – A PILOT STUDY.

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AIM OF THE STUDY - COPD is defined as "a disease state characterized by airflow limitation that is not fully reversible. According to WHO, COPD is one of the main causes of illness and mortality on a global scale. According to estimates, COPD was the sixth most common cause of death in 2019. The objective of this study is to compare the effectiveness of Myofascial Release with conventional exercises and Kinesio Tape with conventional exercises in COPD patients.
STUDY DESIGN- A Pilot Study
MATERIALS AND METHODS- In this Pilot Study, patients with the diagnosis of COPD were randomly allocated into two groups. Group I of MFR with Conventional Exercise Regime (n=6), Group II of Kinesio Tape with Conventional Exercise Regime (n=6). 6MWT, mMRC Dyspnoea scale and PEFR device used as Outcome Measures. Intervention is given for 3 weeks.
RESULT – Participants from both groups showed improvement in all three outcome measures after the treatment but Group I showed drastic changes in the reduction of dyspnoea, an increase in PEFR and 6MWT as compared to Group-II.
CONCLUSION- Interventions such as Myofascial Release and Kinesio tape could act as an effective adjunct to conventional exercises and help in improving the Quality of life of and increasing the exercise capacity of COPD patients
KEYWORDS- COPD, Myofascial Release, Kinesio Tape, Dyspnoea, Exercise Capacity

EFFICACY OF AEROBIC EXERCISE AND RESISTANCE TRAINING IN IMPROVING THE HEMOGLOBIN LEVEL AMONG TRIBAL ADOLESCENT GIRLS.

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BACKGROUND: The adolescent girls are more prone to reduced hemoglobin level and tribal people doesn't reach the optimal nutritional level which they require.
OBJECTIVE: To evaluate the efficacy of Aerobic exercise combined with Resistance exercise in improving the hemoglobin level among tribal adolescent girls.
METHODOLOGY: It is a experimental study. In order to address the mounting effects of reduced hemoglobin level among adolescent girls, the blood test was taken by staff nurse from Mahatma Gandhi Hospital on the target population of 32 tribal adolescent girls. The pre – test data were recorded and the intervention was given 3 times a week for 6 weeks. After which again the hemoglobin levels are assessed to compare and conclude with.
CONCLUSION: The data collected from the pre and post test were compared and the efficacy is determined with the statistical analysis.
KEY WORDS: Hemoglobin level, Tribal adolescent girls, Aerobic exercise, Resistance training, Blood test analysis.

EFFECTS OF PROLONGED SLOW EXPIRATION TECHNIQUE IN ACUTE VIRAL BRONCHIOLITIS INFANTS

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BACKGROUND: Acute viral bronchiolitis is a clinically diagnosed condition causing significant morbidity and mortality in infants below 12months. The intervention of prolonged slow expiratory technique employed in clinical practice in infants with bronchial obstruction and hyper secretion that can be applied as from birth when respiratory disease with obstruction exists.
OBJECTIVE: The main objective of this study was to evaluate the effect of the prolonged slow expiration technique (EFIT) in acute viral bronchiolitis infant.
METHODOLOGY: A Quazi experimental study was conducted on 14 infants in MGMCRI, neonatal intensive care unit. The duration of the study was 3 months. The participants will be randomly divided into group-A and group-B. Group A samples receives expiratory flow increase technique. Group B samples will be the control group will receive medications advised by the pediatrician.
CONCLUSION: In the post measurements, the intervention group showed significantly more improvement in respiratory rate (p=0.0023), heart rate (p=0.0040) and oxygen saturation (p=0.0395) than control group (p < 0.05) and concluded that the effect of prolonged slow expiration technique seems to be beneficiary physiotherapy method for management of acute viral bronchiolitis in infants.
KEY WORDS: Acute Viral Bronchiolitis, Prolonged Slow Expiration technique, Infants.

EFFECT OF CARDIO RESPIRATORY FITNESS ON OBESITY INDICES, ATTENTION AND ACADEMIC MOTIVATION IN SCHOOL GOING ADOLESCENTS

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Background: Adolescent obesity is on the rise, impacting health and academics. This study explores how cardiorespiratory fitness influences obesity indices, attention, and academic motivation in school-going adolescents.
Methods: 520 adolescents aged 13-17 years (Both genders) were chosen by convenient sampling. Cardiorespiratory fitness was assessed using a physical fitness index, categorizing participants into four groups: Excellent, good, fair, poor. Obesity indices (BMI, body fat percentage, WHR) were measured using validated methods. Attention levels were gauged through cognitive tasks, and academic motivation was evaluated using the Motivated Strategies for Learning questionnaire. Appropriate statistical test was used.
Results: Adolescents with good cardiorespiratory fitness exhibited significantly lower BMI (<0.05) and body fat percentage (<0.05), indicating an inverse relationship. They also demonstrated higher attention levels and academic motivation ($p<0.01$). A negative correlation between BMI and attention levels ($r=-0.28$, $p<0.05$) emphasized obesity's impact on cognitive performance.
Conclusion: This study unveils the intricate connections between adolescent cardiovascular health, obesity, attention, and academic motivation. The findings can guide targeted interventions to promote healthier lifestyles, enhance attention, and boost academic motivation among school-aged youth, ultimately fostering improved overall well-being and academic performance.
Keywords: Physical fitness, Obesity, Attention, Motivation

EFFECT OF CARDIO RESPIRATORY FITNESS ON OBESITY INDICES, ATTENTION AND ACADEMIC MOTIVATION IN SCHOOL GOING ADOLESCENTS

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COVID-19 AND ITS EFFECT ON MENTAL HEALTH IN UNIVERSITY STUDENTS.

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INTRODUCTION- As of march 30 th march 2020,there have been over 720,000 confirmed cases and 33,000 fatalities linked to covid -19 worldwide .The original corona virus outbreak in India may be linked primarily to foreign nationals visiting the country as tourists from disease-affected nations . There must be some commonalities or a common denominator in terms of mental health outcomes for pandemics.
AIM- The aim of this prospective study is to access the impact of covid-19 outbreak on mental health of the university students.
METHODOLOGY – Institution based cross sectional study was conducted in the campus of Adesh university. Pre Validated questionnaires were used to assess the mental health of university students via patient health questionnaire-9, WHO-5 Well -being index and self- structured questionnaire. The data was analysed by means of descriptive statistics and mean percentage.
RESULT- Patient health questionnaire shows 28.9% were not at all depression,38.8% were in depression several days,21.94% were in depression more than half the days, and 7.65%very much depressed. Similarly, WHO-5 Well-being index shows 11.8% feel well-being all of the time ,38.8% feel well being most of the time ,18.44% more than half of the time ,13.59% less than half of the time ,9.12% feel well -being some of the time, and 9.12% were not well. Likewise, self-structured questionnaire shows 26.6% were not at all stressful, 27.96% were somewhat stressful, 19% were moderately stressful,13.72% were very stressful, and 9.70% were extremely stressful.
CONCLUSION-From the study we concluded that 70% population of students were in depression during the Covid -19 pandemic.
KEY WORDS- COVID-19, mental health, depression, anxiety and stress.

IMPACT OF CARDIAC REHABILITATION FOLLOWING PERCUTANEOUS CORONARY INTERVENTION ON INDIVIDUALS WITH CORONARY HEART DISEASE

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BACKGROUND: Percutaneous coronary intervention (PCI) is the treatment of choice for coronary heart disease (CHD), which has been shown to reduce morbidity and mortality. However, PCI may affect cardiac function and may cause coronary spasm, endothelial injury and even restenosis. Cardiac rehabilitation (CR) is multidisciplinary intervention composed of exercises, risk factor modifications and psychological support for people with heart diseases. CR is strongly recommended for the treatment of patients with CHD. However, little is known about the effect of CR in improving the health outcomes after PCI.
AIM: The purpose of this review is to provide an overview of effectiveness of cardiac rehabilitation on cardiac function and major adverse cardiovascular events (MACE) after PCI.
METHODOLOGY: Full-text articles in English dated from 2015-2023 were screened across multiple databases such as Scopus, PubMed and Google scholar that investigated the effect of cardiac rehabilitation after PCI.
RESULT: Six studies were included in this study. These studies found significant improvement in cardiac function and reduction in MACE in patients after PCI.
DISCUSSION: Cardiac rehabilitation increases maximum oxygen consumption, improve left ventricular ejection fraction (LVEF), improve exercise tolerance and reduce the incidence of MACE and restenosis.
CONCLUSION: Cardiac rehabilitation mainly exercise-based have shown to improve cardiac function and reduce the risk of cardiovascular events. However, high quality studies with larger sample size are required to support the beneficial effects of CR in reducing the incidence of cardiac death, repeated PCI and CABG.
KEYWORDS: Cardiac Rehabilitation, Percutaneous coronary intervention, Cardiac function, Cardiovascular events, Coronary heart disease

UTILITY OF ONE MINUTE SIT TO STAND TEST IN RESPIRATORY CONDITIONS: A NARRATIVE REVIEW

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1,2 Nitte Institute of Physiotherapy, Nitte University

Background: Physiotherapists working in neonatal care settings vary greatly throughout units, depending upon regional practices, training, and experience. While it is clear that different forms of physiotherapy are helpful in improving the prognosis of at-risk newborns in the NICU, there is a lack of documented literature about the role and practice patterns.
Aim: This review has been carried out to determine the physiotherapy interventions provided to at-risk neonates in Neonatal ICU throughout India.
Methodology: The databases PubMed, SCOPUS, and Web of Science were searched using the keywords. Out of 93 analyzed publications, 25 articles were selected of which, 3 articles were included according to inclusion criteria.
Results: Physiotherapy interventions encompass a spectrum of approaches, including developmental care, positioning, and movement therapies. Research explores how these interventions contribute to different management strategies including respiratory, muscluloskelal and underdevelopmental outcomes.
Discussion: Indian context adds an extra layer of consideration, taking into account factorssuch as cultural practices, and socioeconomic disparities. Researchers aim to create evidence based guidelines that are not only effective but also culturally sensitive and feasible.
Conclusion: Physiotherapy research conducted in India's NICUs exploes the long-tem effects of early interventions on newborns' quality of life, recognizing the potential to improve these vulnerable infants' overall health trajectory and lessen underdevelopment problems and highlighting the need for more literature on physiotherapists' interventions and practice patterns.
Keywords: physiotherapy intervention, neonatal lCU, observational studies, at-risk neonates neonatal care, India

UTILITY OF ONE MINUTE SIT TO STAND TEST IN RESPIRATORY CONDITIONS: A NARRATIVE REVIEW

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Background: The assessment of an individual's physical fitness is aided by their ability to exercise, determined by their muscular strength and endurance. In the setup with limited space, time, and resources, One-minute sit-to-stand test (1MSTST) becomes a quick, easy, and economical method to carry out in the patients with various respiratory conditions.
Aim: The purpose of this narrative review is to understand the utility of 1MSTST in the individuals suffering different respiratory conditions.
Methodology: Full-text articles in English from 2015 to till date were screened across multiple databases like Scopus, PubMed, and the articles with application of 1MSTST in different respiratory conditions were included in this review.
Result: The evidences suggest in the individuals with COPD (chronic obstructive pulmonary disease), pulmonary arterial hypertension and lung transplant, 1MSTST has a strong correlation with other well-established tests like six-minute walk test (6MWT) and repetition maximum test. Similarly, post-test desaturation was found to be lower following 1MSTST.
Discussion: 1MSTST provides insight into change in muscle strength, the prognosis of illness, and effectiveness of pulmonary rehabilitation. It is a simple, safe test that aids in determining exercise capacity, forecasting the post-surgical course, and determining the patients' WHO functional class. Conclusion: Overall, this review emphasizes the usefulness of 1MSTST in a variety of respiratory conditions, particularly in time-bound, space-bound, and cost-bound scenarios. .
Keywords: One minute sit to stand test, respiratory conditions, physical fitness, exercise capacity, functional limitation

THE USE OF SURVEYS TO ASSESS PHYSICAL ACTIVITY WITH SPECIAL REFERENCE TO RURAL VS. URBAN CONTEXTS

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Physical activity is an important tool to prevent and manage various chronic disease conditions, such as diabetes, heart disease, and depression. However, youth and adults around the world are not meeting the current physical activity recommendations outlined by the WHO. One reason is due to the lack of programming tailored toward those with chronic disease conditions. This problem is exemplified in rural and remote communities, where the availability of resources, infrastructure and specialists can be limited. Thus, to improve programming for those experiencing chronic disease conditions, we first need to understand what the values of, and barriers and facilitators, to physical activity are in each community. One way to understand this is through the distribution of surveys. These surveys need to be curated in collaboration with a team of individuals including practitioners, policymakers, and community representatives. Special consideration should be given to the types of questions, language, format, and cultural relevancy to ensure the survey is appropriate to each community. These survey results can enable practitioners and policymakers to create specific strategies for community-based physical activity programming that will be appropriate for those with chronic disease conditions. This can be one strategy to ensure long-term adherence and sustain ability of a physical activity program. rehabilitation is associated with improvement in cardiac autonomic dysfunction.

EFFECTIVENESS OF VIRTUAL REALITY TO IMPROVE BALANCE AND REDUCE THE RISK OF FALL IN ELDERLY PEOPLE

Divyadharshini S
School of physiotherapy, Sri Balaji Vidhyapeeth

BACKGROUND: Falls especially in the elderly people are common problem and often lead to loss of mobility and independence. It occurs as a result of postural reflex due to degenerative changes that accompany the aging process Virtual reality stimulate daily life activities by presenting an illusion of 3 dimensional vision and direct visual and auditory feedback.
AIM: Exercise programs design for reducing the fall approximately 21% and improving the balance. Virtual reality may provide a viable alternative intervention for reducing the fall.
PROCEDURE: 14 Geriatric subjects with the history of frequent fall were selected. The subjects were given virtual reality along with balance exercise for duration of 4 weeks. Each week has 5 sessions, daily 1 session of hour with intervals. Pretest and post test were taken by berg balance scale and fall efficacy scale before and after the intervention.
KEYWORDS: Older people, falls, virtual reality, balance exercises

IMPACT OF VIVIFRAIL MULTICOMPONENT INTERVENTION ON BALANCE AND FUNCTIONAL CAPACITY AMONG GERIATRIC POPULATION.

