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*25<sup>th</sup> & 26<sup>th</sup> – October 2018*



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## ABSTRACT - 1

### “CURRENT TREND ON DIRECT ACCESS PRACTICE IN PHYSIOTHERAPY PROFESSION - AN OBSERVATIONAL SURVEY”

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**Background:** The direct access practice of Physiotherapy has been vital and more needed for the current scenario in India. In this study, we have done a survey on Physiotherapist about the present situation of direct access practice, safety measures taken on practice and its varying barriers affecting the practice.

**Methodology:** Total of 110 Physiotherapist with varying speciality and having clinical experience for more than 5 yrs have been selected for this survey. The respondents have been asked about the direct access practice, safety measures on client management during clinical reasoning and intervention, barriers and legislation aspects of this practice, Follow-up of clients, benefits of Physiotherapist as a direct access practice in the primary health centre and emergency care.

**Results:** A survey results from the respondent shows that average of 40% of total client's treated in their clinic are coming directly for treatment and follow-up of intervention also shows beneficial and cost-effective. Almost 90% responded that they are practicing with evidence based practice on evaluation and intervention with the safety of client's has been maintained throughout.

**Conclusion:** It provides wider scope of practice for physiotherapist if the direct access practice has been well structured legally.

**Keywords:** Direct access, scope of practice, physiotherapy profession.



## ABSTRACT - 2

### Relationship between the anthropometric parameters and 10 meter walk

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**Background:** Walking speed (WS) is a valid, reliable, sensitive measure appropriate for assessing and monitoring functional status and overall health in a wide range of populations. These capabilities have led to its designation as the “6<sup>th</sup> vital sign”. By synthesizing the available evidence on WS, article provides clinicians with a reference tool regarding this robust measure. The 10m walk test is the most feasible, short duration, and easiest test to be administered. After a detailed literature review, despite being the reliable and valid tool, till now no Indian studies which shows the relationship between the anthropometric parameters and the 10MWT. Hence this study is focused to detect the relationship between the anthropometric parameters and the 10MWT.

**Objective:** To explore relationship between the anthropometric parameters and the 10MWT.

**Methodology:** An Analytical study. 600 students of age group 17-21 years through convenient sampling is recruited for the study.

**Results:** The correlation of 10 meter walk test with the anthropometric parameters is about -0.52, -0.020, -0.001 & -0.161 for normal pace and for fast pace it is about -0.130, -0.046, 0.008 & -0.144 with significant p values (Pearson product-moment coefficient of correlation).

**Conclusion:** Despite the correlation between anthropometric parameters and the 10 MWT is low due to its high reliability and validity it is considered as appropriate tool to assess the walking speed and it moderately reflects overall physical functional performance .

**Key words:** 10 meter walk test, walking speed, physical performance etc.



## ABSTRACT – 3

### EXERCISE UNDERTAKEN BY SHOOTERS: A SURVEY

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**Background:** The performance of shooters in India has reduced overall in the years. Proper exercise training has also declined in the past years. The effect of stretching, strengthening, balance and endurance exercises are widely effective in enhancing performance of shooters.

**Methodology:** Survey type of descriptive research method. Athletes from Panjab University in Chandigarh, Punjab Police Academy (PAP) and sharp shooterz academy in Jalandhar and Govindnation college in Ludhiana were a part of the study.

**Participants:** Athletes falling under the age group of 10-30 years who are on regular practice are taken. Participants were given self- administrative questionnaire randomly including both male and female shooters. The data was collected and analyzed with the descriptive statistics using spss version 16.

**Result:** The mean was calculated which showed results that 76% of shooters were performing warm up, 84% performing upper limb stretching, 48% performing upper limb strengthening, 4% performing upper limb endurance, 6% performing lower limb stretching, 4% performing lower limb strengthening, 48% performing balance training and 32% performing cool down.

**Conclusion:** The exercise habitual of pistol shooters for strengthening, endurance, balance and cool down is less even if it is an important component of shooting and there is less awareness regarding it.



## ABSTRACT – 4

### EFFECTIVENESS OF MULTIMODAL EXERCISES STRATEGIES ON SUBJECTS WITH SHOULDER SUBLUXATION

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**Background:** Rehabilitation strategies for patients with shoulder subluxation / dislocation is challenging. Patients often receive limited physical therapy after shoulder subluxation. A continuous rehabilitation program is necessary for pain free and normal motor control, strengthening and maximum stability of the affected joint by using distinct techniques.

**Objective:** The purpose of this study was to report the effect of 12 weeks multimodal exercise programs to gain strength and stability of the shoulder joint and improve the functional activity of subjects with shoulder Subluxation.

**Methods:** Quasi experimental study design with convenient sampling. After getting the consent of 20 Subjects with age group of 25-35 yrs were divided into 2 groups, 10 subjects receives the multimodal exercise (Strengthening exercise, Proprioception training and closed kinetic exercise) and 10 subjects receives the conventional exercise (ROM and strengthening exercise). At baseline and post-12 week of intervention was measured using patient specific functional scale and shoulder ROM.

**Results:** Data were collected and interpreted between both the groups for functional outcome using patient specific functional scale and Shoulder ROM using goniometer by paired t-test. After 12 week of intervention with multimodal exercise shows significant changes ( $p > 0.05$ ) when compared to conventional exercise on subjects with shoulder subluxation.

**Conclusion:** Thus, we conclude that subjects following the multimodal exercise programs showed maximum benefits in pain free and normal motor control ROM and better shoulder stability, and get back to normal ADL.



## ABSTRACT –5

### A STUDY TO ASSESS THE EFFICACY OF INCENTIVE SPIROMETRY VERSUS PEAK FLOW METER BY MEASURING THE PEAK FLOW RATE IN POSTOPERATIVE ABDOMINAL SURGERY PATIENTS

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**Background:** Surgical procedures in abdominal area lead to changes in pulmonary function, respiratory mechanics and impaired physical capacity leading to postoperative pulmonary complications, and the incidence of pulmonary complications varies from 6% to 76%.

**Objectives:** To compare the effect of incentive spirometry versus peak flow meter in postoperative abdominal surgery patients.

**Methodology:** A comparative study design was conducted in Sri Venkateshwaraa medical college & research centre in department of physiotherapy in puducherry. 30 patients who underwent abdominal surgery were allocated into three equal groups. Group A are treated with diaphragmatic breathing exercise, group B are treated with diaphragmatic breathing exercise and peak flow meter, group C are treated with diaphragmatic breathing exercise and spirometry. Outcome measures were recorded on first and seventh day.

**Result:** Comparison of each variable pre and post treatment in each group revealed a significant improvement in all different parameters in study groups (Group B & Group C)  $P < 0.05$  except the oxygen saturation; but group B showed a more significant improvement than group C.

**Conclusion:** Peak flow meter will be more significant than the incentive spirometry to improve peak flow rate in postoperative abdominal surgery patients.

**Keywords:** Incentive spirometry, peak flow meter, diaphragmatic breathing exercise, peak flow rate, abdominal surgery.





## ABSTRACT –6

### “ELECTROMYOGRAPHY”