Valliyappan.S
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BACKGROUND: The aging of global population is accompanied by growing burden of health problem. It can lead to frailty which is defined as progressive age-related decline in physiological systems that results in decreased functional (Intrinsic capacity)capacity. Frailty affects quality of life and increase the risk of adverse events (i.e. falls, fracture, cognitive, decline, disability, hospitalization or even death). To prevent and to treat the problems of older adults the multi-component training programs is one of the most effective intervention. The vivifrail multi-component exercise program combines strength, aerobic, balance and flexibility training and it is a key point in maintaining the independence of activity of daily living.
OBJECTIVE: Objective of the study is to find out the effect of vivifrail multi-component intervention on balance and functional capacity among geriatric population.
METHODOLOGY: This is a Quasi experimental study; 60 older adults were recruited conveniently for this study. After the selection process the participants are allocated to different wheels (A, B, C, D) according to their SPPB scores and the participants are treated according to the wheel for 12 weeks. Pre and post-test were assessed by Short Physical Performance Battery(SPPB) and Barthel Index(BI).
CONCLUSION: After the statistical analysis P-value was less than 0.5 which is considered to be significant. Thus the study concludes that Vivifrail Multi-component Intervention is effective in treating functional capacity and balance among geriatric population.
KEY WORDS: Geriatrics, Balance, Frailty, Functional capacity, aging.

ASSOCIATION OF FEAR OF FALL AND AVOIDANCE OF BASIC ADLS IN ELDERLY.

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Introduction: Fall is the major problem seen in the elderly. As the age increases the incidence of fall also increases. Due to single fall there may be activity restriction , loss of confidence, social isolation, increased dependency.
Need of study: This research is done to understand actual reason of activity restriction and thereby provide fall prevention. Fear of fall and avoidance of activity is equally important aspects which may affect health of society. Hence , it is necessary to find fearful and avoidant people to recommend prevention strategies.
Aim and Objective: To correlate the association of fear of fall and avoidance of basic ADLS in elderly. Material and Methodology :The present study was an cross- Sectional Study conducted in 2022- 23.Subjects were consided on the based of inclusion criteria. 100 samples between age group 65 to 85 were assessed for fall risk, fear of fall and avoidance of basic ADLS using TUG , Fall Efficacy Scale, Avoidance Behaviour Questionnaire.
Result : The study shows that there is significant correction between fear of fall and avoidance of basic ADLS.
Discussion: The study concluded that fear of fall has correlation with avoidance of basic ADLS in elderly. Fall related injury can be the major cause of disability and death. Fear of fall , loss of confidence, increased dependency, social isolation, activity restriction are the problems related to fall .Higher age , female gender, frequent falls are the factors associated with fear of fall.
Conclusion: The findings of the study are essential to identify fearful and avoidant individuals and thereby referred to interventions that will decrease fear of fall and activity restriction.
Key Words : Fear of Fall , Prevention strategies, Avoidance Behaviour, fall risk.

DIGITAL REPRESENTATION OF ANTHROPOMETRIC MEASURES

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2 Professor, Delhi Pharmaceutical Sciences and Research University, New Delhi
3 Associate Professor, Delhi Pharmaceutical Sciences and Research University, New Delhi

BACKGROUND: This study focuses on anthropometric measurements which are crucial in various fields such as epidemiology, anthropology, and health outcomes. To address the need for efficient data computation, this study aims to determine the associations between different anthropometric units and other factors in north Indian adolescents using digital annotation.

METHOD- A diverse sample of 180 individuals from Delhi, India, was chosen for the study. Advanced technology including AI-based software and high-precision instruments like Tanner's staging protocol, BMI chart, stadiometer for height measurements, a high-precision weighing machine for body weight determination, a high-resolution camera for detailed images, a tripod for stability during image capture, and non-stretchable inch tapes for measuring body circumferences were employed for data collection.

RESULT- The coefficient of determination (R^2) revealed substantial associations between the manual and digital measures, with R^2 values ranging from 27% to 89% across different pairs of parameters. Additionally, the correlation matrix of manual vs digital, revealed significant positive correlations between various anthropometric measurement like upper limb length ® = 0.532, p<0.001), lower limb length (r = 0.820, p < 0.001), and arm width (r = 0.948, p <0.001). Moreover, height demonstrated a strong positive correlation with arm width, weight correlated with hip and moderately with waist circumference.

CONCLUSION- The digital revolution offers promising prospects for developing sophisticated software tools that can expedite anthropometric measurements.

EFFICACY OF COMBINED THERAPY (AEROBIC EXERCISE, HYDROTHERAPY AND RELAXATION TECHNIQUE) FOR DEPRESSION AMONG STUDENTS

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BACKGROUND: Depression is a common mental disorder affecting more than 264 million People worldwide. It is characterized by persistent sadness and a lack of interest or pleasure in Previously rewarding or enjoyable activities, disturbed sleep and appetite, tiredness, and poor Concentration. The effects of depression can be long-lasting or recurrent and can dramatically Affect a person's ability to function.

AIM: This study aims to find out the efficacy of aerobic Exercise, hydrotherapy, and relaxation techniques combined for the treatment of depression Among students.

METHODOLOGY: study type: pre and post type, study design Experimental experimental study, sampling method: Convenient sampling. Sample size: 20 subjects were Taken for the study according to the selection criteria and were received the combined therapy (aerobic exercise, hydrotherapy and relaxation technique) for 6-week time duration at Mahatma Gandhi Medical College. Pre and Post test were taken by using Public Health Questionnaire9.

Result: The post test was showed that significant reduction in depression level the post test(18.1+_ 1.7) when it was compared with pretest (25.55 +_ 0.92).

Conclusion: Findings of this Study conclude that aerobic exercises, hydrotherapy, and relaxation techniques combined has Decreased the severity of depression.

KEYWORDS: Depression, combined therapy, college students, Hypothesis, and alternative Hypothesis

Test-retest reliabilty of the English version of The Menstrual Distress Questionnaire (MEDI-Q) in Indian population: A cross-sectional study.

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Background : A normal, regular menstrual cycle pattern is sensitive to changes in body health and environment; it can certainly be disturbed by drug abuse, polycystic ovaries, disease, and also by such life changes as travel, extreme shock or stress, excessive activity and severe loss of weight. It is thought that this results from changes in the hormonal balance. Menstruation has a significant effect on a women's physical, mental and psychological health. The Menstrual Distress Questionnaire (MEDI-Q) is a newly developed tool in Italian that comprehensively evaluates menstrual related distress.
Objective: To evaluate the test-retest reliabilty of the English version of The Menstrual Distress Questionnaire (MEDI-Q) in young collegiate female Indian population.
Methods: The test-retest reliability of MEDI-Q in Indian population was assessed through data collection using survey by double blinding, among young collegiate individuals with the following inclusion criteria: female gender, age between 16 and 26 years, having had atleast 3 menstruations in the past 12 months. The participants were asked to complete the questionnaire again two weeks after the first completion. The method used was based on the available evidence.
Results and Conclusion: Following the present trends and the impact of menstruation, this pragmatic study was conducted to establish the results in young collegiate females. In the light of available evidences and studies conducted for evaluating the impact of menstruation on women health in Italian and Native English speaking population, this instrument showed good reliability.
Keywords: Menstrual distress, back pain, lower abdominal pain, urinary pain

TITLE-IMMEDIATE EFFECT OF CUPPING THERAPY ON LOW BACK PAIN IN PRIMARY DYSMENORRHEA.

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BACKGROUND- Primary Dysmenorrhea is often referred to as painful menstruation with cramping sensations in the lower abdomen, commonly radiating to both the thighs and lumbosacral regions, resulting in discomfort. It is now recognized as an important women's health issue leading to decreased activity, enthusiasm & absenteeism. The intertwining relation of menstrual cramps and lumbar pain can significantly affect overall well-being. Cupping therapy is a non-pharmacological method that could treat menstrual pain. It reduces the level of prostaglandins to decrease uterine contractions and sensitivity to pain, thereby relieving muscle tension & promoting relaxation.
METHODOLOGY- In this experimental study, 30 participants were included based on inclusion and exclusion criteria. Dry cupping was given on the low back region for 15 mins with patients in a prone position. Pain scores (VAS) were taken before the intervention & immediately after that.
RESULT- Based on the Wilcoxon Signed rank test, there was significant reduction in pain score before and after the intervention with $p<0.05$.
CONCLUSION- Dry cupping effectively reduces the intensity of low back pain in primary dysmenorrhea. Therefore, it can be used as an inexpensive, and safe therapy for PD management.
KEYWORDS- Cupping, primary dysmenorrhea, low back pain, menstrual pain, non- pharmacological treatment, physiotherapy, immediate effect, VAS

EFFECTIVENESS OF BRAIN GYM EXERCISES IN PHYSIOTHERAPY STUDENTS WITH DEPRESSION, ANXIETY AND STRESS

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Introduction: The study underscores the significance of addressing mental health issues in the medical education field, given their potential negative consequences, such as suboptimal quality of patient care, patient safety, professionalism, dropouts and suicides. The introduction introduces Brain Gym exercises as a potential intervention to mitigate the effects of psychological disorders in physiotherapy students.

Need for the Study: Current study is justified by the limited interventions available for psychological disorders among physiotherapy students. The study aims to investigate the effectiveness of Brain Gym exercises in addressing depression, anxiety, and stress in physiotherapy students.

Objectives: The effect of Brain Gym exercises on the psychological status of physiotherapy students with depression, anxiety, and stress.

Methodology: It's an experimental study with convenient sampling with a sample size of 200. The study was carried out in physiotherapy colleges of Nagpur with a study duration of one year. The intervention consists of 10 brain gym exercises with duration of practice as 5 days in a week with a section of 25 minutes which is completed in one hour. The outcome measure used in this study is DASS 21.

Results: The intervention led to a notable reduction in stress levels among participants. The percentage of extremely severe stress cases decreased from 12% to 3%, and overall, there was a positive shift in stress grades. Similar positive outcomes were observed for anxiety and depression, indicating the effectiveness of the intervention in improving participants' mental health across the board.

Keywords: Brain gym exercises, depression, anxiety, stress, physiotherapy, students.

PREVALENCE OF SMARTPHONE ADDICTION AND NECK-SHOULDER PAIN IN STUDENTS OF MAHSI

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Background: Smartphone has become the most important communication tool in daily life. During lockdown due to online education system and work from home uses of smartphone have tremendously increased. Individuals who spend more time with smartphone may result in poor posture lead to neck-shoulder pain. Continuously looking down at smartphone result in higher ache, muscle spasm, shoulder ache and tightness and sub health problems such as fatigue, indigestion, psychopathological problems such as anxiety and depression, ocular alteration, dry eye disease, burning in eyes, sleep disorders like daytime sleepiness, reduced duration of night sleep, later bed time, poor sleep quality. Blue light emitted by screen affect melatonin levels and sleep and wakefulness. The aim of the study is to find prevalence of smartphone addiction in the students of MAHSI.

Method: The study examined 400 students of MAHSI using SAS-SV. SAS-SV is a 10 itemed reliable questionnaire to evaluate degree of smartphone addiction. Participants were asked to report about their neck-shoulder pain using VAS. VAS is a 10 point scale marked with 0 for no pain and 10 for worst pain.

Results: Among 400 participants 280 were smartphone addicted and 120 were not smartphone addicted, 205 smartphone addicted participants had neck-shoulder pain and 2 smartphone addicted participants did not have neck shoulder pain.

Conclusions: Prevalence of smartphone addiction in students of MAHSI is 70%. Prevalence of neck-shoulder pain in adults is 51.75%. Prevalence of neck-shoulder pain in smartphone addicted adults is 73.21%..

RETRO WALKING EXERCISE VERSUS CORE STABILITY EXERCISE : EFFICACY IN ALLEVIATING OSTEOARTHRITIS KNEE SYMPTOMS- A Randomized Active Control Study

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Background: Most patients who suffer from osteoarthritis (OA), a chronic degenerative disease, are in their fourth and fifth decades of life. When one ages, it leads to joint wear and tear. Bones, cartilage, and synovium are the structures that are impacted. Retro walking is regarded as a successful closed kinetic chain workout to enhance the body's equilibrium and lower-body strength. Core stability exercises are exercises designed to improve the strength and stability of the muscles that support the spine, hips, and knees, core stability exercise lessen the strain on the lumbar muscles and lower extremities as well as the intradiscal pressure. An adapted curriculum for the needs is needed.

Objective: The study's goal was to investigate the effectiveness of retro walking exercise versus core stability training.

Methodology: 30 subjects with osteoarthritis knee were selected. They were randomly assigned to two groups that is Retro walking exercise (RWE) group and Core Stability Exercise (CSE) group. RWE group received retro walking exercise and conventional exercise and CSE group received core stability exercise and conventional exercise. Exercise is given for 6weeks Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) and the Numeric Pain Rating Scale (NPRS) were used to measure pain and functional activity scores prior to and following the intervention.

Result: The data was analysed and interpreted using the SPSS version. There was a significant reduction in NPRS and WOMAC score in both groups and a significant difference was found between RWE group and CSE group ($p<0.05$).

Conclusion: From the above study, we draw the conclusion that both exercises were successful in treating patients with knee osteoarthritis, but retro walking demonstrates an additional notable extent of handicap decrease.

Keywords: Knee Osteoarthritis, Retro walking exercise, Core stability exercise, Numeric pain rating scale.

Effectiveness of Strengthening Exercises in Patients with Ergonomical Low Back Pain: A Randomized Controlled Trial.

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Background: Low back pain is often associated with imbalances in hip muscle length and strength. It can result from prolonged over stretching of the innervated soft tissues when poor sitting or standing postures are maintained. These changes in muscular tone create muscle imbalance, which leads to movement dysfunction.
Objective: To evaluate the effect of stretching and strengthening exercises (Janda's approach) with conventional treatment in the subjects with postural low back pain in terms of pain intensity, level of function, index of lumbar lordosis, muscle strength and muscle length.
Method: The study design was a single observer blinded randomized controlled trial. 200 subject aged between 18 to 55 years, clinically diagnosed with ergonomical low back pain with LCS were included. The subjects were randomly allocated to two groups. Group A (control group) was provided with moist pack and core stability exercises and Group B (experimental group) was given moist pack and core stability exercises along with stretching of illiopsoas, rectus femoris and erector spinae and strengthening of abdominal and gluteal muscle for 10 sessions.
Results: After intervention both the group showed a significant improvement for all the outcome measures on 10 th day post intervention in terms of VAS Index of Backpain %, strength and length of muscle and Modified Oswestry Disability Questionnaire score as compared to base line values. Experimental group improved with greater change in all parameter at 10 th day post intervention as compared to control group ($p<0.05$).
Conclusion: The present study concluded that Strengthening exercises significantly reduces pain, improves level of function, normalizing the lumbar lordosis curvature, increasing strength of abdominals and gluteal muscles and increasing flexibility of rectus femoris, iliopsoas and erector spine.
KEY WORDS: Ergonomical Low Back Pain, Visual Analog Scale, Modified Oswestry Disability Questionnaire , Strengthening Exercises.

Effects of Dynamic Neuromuscular Stabilization Exercises on Pain, Function, and Movement-Related Fear in Non-Specific Chronic Low Back Pain Individuals with Movement Control Impairment: Interim Analysis of Randomized Controlled Trial

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Introduction: The altered dynamic control of lumbar spine along with all other spinal regions have been suggested to be the potential driver of pain, functional disability and movement related fear in subjects with persistent non-specific low back pain. This study presents the interim results of focused training with Dynamic Neuromuscular Stabilization (DNS) exercises to improve the pain, function and movement-related fear in comparison to generally prescribed Strengthening and Flexibility Exercises (SFE).
Methods: Total 20 NSCLBP patients belonging to MCI subgroup and attending the Physiotherapy Department of Rehabilitation Institute were randomized to two intervention groups of DNS ((n:10; Age: 30.30 ±7.18 yrs.) & SFE (n = 10; Age: 31.80 ±5.69 yrs.). The patients of both groups underwent a 30-45 min of supervised session preferably on 3-5 days / week or for a total of 30 sessions in consecutive weeks. The Numeric Pain Rating Scale, Oswestry Disability Index, and Fear Avoidance Belief Questionnaire were used to measure pain intensity, functional disability, and movement-related fear (kinesiophobia) respectively at baseline and at the end of total 30 sessions.
Results: Both groups were found to be homogeneous at the baseline. Within group analysis revealed significant differences in all the outcome measures of both groups ($p<0.05$).Whereas, a between-groups analysis revealed significant difference in favour of DNS group ($p< 0.05$).
Conclusion: The interim results of this study promises the superior effects of the DNS program, with almost more than twice the mean change percentage decrease in pain intensity, functional disability, and movement-related fear compared to SFE program.
Keywords: Low Back Pain; Dynamic Neuromuscular Stabilization; Movement Control Impairment

Efficacy of Instrument Assisted Soft Tissue Mobilization, Thoracic Manipulation and Pressure Biofeedback in Mechanical Neck Pain

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Background: Mechanical neck pain is a prevalent issue in primary healthcare, often accompanied by reduced neck mobility and cervical disability. While various manual techniques are recommended for restoring these functions, their effectiveness remains unclear. This research aims to assess the efficacy of Instrument Assisted Soft Tissue Mobilization (IASTM) and thoracic manipulation as adjuncts to a strengthening exercise employing pressure biofeedback in patients with mechanical neck pain.

Methods: A randomized, single-blind clinical trial, 100 patients will be assigned to one of four groups : Group A receiving a combination of IASTM, thoracic manipulation, and strengthening exercises; Group B receiving IASTM and strengthening exercises; Group C receiving thoracic manipulation and strengthening exercises; and Group D undergoing only strengthening exercises. Pain intensity (VAS), neck disability (NDI), cervical range of motion (CROM), and deep neck flex or muscle endurance (DNF) will be measured at baseline, the 4th week (post-treatment), and the 6th-week follow-up.

Discussion: The study aims to determine the comparative effectiveness of these interventions and shed light on the specific contributions of soft tissue mobilization, joint manipulation, and muscle strengthening in improving neck pain, neck mobility, and cervical disability in patients with mechanical neck pain.

Trial registration: CTRI/2023/10/059298. Registered on 30/10/2023

Keywords: Neck Pain, Instrument assisted soft tissue mobilization, thoracic Manipulation, Pressure biofeedback

BIOMECHANICAL AND PHYSIOLOGICAL CORRELATIONS OF CRANIO-VERTEBRAL ANGLE IN HEALTHY ADULTS: A CROSS SECTIONAL STUDY

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Background: Cranio-vertebral angle (CVA) is a crucial angle owing its importance to the posture of the neck and its stability. However, it has always been a point of discussion that whether this angle is impacting any other in the body or any other physiological process in the body or not.

Purpose: Since after the era of COVID-19 the prevalence of postural abnormalities have overtaken the area of musculoskeletal abnormalities its very important to ensure that whether they impact other systems of the body or not so that it may help the future physiotherapists to treat such patients not only on musculoskeletal domain but on multiple domains.

Materials & Methods: This is a cross sectional study which involved recruitment of 50 participants with a cranio-vertebral angle of less than 50 degrees measured by (MB Ruler software) and assessing their biomechanical correlations with Q-angle, Carrying angle, Shoulder angle and foot placement along with physiological correlations with Cognition, static balance, dynamic balance and coordination.

Results: The study showed that a positive correlation exists between the biomechanical domains and a strong both positive and negative correlation exists between the physiological domains.

Discussion: Complications arising from Forward Head Posture (CVA being less than 50 degrees) has always been treated by physiotherapists from musculoskeletal perspective it becomes important for us to discover better and a more diversified approach to treat such abnormalities which require modifications of current physiotherapeutic regime and shaping newer techniques to work for the cumulative effect of the multi-domain or multi-modal aspect of rehabilitation.

Conclusion: CVA of an individual affects the overall biomechanical and physiological processes in our body which overall impacts the quality of life of that individual.

Keywords: Balance, Cognition, COVID-19, Cranio-vertebral Angle, Posture, Physiotherapy, Quality of Life

LONGWAVE DIATHERMY IN KNEE OSTEOARTHRITIS: A COMPARATIVE ANALYSIS

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Introduction and background:-Knee osteoarthritis is a prevalent degenerative disorder among the elderly, characterized by significant pain and reduced range of motion in the knee joint. This condition adversely affects functional status and quality of life. Various electrotherapeutic modalities are employed to mitigate pain and enhance joint mobility, with longwave diathermy being a notable method for deep heating, pain reduction, and improving range of motion.

Aims and Objectives:- The primary goal of this study was to assess the effectiveness of both pulsed and continuous longwave diathermy in managing pain and improving the range of motion in patients with knee osteoarthritis.

Material and Methods:- The study adopted an experimental pretest-posttest design with a quantitative approach. It involved 30 patients diagnosed with Kellgren and Lawrence grade 2 or 3 knee osteoarthritis. These participants were selected through convenience sampling and randomly assigned into two groups: one receiving pulsed longwave diathermy (n=15) and the other continuous longwave diathermy (n=15). Both groups underwent conventional therapy along with their respective diathermy treatments for 10 minutes, three times a week, over a period of 4 weeks. The effectiveness of these treatments was measured using the Numeric Pain Rating Scale (NPRS) and knee range of motion, assessed with a digital goniometer.

Results :- The continuous longwave diathermy group demonstrated a higher mean post-test NPRS score, indicating more significant pain reduction compared to the pulsed diathermy group, with statistical significance (p < 0.05). Furthermore, the continuous diathermy group also showed greater improvement in knee flexion and extension range of motion, with these differences being statistically significant.

Conclusion :- Continuous longwave diathermy is more effective than pulsed longwave diathermy in reducing pain and enhancing the range of motion in knee osteoarthritis patients. These findings highlight its potential as a preferred treatment modality in managing symptoms of this condition.

Keywords : Knee Osteoarthritis, Longwave Diathermy, Pain Management, Range of Motion, Therapeutic Modalities

EVALUATING RELIABILITY AND VALIDITY OF A REAL-TIME BIOFEEDBACK DEVICE FOR ASSESSING QUADRICEPS LAG (ACTIVE KNEE RANGE OF MOTION)

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Introduction: This study addresses the challenge of assessing quadriceps lag, a common complication in knee injuries, by introducing a real-time biofeedback device. Traditional assessment methods have limitations, prompting the exploration of innovative technologies to enhance reliability and efficiency in measurement.

Objectives: The primary objectives were to develop a wearable real-time biofeedback device for measuring quadriceps lag and assess its reliability and validity compared to a universal goniometer.

Materials and Methods: The study employed a two-phase approach. In the first phase, a real-time biofeedback device was developed, utilizing components like Node Micro Controller Unit (Node MCU) and Micro Processor Unit (MPU 6050). Wi-fi connectivity enabled real-time data transfer to a mobile application for visual feedback during knee extension. The second phase involved testing the device's efficacy with 103 healthy participants using a Universal Goniometer (UG). Ethical approval was obtained, and statistical methods, including intra-class correlation coefficients (ICC) and Pearson correlation, were employed for data analysis. Intra-rater reliability was assessed over two days, inter-rater reliability involved independent recordings by two raters, and concurrent validity was determined by correlating device measurements with UG data.

Results: Intra-rater reliability demonstrated excellent consistency (ICC > 0.90). Inter-rater reliability showed high consistency (ICC > 0.89), indicating uniform measurements across different raters. Concurrent validity revealed a strong positive correlation (Pearson's r > 0.80) between the biofeedback device and the universal goniometer.

Conclusion: The study concludes that the real-time biofeedback device exhibits excellent intra-rater and inter-rater reliability, along with concurrent validity, making it a promising tool for assessing quadriceps lag.

Keywords: Quadriceps lag, Real-time biofeedback, Reliability, Validity, Goniometer, Knee rehabilitation.

A COMPARATIVE ANALYSIS OF TWO DOSIMETRY APPROACHES IN SHOCK WAVE THERAPY FOR ALLEVIATING SHOULDER PAIN AND IMPROVING MOBILITY DEFICIT: A POLIT STUDY

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Background: Shoulder pain and mobility deficits pose significant challenges to individuals' daily activities and overall quality of life. Shock wave therapy has emerged as a promising intervention, yet optimal dosimetry remains uncertain. This study addresses this gap by comparing the effectiveness of two dosimetry approaches in shock wave therapy for alleviating shoulder pain and improving mobility deficits.
Methodology: Thirty participants with documented shoulder pain and mobility deficits were recruited and randomly assigned to receive shock wave therapy. The intervention was administered according to a standardized protocol over a 4-week period. Quantitative measures, including pain scores and mobility assessments, were collected before the intervention and at regular intervals during the 4-week duration. Participants' experiences and perceptions were qualitatively explored through interviews.
Results: Preliminary findings from this pilot study provided insights into the feasibility of the selected shock wave therapy intervention, including participant recruitment, adherence to the protocol, and data collection processes. Additionally, initial quantitative results offered indications of the intervention's impact on reducing shoulder pain and improving mobility within the 4-week timeframe.
Conclusion: The outcomes of this pilot study informed the design and methodology for larger-scale investigations into shock wave therapy for shoulder-related issues. By assessing feasibility and obtaining preliminary results, this study contributed valuable information for refining protocols and understanding the potential effectiveness of shock wave therapy in a time-limited intervention period. The findings guided the development of future studies aimed at establishing evidence-based approaches for managing shoulder pain and mobility deficits using shock wave therapy.
KEYWORDS - Shock wave therapy, Shoulder pain, Mobility deficits

TRANSLATION, CULTURAL ADAPTATIONS, AND EVALUATION OF PSYCHOMETRIC PROPERTIES OF THE MALAYALAM VERSION OF THE OSWESTRY DISABILITY INDEX.

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Introduction: Low back pain (LBP) is a common pathological issue worldwide that often causes pain and disability and often influences the execution at work and activities of daily living. The Oswestry Disability Index (ODI) is one of the leading outcome measures used often to evaluate disability in LBP patients. However, the interpretation of a questionnaire varies in different languages. Hence, the current objectives of the study were to translate, culturally adapt, and evaluate the reliability and validity of the Malayalam version of the Oswestry Disability Index (ODI-M).
Methodology: The study includes forward translation, synthesis, backward translation, an expert committee's review, testing of the pre-final version, and assessment of psychometric properties. Ninety-one patients with LBP participated in the study. The test-retest reliability of the translated questionnaire was assessed by administering it twice in 48 hours. The validity was tested by comparing ODI-M with the Roland Morris disability questionnaire (RMDQ) and Visual Analogue Scale (VAS), respectively.
Results: The internal consistency (Cronbach's α =0.775) was good for ODI-M. An excellent test-retest reliability was found (ICC=0.995). Construct validity was used to examine the correlation between ODI-M and both RMDQ and VAS and the results showed a high correlation (r) of 0.84 and 0.83, respectively.
Conclusion: ODI-M is a valid and reliable tool for assessing LBP in patients communicating in Malayalam.
Key Words: Low Back Pain, ODI, Reliability, Validity

THE EFFECT OF PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION DIAGONAL PATTERN TRAINING ON ARCHERS TO IMPROVE STABILITY-An Experimental Study

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Introduction: Archery is a very static activity that calls for upper body strength and stamina, especially in the forearm and shoulder girdle. A steady hand, strong shoulders, flexible muscles, a keen eye, and a cool deposition are all necessary for the sport of archery. Proprioceptive neuromuscular facilitation (PNF) is a type of stretching technique in which therapist perform a combination of movement which helps to improve ROM, flexibility, stability and muscular strength. The aim of this study is to assess the PNF diagonal pattern training in improving stability of shoulder joint in archers.

Methodology: 27 Male and female national and state level archers of age 15-30 years were conveniently assigned for the study. In this single arm experimental study, the participants were administered with PNF of upper extremity with resistance using elastic band. The duration of study was 4 weeks and the pre & post readings were taken on day 1 & day 28. The stability of participants was assessed using water level instrument and stop watch, being the primary outcome measure.

Result: The study shows that there is improvement in the stability of upper extremity after the intervention within the group, the pre stability mean value is 16.25, SD value is 6.36 and post stability mean value is 26.69 and SD value is 7.88. So, the result with in the group shows statistically no significance with p = >0.05.

Conclusion: Resisted D1 and D2 PNF diagonal pattern training is effective in improving the stability of shoulder in Archers.

Key Words: Proprioceptive neuromuscular facilitation (PNF), Range of motion (ROM), Stability, Flexibility, Strength.

EFFECTIVENESS OF MYOFASCIAL RELEASE AND MUSCLE ENERGY TECHNIQUE ON FLEXIBILITY & THROWING DISTANCE IN JAVELIN THROWER'S – AN EXPERIMENTAL STUDY

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Introduction: Javelin throw is a field event which needs flexibility and strength of whole body kinematic chain in which the structures stores energy during lengthening and release it during throwing action. Myofascial release is a muscle release technique in which therapist gently assess for tightness & then gently release that area by massaging & stretching. Muscle Energy Techniques is a muscle activation as well as releasing technique in which the therapist take the muscle at its maximum available length and make the subject to contract that muscle and maintain for 8-10 seconds then relax.

Methodology: 22 male & female state level javelin throwers of age group 15-30 years were assigned for the study according to inclusion and exclusion criteria. The assigned participants were allocated into two groups based on interventions of MFR (n = 11) & MET (n = 11). MFR and MET was given on pectoral muscles for the 4 weeks to the groups separately and the outcome measures documented for pre and posttest on the 1 st day and 28 th day. Results were recorded and analysed data was discussed.

Result: Both groups demonstrated improved throwing distance and acromial distances post-intervention. MFR group excelled in acromion distance, while MET group showed superior improvement in throwing distance & this improvement was found to be not statistically significant with p = >05.

Conclusion: Both techniques effectively improve throwing distance and acromial distance. MFR is recommended for short-term or on-field treatment, while MET should be included for long-term protocols.

Keywords: Myofascial release (MFR), Muscle energy technique (MET)

EFFECTS OF CROSS FIT TRAINING ON PHYSICAL PROFILES IN WRESTLERS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Wrestling consists of great strength and muscle power demands on both the upper and lower body, with intermittent and high-intensity effort requirements in both styles. Cross fit is recognized as one of the fastest growing high intensity functional training modes in the world. There are studies showing the effectiveness of a cross fit programs on strength, anaerobic power and cardiovascular parameters.
Methods: Systematic review data source were PubMed, Google Scholar and Cochrane Library databases were conducted for the articles reporting the effects of cross fit training. The systematic review followed the PRISMA guidelines. The outcome measures were anaerobic power, vertical jump and Vo 2 max. For the meta-analysis effect size with 95% confidence interval (CI) were calculated. The quality of the research was assessed using the PEDro grading scale. The researchers employed the Cochrane risk of bias tool to evaluate the potential for bias in the study. The studies that were included in the analysis were subjected to meta-analysis using Review Manager Software, version 5.4.
Results: A total of 5896 researches were searched, with five publications fulfilling the inclusion criteria to be included into the study. Five articles with 159 wrestlers were included in the qualitative systematic review and four articles with 136 wrestlers were included in the quantitative meta-analysis. The literature shows the improvement in the VO 2max after the practice of cross fit training. The results shows that statistically significant in anaerobic power in the cross fit training (Mean Difference (MD) = 270.04, 95% CI: 213.02 to 327.06 and p <0.00001) and also statistically significant in vertical jump with cross fit training in wrestlers (Mean Difference (MD) = 1.68, 95% CI: 1.40 to 1.97 and p<0.00001).
Conclusion: The literature suggests that there was a statistically significant improvement in anaerobic power, vertical jump and VO 2max in the wrestlers after the practice of cross fit training. Therefore, coaches and athletes will be able to develop training programs cross fit training programs therefore it will be more effective to improve sportive performance.
Keywords: "Cross fit training", "Wrestler" "Anaerobic power", "Cardiorespiratory fitness", "Balance"

CORRELATION STUDY OF CORE MUSCLES STABILITY WITH LOWER LIMB INJURY PREVALENCE AMONG YOUNG KABADDI PLAYER

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BACKGROUND :-Core stability is define as the ability to control the position and motion of the trunk, over the pelvis to allow the optimum transfer of energy from the torso to extremity when performing athleticactivities, which are often composed of highly loaded movement .The plank exercise has commonly been used to improve trunk stability in the context of physical therapy, compared with other trunk stability exercise, such as sit-up, the plank exercise is performed without excessive lumbar flexion, which prevents greater compression forces on the lumbar spine, thus, the plank exercise has been suggested as a useful and safe trunk stability exercise .Therefore in the present study plank test has been taken as outcome measure for evaluating core stability.
OBJECTIVE OF THE STUDY :-To find the Correlation study of core muscles stability with lower limb injury prevalence among young football players.
INTERVENTION :- Players were interviewed by the interviewer on the self-administered Questionnaire which was about their pervious and recent injuries and included the demographic characteristics; questions related to injury like whether player had any injury during playing which part of the body was involved. The questionnaire given was modified according to different components which were taken or the base of previously conducted Studies Then after the players has been asked to perform the core stability for plank test.
RESULTS :-Statistical analysis was done using SPSS version 25.0 correlation methods was used to correlate plank test with three injury outcome scale. No significant correlation was found.
CONCLUSION :-There is no correlation between core muscle stability and injury prevalence among young male football players. KEY WORDS :-Core stability, plank test, lower limb injuries.

THE DEVELOPMENT OF ENDURANCE TRAINING: THE PRESENT AND COMING TIME TRENDS

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Background: Elite sports are dynamic and ever-changing. Athletes from a wider range of nations are competing and setting new world records.
Methods: We used a structured elicitation process to gather expert opinions in order to obtain important insights regarding the development of endurance training and performance. Step one involved the first and last authors posing two questions to a panel of 25 recognized sport scientists (5 women and 20 men), with experiences during the last ten(s) years of working closely with world-class endurance athletes and coaches. To promote a range of viewpoints, each scientist was requested to rank three important aspects for each question separately and to provide an explanation and example for their selections. Consent was granted based on the responses could be used to this commentary's objectives. Iterative improvement was carried out through facilitated dialogue and negotiation regarding emails amongst all authors until the primary categories are decided upon in full as well as illustrative instances and justifications were arrived at.
Results: In the last five to ten years, the main forces behind development have been: scientific knowledge that is easier for coaches and athletes to access; improved integration of scientific and practical exchange across multi-disciplinary perspectives within professionalized elite athlete support structures; and utilization of new technological advancements. Future advancements are anticipated to primarily stem from the following areas: greater use of advanced technology for monitoring and prescribing training and recovery; more targeted application of nutritional and environmental interventions; improved comprehension of the interactions between athletes and equipment; and increased focus on illness and injury prevention.
Conclusions: These knowledgeable opinions can act as a springboard and source of inspiration for the development of fresh theories and concepts, promote future cooperation between academics and athletes, and—above all—kindle interest in and lead to more cooperative research on the physiology, training, and performance of endurance athletes.
Keywords: athlete health, endurance performance, sport technology, training intensity, training load, training quality

EXPLORING THE MOVEMENTS OF TRADITIONAL INDIAN GAMES: AN INNOVATIVE APPROACH FOR ANALYZING THE MOVEMENT PATTERNS

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Background: Movement analysis in sports is crucial for understanding biomechanics, enhancing athletic performance, and minimizing injury risks. While Western sports have been studied extensively, the distinctive movement patterns of traditional Indian games, rooted in cultural heritage, remain unexplored. This study provides a cost-effective approach using low-tech tools to analyze the movements of traditional games.
Methodology: Thirteen traditional games from the Kongunadu zone in South India were selected for analysis. Key positions and discrete movements were examined by two observers, incorporating both visual observation and the use of 2D motion analysis software.
Results: The study evaluated 23 key positions and 34 discrete movements in 13 traditional Indian games. Game characteristics, such as type (sitting/dynamic) and play area (indoor/outdoor) were outlined. Between games, the differences in joint range of motion and muscle activity were observed.
Conclusion: The study offers a unique perspective on traditional game movement analysis and utilizes cost-effective tools for practical applicability. It also highlights the potential benefits for behavioral scientists integrating these games into community programs, particularly in low- resource settings.
Key words: Movement analysis, traditional games, 2D motion analysis

RELIABILITY AND VALIDITY OF GUJARATI VERSION OF NOMOPHOBIA QUESTIONNAIRE : CROSS SECTIONAL STUDY

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Introduction- Nomophobia is considered a modern age phobia those people having fear being without Smartphone. This study doing for Guajarati translation a nomophobia questionnaire (NMP- Q) to measure nomophobia.
Aim- To find reliability and validity of Gujarati version of NMP-Q
Material and methods- This cross-sectional study was conducted during May- 2023 to Nov-2023. This study was carried out in two phases: 1) Face and content validation by expert clinical review; 2) Test-retest reliability. The consensus method was used to find face and content validity of Gujarati NMP-Q Total 100 participants aged between 15-18 years were included in this study. To find reliability of Gujarati NMP-Q, internal consistency and test- retest reliability was determined. Test- retest reliability was determined by Intraclass Correlation Coefficient (ICC) and internal consistency was calculated by chronbach's alpha.
Results: Total of 100 participants (mean age 16.5 years) were studied. Gujarati version of NMP-Q showed excellent test-retest reliability as evidenced by high ICC and high Internal consistence. Values for Content Validation Ratio (CVR), Item level Content Validation Index (I-CVI), Modified Kappa (K), and Proportion of agreement were 1. The content of translated items was understandable and related level of nomophobia and its evaluation.
Conclusion: Gujarati version of the NMP-Q has excellent reliability and good face and content validity. It is adequate and useful for evaluation of level of fear being without Smartphone in daily life in Gujarati speaking school students.
Keywords- nomophobia, nomophobia questionnaire, school students, Guajarati version

EFFICACY OF PERTURBATION TRAINING ON BALANCE AND FUNCTION IN OLDER INDIVIDUALS-AN EXPERIMENTAL STUDY

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Background: Aging involves decline in visual, vestibular and proprioceptive acuity associated with functional limitations and reduced motor function, which may disturb balance and increased risk of fall. The present study evaluated the effect of perturbation based balance training in older individuals with mild to moderate risk of fall and find out its effect on postural stability and thus reducing falls.
Methods: An experimental trial where 30 individuals (age 65-85 years) with mild to moderate risk of fall were recruited in the study. Perturbation Training with the use of tilt-board and conventional exercises of balance were given 3 days per week for 4 weeks (12 sessions). Modified-CTSIB test on NeuroCom Balance Master® and Timed Up and Go Test were taken at baseline and post-completion.
Results: Pre and post measures on Timed Up and Go test and M-CTSIB test on NeuroCom Balance Master® shows statistically significant improvement in TUG values ($p<0.0001^*$) and COG sway velocity in all conditions except on Firm surface with eyes open, with FIEO($p<0.1208$),
FIEC($p<0.0011^*$), FOEO($P<0.0013^*$), FOEC($p<0.0001^*$) and Composite COG sway velocity($p<0.0001^*$).
Conclusion: Perturbation training along with conventional exercises of balance showed to be an effective intervention to improve postural control and improve balance.

NEURAL MOBILIZATION AND RESISTANCE EXERCISES IMPROVES GLYCOSYLATED HEMOGLOBIN AND NERVE FUNCTIONS IN PATIENTS WITH DIABETIC PERIPHERAL NEUROPATHY: A RANDOMIZED CONTROL TRIAL

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Background: Diabetic Peripheral Neuropathy (DPN) affects physiology of small and large fiber nerves which results in sensory and motor deficits. Slower conduction velocities are reported in tibial nerve, peroneal nerve, and median nerve.
Aim: The aim of the study was to find the effect of nerve mobilization (NM) on HbA1C, nerve conduction velocity (NCV) of the tibial nerve, Michigan Diabetic Neuropathy Score (MDNS). Also, to find out the correlation between the duration of diabetes and other outcomes.
Methods: After screening for DPN, 30 subjects were randomly divided in to three equal groups (n=10 in each group): Intervention Group A (nerve mobilization + resistance training), Intervention Group B (resistance training) and Control Group C (dietary and lifestyle consultations only). NM of the tibial and peroneal nerves and strengthening exercises of the lower limb were given. The outcomes include HbA1C, nerve conduction values of the tibial nerve, sensory motor outcomes of the MDNS.
Results: The mean age of the Groups A, B and C are 59.0 ± 9.4, 59.8 ± 9.01 and 57.6 ±8.38 years, respectively. Interventional group showed significant changes in the conduction velocity and sensory scores compared to the control group. The correlation between age and NCV in Groups A, B and C are r= -0.14, -0.549, - 0.041, respectively. The association between duration of diabetes and NCV showed strong correlation in all the groups (A, r = -0.694, $p<0.05$; B, r= -0.541 and C, r= -0.675, $p<0.05$).
Conclusion: Neural mobilization along with exercises provides a positive effect on the neurophysiological functions in diabetic peripheral neuropathy patients.

EFFECT OF MODIFIED CONSTRAINT INDUCED MOVEMENT THERAPY VERSUS MOTOR IMAGERY IN MPROVING UPPER LIMB FUNCTIONING IN CHRONIC STROKE PATIENTS: A RANDOMIZED CONTROL TRIAL.

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BACKGROUND: Stroke results in neurological complications, 55-75% patients having residual upper extremity paresis resulting in functional, motor and manual loss or reduction of the affected arm. Rehabilitation protocols have been designed in a way to produce improvements in the outcomes along with transference to daily living. Modified Constraint Induced Movement Therapy (mCIMT) and Motor Imagery (MI) have shown to be effective in improving upper arm functional independence. Due to the lack of comparative analysis this study is designed to investigate the effect of mCIMT versus MI in improving upper limb functioning in chronic stroke patients.
DESIGN: A Randomized Control Trial
METHODOLOGY: In this randomized controlled trial, 70 post-stroke patients were assessed for eligibility, out of which 45 were included in the study based upon the inclusion criteria. The subjects were randomly allocated to either of the two groups, i.e., Group A following the mCIMT protocol for 3-5 hours/day and Group B following the MI protocol for 45 minutes/day, 5 days a week for 6 weeks. The pre and post intervention reading was taken by the assessor who was blinded to the group allocation. Outcome measures used for the assessment included Fugl-Meyer Assessment-Upper Extremity (FMA-UE) and timed manual dexterity performance test.
RESULT: Significant gains in upper limb function were seen in both groups during the within-group analysis; however, the between-group analysis demonstrated that the mCIMT was more beneficial than the MI group in enhancing functional skills of the affected arm.
CONCLUSION: According to the study's conclusions, mCIMT and MI have a significant impact on upper limb functional activities, and mCIMT is substantially more effective than MI alone.
KEYWORDS: Modified Constraint Induced Movement Therapy (mCIMT), Motor Imagery (MI), Fugl- Meyer Assessment-Upper Extremity (FMA-UE).

UPPER LIMB NEURAL TISSUE EXTENSIBILITY IN ASYMPTOMATIC HEALTHCARE PROFESSIONALS

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Aim: Is upper limb neural tissue extensibility affected in asymptomatic health care professionals? Participants: 90 asymptomatic health care professionals of 26-60 years (30 surgeons, 30 dentists, 30 physiotherapist) were selected on the basis of inclusion and exclusion criteria.
Methodology: This was a cross-sectional type of observational study and the data was collected by simple random sampling. In which various ULTT were performed on both upper extremities for median(ULTT1), radial(ULTT2) & ulnar(ULTT3) nerve. Elbow position was measured at first onset of discomfort perceived by participants (R1). Secondly, when the firm resistance to movement was felt by the examiner(R2), by using universal goniometer. The test was considered positive if the symptoms arise before 60^0 of end elbow ROM.
Results: The results showed that there was reduced upper quadrant neural tissue extensibility in asymptomatic health care professionals. The median nerve was most affected and the ulnar nerve was least affected. The prevalence rate of reduced neural extensibility was highest among dentists as compared to the surgeons and physiotherapists. High correlation was found between R1and R2 for all three ULTT (p-value=0.000).
Conclusion: More than half, specifically 51.1%, of asymptomatic healthcare professionals had reduced extensibility of the neural tissues in their upper limbs. Therefore early introduction of exercise will help in combating the occurrence of these nerve related issues in further life.

EFFECTS OF NEURODYNAMIC MOBILIZATION ON SMALL FIBRE DYSFUNCTION IN PATIENTS WITH PAINFUL DIABETIC PERIPHERAL NEUROPATHY: A PILOT STUDY.

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Background: Painful diabetic peripheral neuropathy (PDPN) is defined by neuropathic pain and altered sensory symptoms, typical defining markers of small fibre pathology. Potential reasons include changes in peripheral nerve structure and function caused by metabolic and microvascular changes. Neurodynamic mobilization, that directly targets the nerves, increases neural vascularity and lowers intrinsic pressure on neural tissue appears to be significant and promising technique to effectively treat the crippling pain and sensory symptoms in the population of concern.
Purpose: This study aimed to assess how mobilizing the tibial, peroneal, and sural nerves affects pain and sensory symptoms in PDPN.
Methods: The study was conducted in Metro Heart Institute with Multispecialty, Faridabad. Five consecutive patients with PDPN who fulfilled the eligibility criteria were included in the study. Neurodynamic mobilization of tibial, peroneal and sural nerve for both lower limbs were given three times a week for 8 weeks. Neuropathic pain scale (NPS), Neuropathy disability score (NDS) and hot and cold perception threshold (HPT, CPT) were used to measure intensity of Pain, severity of neuropathy and sensory symptoms respectively. Outcomes were assessed at baseline and end of 8 weeks.
Results: The analysis revealed statistically significant changes in NDS and NPS (P<0.05). Though there was improvement in HPT, results were not statistically significant. Improvements were also seen in CPT and the values of right side were statistically significant.
Conclusion: This study demonstrated that neurodynamic mobilization of tibial, sural and peroneal nerve may be beneficial in alleviation of pain and sensory symptoms in patients with PDPN.
Keywords: Painful diabetic peripheral neuropathy, Sensory symptoms, Neurodynamic mobilization, neuropathic pain.

EFFICACY OF NEURODEVELOPMENTAL THERAPY-BASED TASK- ORIENTED TRAINING ON GAIT IMPROVEMENT IN CHILDREN WITH CEREBRAL PALSY: A SYSTEMATIC REVIEW

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Background: Cerebral palsy (CP) profoundly affects motor function, particularly gait, in children. This systematic review investigates the efficacy of Neurodevelopmental Therapy (NDT)-based task- oriented training on gait improvement in children with cerebral palsy. Given the significance of gait function in daily activities, understanding the effectiveness of NDT-based interventions holds promise for optimizing rehabilitation strategies.

Methodology: A comprehensive search across key databases identified studies focusing on NDT- based task-oriented training for gait improvement in children with cerebral palsy. Inclusion criteria encompassed randomized controlled trials and quasi-experimental studies, with gait-related outcomes as primary measures. 360 articles were found out of 46 articles selected from the last 8 years for in-depth review. Methodological quality and risk of bias were rigorously assessed.

Results: Synthesizing findings from selected studies, this systematic review evaluates the impact of NDT-based task-oriented training on various gait parameters in children with cerebral palsy. Key outcomes include improvements in gait velocity, stride length, and overall gait quality. The review offers insights into the effectiveness and limitations of NDT-based interventions for enhancing gait function in this pediatric population.

Conclusion: The systematic review underscores the potential efficacy of NDT-based task- oriented training in improving gait parameters in children with cerebral palsy. The findings provide a foundation for refining and tailoring rehabilitation strategies, emphasizing the importance of task- oriented approaches within the NDT framework. Implications for clinical practice and avenues for future research in pediatric neurorehabilitation are discussed.

EXPLORATION OF THE NEURAL MECHANISMS UNDERLYING THE THERAPEUTIC EFFECTS NEUROMUSCULAR ELECTRICAL STIMULATION ON UPPER LIMB MOTOR CONTROL IN SUBACUTE STROKE PATIENTS: A SYSTEMIC REVIEW

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Background: This systematic review delves into the neural mechanisms that underlie the therapeutic effects of Neuromuscular Electrical Stimulation (NMES) on upper limb motor control in subacute stroke patients. Recognizing the critical need for effective interventions during the subacute phase, this study aims to provide a comprehensive understanding of the neurobiological processes influenced by NMES in the context of motor recovery.

Methodology: A systematic search was conducted across major databases to identify relevant studies focusing on the neural mechanisms of NMES in subacute stroke patients. Inclusion criteria comprised studies investigating upper limb motor control, utilizing NMES interventions, and reporting neurophysiological outcomes. 36 Articles were selected from the last 5 years and underwent deep review. Quality and risk of bias were assessed systematically.

Results: The review synthesizes findings from selected studies, highlighting key neurobiological mechanisms affected by NMES in subacute stroke patients. These encompass changes in cortical excitability, neural plasticity, and motor learning processes. The systematic analysis provides a nuanced understanding of how NMES contributes to upper limb motor control recovery during the critical subacute phase post-stroke.

Conclusion: This systematic review contributes valuable insights into the neural mechanisms underpinning the therapeutic effects of NMES on upper limb motor control in subacute stroke patients. The findings underscore the potential of NMES as a neuro-rehabilitative tool and provide a foundation for the development of targeted interventions aimed at optimizing motor recovery during the subacute period post-stroke. Future research directions and implications for clinical practice are discussed.

KEYWORDS - Neuromuscular Electrical Stimulation (NMES), Stroke rehabilitation, Upper limb motor control, Subacute stroke, Neurobiological mechanisms, Motor recovery

A STUDY ON EFFECTIVENESS OF VIRTUAL MOBILE GAME BASED HAND TRAINING ON FINE MOTOR SKILLS AMONG CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY – A DOUBLE BLINDED STUDY"

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BACKGROUND: Treating children with cerebral palsy is a challenging task for physiotherapist because patients often withdraw from treatment, mainly due to lack of motivation or delayed perception of their progress. Treatment in form of mobile games may change this paradigm. The purpose of the study is to find out the effectiveness of mobile touch screen game based hand training on fine motor skills among children with hemiplegic cerebral palsy.
METHODS: 36 Children with hemiplegic Cerebral Palsy who comes under the eligibility criteria were selected for this study and they were randomly allocated into three groups by using closed envelop method. Group A participants were received conventional physiotherapy, Group B participants were received conventional physiotherapy plus task oriented training and Group C participants were received conventional physiotherapy plus mobile touch screen game based hand training. All the three groups were received intervention for 45 minutes per session, 5 days in a week for 6 weeks. The pre and post score values of fine motor skills were evaluated by using FMA- UE and JTHFT and the data were recorded.
RESULTS: The statistical report revealed that conventional physiotherapy plus mobile touch screen game based hand training showed highly significant improvement in fine motor function when compared to other two groups at the end of 6 weeks of intervention.
CONCLUSION: Finally, the study concluded that the 6 weeks of hand training program with mobile tough screen games showed statistically highly significant improvement in fine motor function among children with hemiplegic cerebral palsy.
KEYWORDS: Hemiplegic Cerebral Palsy, Mobile games, Fine Motor Skills, Physiotherapy.

A Structured Institutional Based Therapy Programme To Improve Upper Limb Movements And Prevent The Development Of Erb's Engram In Children With OBPP

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Background: Brachial Plexus Palsy is the flaccid paralysis of the arm at birth that affects different nerves of brachial plexus supplied by C5-T1. Physiotherapy started at an early stage can aid in enhancing the recovery of the affected upper limb.
Objective: To study the effect of a structured institutional based physiotherapy programme on improvement in upper limb movements. Subjects: All the babies with Obstetric Brachial Plexus Palsy who were less than 45days of age were received and assessed in Rainbow Children's Hospital, Physiotherapy Out Patient Department. Based on convenient sampling they were divided into two groups- control group and interventional group. Each group had 23 subjects.
Method: For subjects in the control group, home exercises programme was designed which included passive movements and positioning. The interventional group received a structured programme which included passive movements, electrical stimulation, positioning, kinesiotaping, strengthening exercises and derotational strap. Effects were assessed using AMS score on the first day, 3 rd month, 6 th month, 9 th month and 1 year of age.
Results: Improvement in range of motion was seen in both the groups. But the interventional group showed a statistically significant difference in movements when compared to control group.
Conclusion: This study showed that for this cohort of subjects (less than 45days of age) with brachial plexus palsy at birth, a structured institutional based physiotherapy resulted in improved upper limb movements and prevented the development of erb's engram.
Key Words: Obstetric brachial Plexus Palsy, Exercise, AMS Score

THE IMMEDIATE EFFECT OF CONVENTIONAL THERAPY (CT), MOVEMENT THERAPY (MT) AND CONTRACT RELAX (CR) ON WALKING ABILITY IN INCOMPLETE SCI PATIENTS WITH SPASTICITY-EXPERIMENTAL STUDY DESIGN

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Background: Studies have shown that about 80% of people with an incomplete spinal cord Injury (SCI) have spasticity as a secondary complication. It can interfere with mobility such as walking and can reduce the quality of life. Therefore, it is important to reduce the spasticity before a gait training in order to have a better functional Performance.

Objective: To compare the immediate effect of Conventional Therapy (CT), Movement Therapy(MT) and Contract Relax(CR) on walking ability in incomplete SCI patients with spasticity.

Methods: A quasi experimental study with Pre and post test study design was carried out with three comparative treatments. Forty Five patients selected based on inclusion criteria from Ganga Spine Injury foundation, Coimbatore from the period December 2021 to March 2023 were recruited for the study using convenience sampling technique. The samples were divided into three groups with 15 patients in each group. Group 1 Conventional Therapy (CT), Group 2 Movement Therapy (MT), Group 3 Contract Relax (CR). For all three groups, walking ability was assessed before treatment with help of 10 Meter Walk Test. Total Study duration was one year and four month. Each Patient underwent one session of their allotted Treatment. 10 Meter walking ability assessed following the treatment. CT, MT, CR concentrated on immediate relaxation of spasticity. Pre test and Post test 10 meter walking measurements were statistically analyzed.

Results: ANOVA was used to compare three group treatments. F value for post three group comparisons is 8.9405 at $p<0.05$. It shows there is strong evidence that the expected value in the three groups differ. Post hoc analyses of the group means were done. First and second group differ 1.8, first and third group means differ by 4.5, second and third group means 2.5. Standard error for three group's was 1.72110. Third group was strongly different from the other groups as the mean difference is more times the standard error. So we can be highly confident that the 10 Meter Walk Test mean of the third group differs from the means of the other group.

Conclusions: Conventional therapy (CT), Movement Therapy (MT) and Contract Relax (CR) had shown Spasticity Reduction and Relaxation. But the effort was different from other therapy. Contract Relax gave Immediate, maximum and specific effect than conventional and movement therapy. Therefore Contract relax used as a tool by therapist for immediate response in the relaxation of Spasticity.

THE ROLE OF AGE, GENDER AND PHYSICAL ACTIVITY ON HEART RATE VARIABILITY PERFORMANCE OF ADULT POPULATION

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HRV is a non-invasive quantitative marker to assess cardiac autonomic function. Middle-aged adults are a population where autonomic irregularities manifest, however, remain an under investigated population in heart rate variability studies. The aim of the present study was to determine the influence of age, gender and level of physical activity on heart rate variability parameters in middle- aged adults as well as young adults. A cross-sectional study was conducted on 143 adults; 65 middle- aged adults and 78 young adults. Measurement of short-term Heart Rate Variability (HRV) was carried out using the EQ02, wearable ambulatory monitoring system. Physical activity levels were reported through IPAQ. Regression trends indicated age to predict HRV parameters and positive correlations were found between age and sympathetic parameters whereas negative correlations were found between age and parasympathetic parameters. Levels of physical activity were able to predict few HRV parameters whereas gender had no influence. Within-group comparisons in HRV parameters based on age revealed higher parasympathetic parameters in young adults compared to middle aged adults. Similarly, high parasympathetic activity was observed in highly active adults over moderately active counterparts. In conclusion, age had an influence on heart rate variability, first observed in middle ages. Middle-aged adults report significantly higher sympathetic activity in comparison to young adults. However, physical activity also influences heart rate variability in the adult population. Parasympathetic activity is found to be significantly higher in highly active middle- aged adults in comparison to their lesser active counterparts advocating its adoption in lifestyle.

A SYSTEMATIC REVIEW ON THE VALIDITY OF STEP TEST IN ESTIMATING MAXIMAL OXYGEN UPTAKE IN HEALTHY PEOPLE

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Introduction: Various step tests have been used to predict cardio-respiratory fitness (CRF) ofan individual. Maximum volume of oxygen consumed per unit time (VO2max) is accepted as the criterion measure of CRF. The aim of this systematic review is to examine the validity of step test in predicting the VO2 max in healthy people.
Methods: Five databases namely Scopus, PubMed, Central, Embase and Cochrane were searched for the eligible studies. We conducted a systematic review of the studies that examine the validity of step test in prediction of VO2 max. Estimated and predicted VO2 max are the outcome measures.
Result: Six studies were included in the systematic review for result synthesis. Out of six, three studies included Treadmill testing as a direct method of VO2 estimation, while the other three included Bicycle ergometry in the remaining three studies. VO2 max estimation using Mc Ardle step test showed poor correlation with the actual VO2 max, while Chester step test and YMCA step test showed positive correlation with the estimated VO2max by direct method.
Conclusion: Three of the six studies showed that step test is a valid tool to estimate the VO2 max as an alternate to direct calorimetry, while the other three studies show that step test results are poorly associated with the actual Vo2 max. More studies need to be done, with special consideration to the type of step test to be used in the study.

Keywords: VO2 max, step test

POST-COVID19 CARDIOPULMONARY DYSFUNCTION: A LOOK INTO THE FUTURE THROUGH THE LENS OF DIFFERENT DOMAINS OF REHABILITATION

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Post–COVID-19 condition is characterized by a myriad of persistent symptoms experienced up to 60 days after the acute infection, not only in those hospitalized, but also in patients with mild to moderate acute symptoms. The overwhelming evidence on multisystem involvement in post–COVID-19 condition brings to attention the need for integrated delivery models to address health care needs of this population. The World Health Organization recently highlighted critical gaps in adequately providing the level of integrative care required to address the different needs of this patient population in current health care delivery models and recommended development of new innovative models of delivery. This article presents a novel approach to addressing these gaps from a rehabilitation perspective.

ANALYSIS OF HIGH-FREQUENCY CHEST WALL OSCILLATION (HFCWO) IN THE MANAGEMENT OF COPD: A SYSTEMIC REVIEW

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Background: Chronic Obstructive Pulmonary Disease (COPD) is a prevalent respiratory condition characterized by impaired lung function and persistent airflow limitation. High- frequency chest Wall Oscillation (HFCWO) has emerged as a therapeutic modality for airway clearance and respiratory management in COPD. This systematic review critically examines the existing literature to evaluate the effectiveness of HFCWO in the comprehensive management of COPD.

Methodology: A systematic search of major databases was conducted to identify studies assessing the impact of HFCWO on COPD outcomes. Inclusion criteria encompassed randomized controlled trials, observational studies, and clinical trials that investigated the use of HFCWO in individuals diagnosed with COPD. Outcome measures included pulmonary function, exacerbation rates, quality of life, and patient-reported outcomes. 112 articles were found out of which 16 articles were selected for In-depth review. Rigorous quality assessment and risk of bias analysis were applied.

Results: This systematic review synthesizes findings from selected studies, shedding light on the effects of HFCWO in the management of COPD. The analysis includes assessments of pulmonary function improvement, reduction in exacerbation rates, and enhancements in the quality of life for individuals utilizing HFCWO as part of their treatment regimen. The review also identifies gaps and limitations in the existing literature.

Conclusion: The systematic review provides a comprehensive evaluation of the role of High- Frequency Chest Wall Oscillation (HFCWO) in the management of COPD. While the results indicate potential benefits in various aspects of COPD care, further research with larger sample sizes and standardized methodologies is warranted to strengthen the evidence base. Insights from this review contribute to a better understanding of HFCWO's place in the multifaceted approach to COPD management, guiding both clinical practice and future research endeavours.

KEYWORDS - Chronic Obstructive Pulmonary Disease (COPD), High-Frequency Chest Wall Oscillation (HFCWO), Respiratory management, Airway clearance

IMPACT OF RECURRENT PHYSIOTHERAPY SESSIONS IN A MECHANICALLY VENTILATED INFANT: A CASE REPORT

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Atelectasis or lung collapse occurs due to impaired airway clearance or complete airway obstruction caused by inflammation, leading to the collapse of tiny airways in neonates and infants either partially or completely. This results in impaired exchange of carbon dioxide and oxygen. A chest X-ray, Computed Tomography (CT), and/or thoracic ultrasound are helpful in identifying atelectasis. In the present case, a 5-month-old female infant was reported to the Paediatric Department with the chief complaint of seizure, loss of consciousness and high grade fever. An X-ray was done, revealing complete left lung atelectasis with no air entry. The infant was referred for physiotherapy in addition to medical management. Through seven intensive and regular sessions of respiratory physiotherapy, which included techniques such as percussion, vibration, and postural drainage for more than 30 minutes, there was successful resolution of the consolidation and improvement in presenting symptoms within a span of 48 hours. After the final sessions of physiotherapy, the infant was discharged with home programs. This suggests that physiotherapy is an integral part of paediatric critical care, ensuring a good prognosis and faster recovery.

Keywords: Atelectasis, Mechanical ventilation, Infant, Physiotherapy, Paediatric Critical Care

METABOLIC RESHAPING THROUGH HIGH INTENSITY INTERVAL TRAINING: A STUDY ON PCOS AND ITS INFLUENCE ON BODY MASS INDEX, GLUCOSE AND INSULIN.

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Sri Balaji Vidyapeeth

BACKGROUND: Polycystic ovary syndrome (PCOS) is a common metabolic and endocrine disorder affecting 15 to 20% of women of reproductive age. It is associated with increased prevalence of several clinical problems including: obesity, insulin resistance, menstrual irregularity and infertility. Lifestyle interventions and weight loss remains first line treatment for women with PCOS.
AIM: The aim of this study was to find out the effect of high intensity interval training on body mass index, plasma glucose and insulin among individuals with polycystic ovary syndrome.
METHODOLOGY: The population comprised of 30individuals who were aged between 18 to 40 and diagnosed with PCOS were included and divided into two groups i.e., group A (experimental group) (n=15) and group B (control group) (n=15). Group A participants performed high intensity interval training along with medications while group B participants followed the medications alone. Intervention was done for 40 minutes every day, 4 days per week for the duration of 6 weeks. Body mass index, plasma glucose and insulin were measured before and after the intervention period.
RESULTS: Group A (experimental group) has shown significant reduction in body mass index, plasma glucose and insulin compared to the baseline ($p<0.05$). However no significant change in body mass index, plasma glucose and insulin were seen in group B (control group) ($p> 0.05$).
CONCLUSION: High intensity interval training had a beneficial effect on body weight and improving metabolic health in women with polycystic ovary syndrome.
KEY WORDS: High intensity interval training, polycystic ovary syndrome, Body mass index, Plasma glucose, Insulin

A COMPARATIVE STUDY TO CHECK THE EFFICACY OF KINESIOTAPING ON PAIN, MENSTRUAL DISTRESS IN SUBJECTS WITH DYSMENORRHEA

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Objective- To evaluate the efficacy of Kinesiotaping on , menstrual pain distress in young collegiate females with dysmenorrhea.
Method- The subject of this study were 34 Un-married collegiate female. The subjects were randomly divided into a Kinesiotaping group, a sham taping group (control group). Subjects with normal menstrual cycle underwent taping a total of four times; twice a week about two weeks, starting from 10 days before menstruation and continues till its ends. Degree of pain premenstrual distress were measured before the application of typing.
Result- The result reveal the Kinesiotaping had significant effects on pain, menstrual distress.
Conclusion- Kinesiotaping group in comparison to Sham taping group before and during menstruation brought significant relief to pain, menstrual distress which suggests that Kinesiotaping is an effective method of alleviating pain menstrual distress in young collegiate female.
Keywords- Kinesiotaping Pain; Menstrual distress; Dysmenorrhea

TRANSFORMING ATTITUDES AND KNOWLEDGE: THE NEED OF TRANSGENDER-AFFIRMATIVE CARE TRAINING FOR HEALTHCARE WORKERS AND STUDENTS

Badri Vishal[1] , Deepak Raghav[2] , Amit Dwivedi[3]
1 PhD Scholar, 2 Guide, Principal, Santosh College of Physiotherapy, 3 Head, Dept. of Orthopaedics

Background: Transgender individuals face significant hurdles in accessing healthcare due to stigma and discrimination. Despite legal protections, healthcare providers often lack knowledge or sensitivity, leading to negative experiences and delayed care for trans people. Additionally, medical education rarely covers transgender health, leaving healthcare professionals unprepared.

Aims & Objectives: This study investigated the impact of a transgender-affirmative training program on healthcare workers' attitudes and knowledge regarding routine care and transition support for trans individuals. By understanding the link between contact and improved perception, the research aimed to identify effective strategies for reducing trans healthcare barriers.

Methodology: Healthcare workers and trainees across various fields (MBBS, nursing, physiotherapy) in North India participated. They completed surveys assessing general demographics, awareness of transgender topics, and anti-transgender prejudice. Open-ended questions were also included.

Results: Moderate levels of transphobia were observed, with women and medical students showing lower prejudice compared to men and practicing doctors. Awareness about general transgender characteristics was average, but knowledge on specific health issues and gender- affirming surgery was low.

Conclusion: The study emphasizes the need for comprehensive transgender healthcare education. Increased personal contact with trans individuals and educational/media exposure are crucial for improving attitudes and knowledge among healthcare providers. This can pave the way for more inclusive and culturally competent care for transgender individuals within the healthcare system.

Keywords: Transgender-affirmative care, Healthcare workers, Students, Attitude change, Knowledge enhancement, Transgender healthcare.

PHYSIOTHERAPY INTERVENTION IN TREATING DYSMENNORHEOA IN PRE-MENOPAUSAL WOMEN: A SYSTEMATIC REVIEW

Nidhi Agarwal, Assistant Professor, Rama University, Kanpur

Background: Physiotherapy has a number of health welfare and has been endorsed as a treatment for primary dysmenorrhoea (period pain), but the substantiation for the effectiveness on primary dysmenorrhoea is obscure. This review endorsed the available substantiation supporting the use of physiotherapy to treat primary dysmenorrhoea.

Methodology: We searched for articles from 2010 up to November 2023 from the databases like PubMed, Google Scholar, Scopus, Cochrane Library. We comprised studies if they randomised women (18-30 years) with moderate-to-severe and improve of quality of life in primary dysmenorrhoea to receive physiotherapy, online free available reviews and credible journal. Cross- over studies, case study, surgical cases and medical related treatment were not included. Our primary outcomes were menstrual pain intensity and adverse events. Secondary outcomes included overall menstrual symptoms, restriction of daily life activities, absence from work or school and quality of life. We included articles that assessed pain by VAS scale and overall menstrual symptoms, restriction of daily life activities, absence from work or school and quality of life assessed by The 36- Item Short Form Health Survey questionnaire (SF-36).

Results: Here we comprised a total of 12 trials. Nine of the 12 studies compared exercise with no medical treatment. Around 11 articles involved aerobic training v/s Kegel exercises v/s no exercises likewise Studies used low-intensity exercise (stretching, core strengthening) or high-intensity exercise(aerobic training); none of the included studies used resistance training.

Discussion: There is an enormous amount of data that has been reporting since time that complications arising from Dysmenorrhoea require a better and goal wise treatment protocol but none of the studies explained that was the treatment strategy opted better from the other cited in various literatures. This indicates lack of appropriate physiotherapy exercise regime in this category.

Keywords: Dysmenorrhoea, Physiotherapy, Pain, Exercise, Quality of Life

EFFECT OF POSTURE CORRECTION EXERCISES ON RESPIRATORY FUNCTIONS IN LACTATING MOTHERS

Kalindi Dev [1] , Mamta Dagar [2], Preeti Sharma [3]
1 PhD, GJUST, Hisar, 2 PhD Research Scholar, GD Goenka University, Gurugram, 3 PhD Research Scholar, GJUST, Hisar

Background: Posture is the attitude that the body adopts when muscles are active or when several muscles work together to maintain stability. Due to the numerous changes that take place during nursing, the mother is more likely to have pain due to numerous bad behaviour and postural alterations.
Methods: The study comprised 30 nursing mothers (CVA<48degree) who had some degree of FHP. The subjects were given the full workout protocol for four weeks, subjects completed two sets of functional corrective exercises in each of three weekly sessions. Respiratory functions, CVA, chest expansion, VAS, and QOL were measured at the baseline visit and after the treatment baseline values were collected prior to the exercise treatment. After four weeks of the exercise routine, all the parameters were measured.
Results: The standard deviation of FEV 1/ FVC pre intervention 73.31±6.86 and post intervention 98.83±0.94, which shows that the result is significant. The results also shows the standard deviation of CE2, pre intervention 3.03±.24 and post intervention 3.81±0.35 and p value was p=0.00 and the standard deviation of CE4, pre intervention 4.03±0.30 and post intervention 3.33±0.38 and p value was p=0.00 and the standard deviation of CEX pre intervention 2.48±0.33 and post intervention 4.37±0.37.
Conclusion: As the results were significant and helped in improving the respiratory health status of mothers, posture correction exercises can be incorporated in daily routine of breastfeeding mothers to prevent abnormal posture and improve lung functions.
Keywords: Lactating mother, Forward head posture, FVC, FEV 1, CVA

THE RELATIONSHIP BETWEEN FATIGUE AND ERP P300 WAVE PARAMETERS IN PEOPLE WITH TYPE 2 DIABETES MELLITUS

Sarah Parveen 1
M.P.T., Majumi M. Noohu 1 Ph.D. 1 Jamia Millia Islamia, Delhi

Background: Cognitive impairment and fatigue are complications of type 2 diabetes mellitus (T2DM). Individuals with T2DM may experience fatigue from a variety of sources, including physiological, psychological, and lifestyle factors. Potential cause of cognitive impairment includes hyperglycemia, insulin resistance, β-amyloid deposition, and others. Event-related potentials (ERP) P300 have been used to assess cognitive function in people with T2DM.
Objective: The purpose of this study was to investigate the relationship between ERP P300 wave parameters and fatigue in T2DM patients.
Methods: Fifty T2DM with a disease duration of ≥5 years were recruited in this study. The participants were assessed for fatigue, cognitive impairment, and depression, Fatigue was examined via the administration of Multidimensional Fatigue Inventory (MFI). Cognitive impairment was evaluated using ERP P300 wave latency and amplitude. For assessing depression, Beck Depression Inventory (BDI) was used.
Results: Participants had a mean (±SD) age of 53.70 (±4.90) years and HbA1c of 7.16±0.62. P300 latency (r=0.46; p=0.01) was significantly correlated with MFI. A similar trend was observed in MFI with respect to P300 amplitude (r=-0.78; p=0.01). A significant correlation was found between scores of BDI and P300 latency (r=0.31; p=0.02) and amplitude (r=-0.32; p=0.02).
Conclusion: The fatigue was related to ERP P300 and a similar relation was observed in BDI with ERP P300. Identifying and controlling these factors should be an essential intervention in maintaining cognitive function in people with T2DM. **Keywords:** ERP P300; Fatigue; Type 2 diabetes mellitus; Hyperglycemia

EFFECT OF TASK SPECIFIC EXERCISE VS MULTI MODEL INTERVENTION IN REDUCING FRAILTY AND IMPROVING QUALITY OF LIFE IN FRAIL ELDERLY. A COMPARATIVE STUDY

Sneha Bagadia
MGM Allied Health Sciences Institute, Indore

Impairments in the health and function of the muscles lead to deficits in motor functions and the ability to perform everyday activities which have a negative impact on quality of life.(A. B. Sklivas1, et al 2022) Fraility is a syndrome associated with aging that results in a decline in physiological systems, making individuals more susceptible to negative outcomes. It affects 7- 11% of people aged 65 and 25-40% of people aged 80(Hyung-S.S. M, et al 2014) The objective of the present clinical study is to compare the effect of task specific exercise and multi- modal intervention in reducing fraility and improving quality of life in frail elderly. 62 frail elderly people with informed consent, treated for 5 days in a week for 6 weeks. They were evaluated and randomized and divided into two groups. Group A receiving Task specific exercise and Group B receiving Multi model intervention. The Pre and Post values of Physical Frailty Phenotype Scale, Short Physical Performance Battery and Older People Quality Of Life-35 Questionnaire were recorded. The study found that there is a significant ($p<0.001$) effect of Task specific exercise and Multi model intervention in reducing frailty and improving quality of life in frail elderly. There was no significant (P >0.001) difference between the effects of Task specific exercise and Multi model intervention, Therefore, we concluded that both techniques Task specific exercise and multi modal intervention are equally effective in reducing frailty and improving quality of life in frail elderly.

Randomized Control Trial to Compare the Effect of Resistance exercises on Changes in Skeletal Muscle Health in Obese Individuals with Sarcopenia

Mriga Jain[1], Karishma Gupta, Swati Allen, Dr. Naval K Vikram
1 JRF, AIIMS, Delhi

Introduction: Sarcopenia, an age related loss of skeletal muscle mass and function is also seen in younger individuals and may lead to disability and future complications. The trajectory of one's muscle loss can be altered by physical exercise and/or the environment, which are the modifiable risk factors.

Methodology: A total of 60 adults with sarcopenic obesity, were studied and assigned to an intervention group (RET, n=30) and control group (CG, n=30). The RET group underwent progressive resistance band exercise training for 24 weeks, and the CG was recommended standard physical activity. Handgrip strength (HGS), physical performance, BIA and other biochemical tests were assessed at the baseline and post intervention.

Results: At the end of 24 weeks, significant between-group differences were observed in weight loss, HGS and physical performance (p<0.05) with improvement in RET group. Appendicular lean mass index (ALMI) showed an increase in RET group as compared to CG, Significant correlation was observed between percentage weight loss and HGS in the RET group. Among biochemical parameters, total cholesterol and triglycerides decreased in the RET group.

Conclusion: Resistance exercise training using elastic bands was found to be beneficial in improving the muscle strength and physical function in individuals with sarcopenic obesity.

Keywords: Sarcopenia, progressive resistance training, muscle health, metabolic syndrome, Obesity

TRANSFORMATIVE PEDAGOGIES IN PHYSIOTHERAPY EDUCATION: NURTURING COMPETENT AND COMPASSIONATE PRACTITIONERS- A SYSTEMATIC REVIEW

Rakesh Krishna Kovela[1], Dhanesh Kumar K U
1Associate Professor and Phd Scholar, Nitte Inst. Of Physiotherapy

Background: Like all forms of education, physiotherapy education must advance continuously to meet the challenges posed by the world 's rapid changes. Academic institutions have been compelled to develop and apply innovative pedagogical and andragogical methods in order to better educate students for the future.
Aim: To investigate cutting-edge methods of instruction that foster empathy and cultural competence in addition to giving physiotherapy students clinical skills.
Methodology: Arksey and O'Malley framework was used. Publications between 2003 to till date were considered for inclusion from six databases—PubMed/Medline, Scopus, Web of Science, Cochrane Central, ProQuest, and CINAHL. Studies were examined at the title/abstract, full-text, data extraction, and critical assessment stages by two independent reviewers.
Results: 406 full text articles related to education and pedagogy in higher education were downloaded, and their eligibility was determined. 4 duplicate records have been removed. 106 articles of primary school children found ineligible. 13 papers addressed the inclusion criteria were included in this study.
Discussion: While research on pedagogical techniques exists, it has not been examined in relation to transformative pedagogies in higher education institutions. There is a dearth of literature highlighting the relationship between learning styles and instructional methods, clear advice and standardized standard practices for nurturing Competent and Compassionate Practitioners
Conclusion: By integrating transformative pedagogies, we can uplift the physiotherapy profession, ensuring practitioners are not only technically proficient but also compassionate caregivers
Keywords: Physiotherapy, Education, Pedagogy, Competency, Compassion, Systematic review

MIND-BODY INTEGRATION IN PSYCHO PHYSIOTHERAPY: INNOVATIVE APPROACHES FOR HOLISTIC WELLNESS- A SCOPING REVIEW

Pamidigantam Raghava Priya[1]
1 Lecturer, Department of Psychiatry, Nitte (DU)

Introduction: There is a close relationship between mental and physical well-being; this relationship is called the "mind-body connection." The evolving landscape of physiotherapy, focusing on novel interventions that integrate psychological and physiotherapeutic principles helps in comprehensive patient care as well as therapist wellness.
Aim: To comprehensively review the evidence on integrated approaches and their effectiveness on holistic wellness for patients by addressing both physical and mental health challenges.
Methodology: 73 Full text articles in English from 2005 to till date were screened for eligibility. Data sources used are Pub Med, Scopus, google scholar and science direct. 3 duplicates were removed and 6 out of 70 articles were included in this scoping review based upon the keywords and inclusion criteria
Results: Most of the studies suggests that Patient rehabilitation by incorporating psychological concepts and skills with physiotherapy treatments leads to quicker recovery and will help to enhance the physical and mental health of patients improving their overall health by controlling the emotional balance in the mind.
Discussion: Evidence suggests that Psychological clinical concepts training in physiotherapy help in providing in-depth knowledge and aid to manage physical and mental health challenges effectively.
Conclusion: The main concept training of CBT and Mindfulness-Based Stress Reduction (MBSR) helps in managing patients by increasing self-efficacy and pain catastrophizing, acceptance, and tolerance. This training helps in many health-related issues for both patient and therapist.
Keywords: Psychotherapy, Physiotherapy, Mindfulness, behavioral therapy, holistic care

A STUDY TO ANALYSE THE LONG TERM EFFECT OF MOBILE PHONE USE ON SLEEP QUALITY AND GENERAL HEALTH IN PHYSIOTHERAPY STUDENTS AND PROFESSIONALS: A PILOT STUDY

Neha Maurya (Student, MPT),
Shagun Agarwal (Professor, Galgotias University)

Background: With the advent of technology and increasing demand of a better health care use of smartphones has increased dramatically among the physiotherapy students and professionals . As there exists both pros and cons of technology, the increased screen time may have unwanted impact on sleep quality and quantity along with the general health deterioration of the physiotherapy students & professionals. This study is to analyse such impacts of smartphone use on physiotherapy students & professionals of Delhi & NCR region.
Methodology: Eighty participants who are using mobile phones particularly smartphones and are either physiotherapy students or professionals have participated. A survey method using Google forms was used to collect the data from the participants which included questions regarding the sleeping patterns and other health issues with the smartphone use.
Results: Preliminary findings from this pilot study provided that most of the participants who are using smartphones for years experience change in their sleeping patterns, frequent headaches & other health issues.
Conclusion: The outcomes of this pilot study shows a positive correlation between use of smartphones and changed sleeping patterns along with other health issues among the physiotherapy students and professionals from Delhi and NCR.
KEYWORDS - Smartphones, Sleeping patterns, Headache.

THE IMPACT OF BLOOD FLOW RESTRICTION TRAINING (BFRT) ON MUSCLE MASS AND ITS ASSOCIATION WITHSTRENGTH AND MULTIFACTORIAL INFLUENCES IN SPORTS: A SYSTEMATIC REVIEW

Taruna Verma (PhD Scholar)

Recent emphasis has been focused on Blood Flow Restriction Training (BFRT) due to its ability to increase muscle development and strength. This review examines the effect of BFRT on muscle mass and its connection with numerous multifactorial variables in the context of athletic performance. A thorough database search found 37 relevant papers, which were evaluated for quality and rigour. This research indicates that BFRT when included in sports training regimens, may result in considerable gains in muscle mass. Athletes and persons undertaking BFRT therapies revealed excellent muscular hypertrophy results in a variety of sports. In the framework of BFRT, the link between muscle mass and strength was also investigated. The research suggests that BFRT may lead to increased muscular strength, and the hypertrophic increases produced by BFRT may be directly connected with strength gains. The existing data shows that BFRT is a promising complement to sports training techniques designed to increase both muscle growth and strength. It was determined how variables such as age, training state, and exercise regimes interact with BFRT results by considering multifactorial impacts.
This systematic analysis concludes by highlighting the potential advantages of BFRT for boosting muscle growth and strength improvements, particularly in the context of sports performance. It highlights the necessity of incorporating multiple variables in the design of BFRT protocols and asks for more studies to determine the ideal ways for optimising the advantages of BFRT in sports training.
Keywords: Blood Flow Restriction Training, muscle mass, strength, sports performance, multifactorial influences.

SCHEDULE OF PAPER PRESENTATION

23rd Dec 2023 Saturday (2-5 pm)

Lecture Hall

I (19)	II (20)	III (20)
Junior Misc (9)	Junior Cardio (9)	Junior Neuro (15)
Senior Misc (10)	Senior Neuro (11)	Sr Ortho (5)

24th Dec 2023 Sunday (10 am-1 pm)

Lecture Hall

I (12)	II (13)	III (11)
Junior Ortho (7)	Jr Sports (7)	Jr Ortho and Sports (6)
Sr Ortho (5)	Sr Sports (6)	Sr Cardio (5)

Note: The name of the Faculty Incharge/Co-ordinator shall be displayed on the venue on the day of presentation.

23rd Dec, 2023 SATURDAY (2-5 PM), VENUE: LT I

Category : Junior Miscellaneous Faculty Incharge: Contact No:

S No	NAME	LT	TITLE OF PAPER
1	Sunaina Chopra, Pat G Camp	I	The Use of Surveys to Assess Physical Activity with Special Reference to Rural vs. Urban contexts
2	Divyadarshini S	I	Effectiveness of virtual reality to improve balance and reduce the risk of fall in elderly people
3	Valliyappan S	I	Impact Of Vivifrail Multicomponent Intervention On Balance And Functional Capacity Among Geriatric Population
4	Sanskruti Dayanand Jawalkar	I	Association of fear of fall and avoidance of basic ADLs in elderly
5	Aaditya Singh Dharmasya, Richa H Rai, Sheetal Kalra	I	Digital Representation Of Anthropometric Measures
6	Abishek Godwin	I	Efficacy Of Combined Therapy For Depression Among Students
7	Darshana Babel, H Mathur	I	Test-retest reliabilty of the English version of the Menstrual Distress Questionnaire (MEDI-Q) in Indian population: A cross-sectional study
8	Gauri Gupta, Komal Shah	I	Immediate Effect Of Cupping Therapy On Low Back Pain In Primary Dysmenorrhea
9	Riddhi Godhe, Purusotham Chippala	I	Effectiveness of Brain Gym Exercises in Physiotherapy Students with Depression, Anxiety and Stress

CATEGORY: Senior Miscellaneous

S No	NAME	LT	TITLE OF PAPER
1	Muruga Raj Thyagarajan	I	Metabolic Reshaping through HIIT: A Study on PCOS and its influence on BMI, Glucose and Insulin
2	Gulwish Sadique, Nishat Quddus, Zuheb Ahmed Siddiqui	I	A Comparative Study To Check The Efficacy Of KT On Pain, Menstrual Distress In Subjects With Dysmenorrhea
3	Badri Vishal, Deepak Raghav, Amit Dwivedi	I	Transforming Attitudes and Knowledge: The Need of Transgender-Affirmative Care Training for Healthcare Workers and Students
4	Nidhi Agarwal	I	Physiotherapy Intervention In Treating Dysmennorheoa In Pre-Menopausal Women: A Systematic Review
5	Kalindi Dev, Mamta Dagar, Preeti Sharma	I	Effect Of Posture Correction Exercises On Respiratory Functions In Lactating Mothers
6	Sarah Parveen, Majumi M Noohu	I	The Relationship Between Fatigue and ERP P300 Wave Parameters in People with type 2 DM
7	Sneha Bagadia	I	Effect of Task specific exercise vs Multi model intervention in reducing frailty and improving quality of life in frail elderly: A comparative study
8	Mriga Jain, Karishma Gupta, Swati Allen, Naval K Vikram	I	Randomized Control Trial to Compare the Effect of Resistance exercises on Changes in Skeletal Muscle Health in Obese Individuals with Sarcopenia
9	Rakesh Krishna Kovela, Dhanesh Kumar KU	I	Transformative Pedagogies in Physiotherapy Education: Nurturing Competent and Compassionate Practitioners- A Systematic Review
10	Pamidigantam Raghava Priya	I	Mind-Body Integration in Psycho Physiotherapy: Innovative Approaches for Holistic Wellness- A Scoping Review

23rd Dec, 2023 SATURDAY (2-5 PM) VENUE: LT II

Category :Junior Cardio Faculty Incharge:_____ Contact No: _____

S No	NAME	LT	TITLE OF PAPER
1	Shikha Sharma, S. Mitra, Prabhpreet Sethi	II	Association of aerobic capacity, respiratory function and heart rate variability in individuals with COPD
2	Nandini Narang, Nidhi Singh	II	Effect Of Cardiorespiratory Fitness On Obesity Indices, Attention & Academic Motivation In School Going Adolescents
3	Raveendar Thiyagarajan	II	Impact of HIIT and MIIT on body mass index and lipid profile on overweight middle age men
4	Aishwarya Kasyup, Dr. Aasman Thakur	II	A comparative study to Evaluate the Effectiveness of Myofascial Release and Kinesio Taping to improve dyspnoea, functional capacity and quality of life in COPD patients- A Pilot Study
5	Padmaja Rajavaradhan	II	Efficacy of Aerobic exercise and Resistance exercise training in improving Hb level among tribal adolescent girls
6	Kajal, Davinder Mittal, Sutantar Singh, Kavita Kaushal	II	Covid-19 and its effect on mental health in university students
7	Dipika Prajapati, Aishwarya Nair	II	Impact Of Cardiac Rehabilitation Following PCI On Individuals With Coronary Heart Disease
8	T Vaishnavi, Rakesh Krishna Kovela	II	Tiny Steps to Triumph: Unraveling Physiotherapy Wonders in India's Neonatal Intensive Care Units
9	Shailesh Shrestha ,Dhanesh Kumar K U	II	Utility of One minute Sit to Stand Test in Respiratory Conditions: A Narrative Review

Category : Senior Neuro

S No	NAME	LT	TITLE OF PAPER
1	Niyati Patel	II	Reliability and validity of Gujarati version of Nomophobia questionnaire: Cross-sectional study
2	Kinjal Shah, Reema Joshi	II	Efficacy of perturbation training On balance and function In older individuals-An experimental study
3	Muhammad Azharuddin, Majumi M Noohu	II	Neural Mobilization And Resistance Exercises Improves Glycosylated Hemoglobin & Nerve Functions In Patients With Diabetic Peripheral Neuropathy: A Rct
4	Ashutosh Sharma, Himanshu Mathur	II	Effect Of Modified Cimt Versus Motor Imagery In Improving Upper Limb Functioning In Chronic Stroke Patients: A Rct
5	Priyanka Goyal, Retasha Soni	II	Upper Limb Neural Tissue Extensibility in Asymptomatic Healthcare Professionals
6	Jyoti Sharma, Irshad Ahmad, Arun Kumar Chandresh Singh	II	Effects of Neurodynamic mobilization on small fibre dysfunction in patients with Painful Diabetic Peripheral neuropathy: A Pilot study
7	Narendra Kumar	II	Efficacy Of Neurodevelopmental Therapy-Based Task-Oriented Training On Gait Improvement In Children With Cerebral Palsy: A Systematic Review
8	Jugendra Singh Indolia	II	Exploration of the neural mechanisms underlying the therapeutic effects NMES on upper limb motor control in subacute stroke patients: A Systemic review

9	Dhivakar Murugan, Sankar Sahayaraj, Franklin Saju	II	A Study On Effectiveness Of Virtual Mobile Game Based Hand Training On Fine Motor Skills Among Children With Hemiplegic Cp– A Double Blinded Study
10	Shanti Bhushan	II	Effect of structured based therapy programme to improve upper limb movements and prevent the development of erb's engram in children with OBPP
11	Sathiyamoorthi P	II	The immediate effect of Conventional Therapy (CT), Movement Therapy (MT) and Contract Relax (CR) on walking ability in incomplete SCI patients with spasticity-Experimental Study design

23rd Dec, 2023 SATURDAY (2-5 PM) VENUE: LT III

Category :Junior Neuro Faculty Incharge:_____ Contact No: _____

S No	NAME	LT	TITLE OF PAPER
1	Ankush Gera, Shefali Walia, Stuti Shah, Garima Wadhwa	III	Effect of high-intensity interval training on neuropathic pain and Quality of life in person with paraplegia.
2	Kanishka, Shambhovi Mitra, Anne E Palermo	III	Effect of Inspiratory Muscle Training on Functional Sitting Balance in People with SCI
3	Parkavi B	III	Effects of modified constraint induced movement therapy on motor performance and daily functions in patients with sub-acute stroke
4	Sadhana Vasani, Karishma Jagad	III	Value Of H amp /M amp Ratio For Flexor Carpi Radialis Muscle In Normal Healthy Individuals– A Cross-Sectional Study
5	Abirami P	III	Effect of Epley Maneuver and Semont Maneuver in Patients with BPPV
6	Divakar Mehta	III	A Pilot Study To Find Out The Efficacy Of Rehabrelive Active Glove To Improve Hand Function In Stroke Patients
7	Sangavi Sivakumar	III	Effects of vestibular rehabilitation exercises on relieving dizziness in patients with visual vertigo
8	Resham Kugaji	III	Comparison of reliability of full outline of unresponsiveness (FOUR) score and simplified evaluation of consciousness disorders(SECONDs) scale on comatose patients-an observational study
9	Gouri Kotabagi	III	Comparing the effect of Right and Left median nerve stimulation on Comatose patients using GCS and CRS- revised- A Pilot study
10	Arundhati Mahori, Ashutosh Sharma	III	Functional progress in obstretic brachial plexus palsy: A 3 year old patient's case report
11	Shubhi Sharma	III	Effect Of Sprinter And Skater Pattern Of Pnf On Trunk Control And Postural Balance In Individuals With Stroke
12	Aishwarya Swaminathan	III	A Questionnaire to Assess Knowledge, Attitude and Awareness Regarding Coma In Informal Caregivers of Comatose Patients- An Observational Study
13	Kajal Kumari, Ashutosh Sharma, Farah	III	Effects Of Cognitive Behavioural Therapy (CBT) in Addition To Neurobics on cognition and mobile phone addiction in Moderate Nomophobic Collegiate Students: A Pilot Study
14	Jayashree, Rakesh Krishna Kovela	III	Pelvic Alignment's Impact on Functional Recovery After Stroke: Unravelling the Connection– A Scoping Review
15	Jemimah John David	III	Prevalence Of Comatose Patients And Disability Status In Relation To The Level Of Consciousness In Belgaum City

Category :Senior Ortho

S No	NAME	LT	TITLE OF PAPER
1	Niketa Shobhit	III	Prevalence of smartphone addiction and Neck-Shoulder pain in students of MAHSI
2	Velkumar Vasudevan	III	Retro Walking Exercise Versus Core Stability Exercise: Efficacy in Alleviating Osteoarthritis Knee symptoms
3	S Purna Chandra Shekhar	III	Effectiveness of Strengthening Exercises in Patients with Ergonomical Low Back pain: A randomized controlled trial
4	Manju Kaushik, Irshad Ahmad	III	Effects of Dynamic Neuromuscular Stabilization Exercises on Pain, Function, and Movement-Related Fear in Non-Specific Chronic Low Back Pain Individuals with Movement Control Impairment: Interim analysis of RCT
5	Amandeep Singh	III	Efficacy of Instrument Assisted Soft Tissue Mobilization, Thoracic Manipulation and Pressure Biofeedback in Mechanical Neck Pain

24th Dec, 2023 SUNDAY (10 AM – 1 PM) VENUE: LT I

Category : Junior Ortho Faculty Incharge:_____ Contact No: _____

S No	NAME	LT	TITLE OF PAPER
1	Ishika, Zaki Anwer	I	To compare the effect of METs with neck stabilization exercises versus Stereotypical kinaesthetic rehabilitation in non -specific neck pain among the lab professionals
2	Kriti Khanna, Shikha Jain, Gautam Shetty, CS Ram	I	FearAvoidance Beliefs, Kinesiophobia, and Disability Risk Among Indians with Spine Pain
3	Komal Jaiswal, Arunmozhi R, Reena Kumari, Jasdeep Kaur	I	The impact of Anterolateral fascial Elongation techniques vs Cross-hand techniques in non-specific low back pain
4	Rasika Jadhav	I	Work related musculoskeletal disorder among secondary school teachers – An Observational Study
5	Anjali Kumari, Himanshu Mathur	I	To see the effect of MWM, Proprioceptive training and conventional exercises on functional, Kinesiophobia and postural sway in patient suffering from Grade II OA:A cross sectional study
6	S.Mohamed Fazil H	I	Effects Of Closed Dynamic Vs Closed Kinematic Exercise With Stretching In Periarthritis Shoulder.
7	Vanshika Rajput, Himanshu Mathur	I	A novel approach for the rehabilitation of chondrocalcinosis of ankle joint: A case report

Category : Senior Ortho

S No	NAME	LT	TITLE OF PAPER
1	Md Farhan Alam, Saurabh Sharma	I	A Reliability Study of Y-Balance Test on Pronated Feet Subjects
2	Apoorva Srivastava, Digvijay Sharma	I	Biomechanical and Physiological Correlations of Cranio-Vertebral Angle in healthy adults: A cross sectional study
3	Sapna Chaudhary, Ashish Dhirajlal Kakkad	I	Evaluating reliability and validity of a real-time biofeedback device for assessing quadriceps lag (active knee range of motion): A cross-sectional study
4	Yash Pratap, Shahiduz Zafar, Shagun Agarwal	I	A COMPARATIVE ANALYSIS OF TWO DOSIMETRY APPROACHES IN SHOCK WAVE THERAPY FOR ALLEVIATING SHOULDER PAIN AND IMPROVING MOBILITY DEFICIT: A POLIT STUDY
5	Saumya Srivastava	I	TRANSLATION, CULTURAL ADAPTATIONS, AND EVALUATION OF PSYCHOMETRIC PROPERTIES OF THE MALAYALAM VERSION OF THE ODI

24th Dec,2023 SUNDAY (10 AM – 1 PM) VENUE: LT II

Category : Junior Sports and Ortho Faculty Incharge: Contact No:

S No	NAME	LT	TITLE OF PAPER
1	Anmol Saini, Gaurav Kadyan	II	An Intervention Study to Check the Effect of Medicine Ball Training on Adult Cricket Players
2	Karan Kapur, Gaurav Kadyan	II	CORE TRAINING TO IMPROVE DYNAMIC BALANCE
3	Amit Prashar, Anmol Saini, Gaurav Kadyan	II	ENDURANCE TESTING AND RUNNING PERFORMANCE IN SOCCER PLAYERS
4	Ashish Thakurdesai	II	EFFECTIVENESS OF SPINE MOBILITY EXERCISES AND CRYOTHERAPY TO RELIEVE PAIN AND DISCOMFORT CAUSED DUE TO POSTERIOR PELVIC TILT IN ATHELETS
5	Mahima Sisodia, Varsha Huddar	II	3D KINEMATIC ANALYSIS OF PELVIS FROM STATIC STANDING TO DYNAMIC WALKING- A PILOT STUDY
6	Mayuri Burkul	II	ASSESSMENT OF HAMSTRING FLEXIBILITYIN RECREATIONAL WEIGHTLIFTERS
7	Shweta Chaudhari, Rima Musale, Nilesh Andhare	II	ASSESSMENT OF LEVEL OF PHYSICAL FITNESS AND LEVEL OF MENTAL STRESS IN YOUNG STUDENTS

Category :Senior Sports

S No	NAME	LT	TITLE OF PAPER
1	Medini Namdev	II	Effectiveness of PNF diagonal pattern training on archers to improve stability– An Experimental Study
2	Hemant K Nagar	II	Effectiveness of MFR & MET on Flexibility and Throwing distance in Javelin Throwers– An Experimental Study
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4	Monika, Kalindi Dev	II	Effects of cross fit training on physical profiles in wrestlers: A Systematic Review and Meta-Analysis
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24th Dec, 2023 SUNDAY (10 AM – 1 PM) VENUE: LT III

Category : Junior Ortho & Sports Faculty Incharge:_____ Contact No: _____

S No	NAME	LT	TITLE OF PAPER
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2	Drishti Pachauri, Himanshu Mathur	III	Effect of addition of MWM, MFR, and MET of TMJ to conventional exercises regime on mouth opening, mandibular deviation and disability in patient suffering from TMJ dysfunction:
3	Afif, Saumya Srivastava	III	Artificial Intelligence and Machine Learning In Musculoskeletal Conditions: A Review Of Literature
4	Shaifali Sharma, Mukesh Kumar Sharma	III	The Effect of Addition of Ballistic Six Exercise Training Combined With Conventional Rehabilitation Protocol On Shoulder Performance In Badminton Player Having Gird –
5	Nischitha U Shetty, Purusotham Chippala	III	Does Body Mass Index Influence Fitnessgram's Curl-Up Test In School Going Children
6	Manoj J Patil	III	Assessment of Dynamic Balance in Basketball, Volleyball and Football players using Star Excursion Balance Test

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S No	NAME	LT	TITLE OF PAPER
1	Namrata Sharma	III	THE ROLE OF AGE, GENDER AND PHYSICAL ACTIVITY ON HEART RATE VARIABILITY PERFORMANCE OF ADULT POPULATION
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4	Pankaj Singh	III	ANALYSIS OF HIGH-FREQUENCY CHEST WALL OSCILLATION (HFCWO) IN THE MANAGEMENT OF COPD: A SYSTEMIC REVIEW
5	Aishwarya Nair	III	Impact of recurrent physiotherapy sessions in a Mechanically Ventilated Infant: A Case Report

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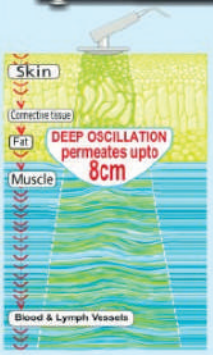

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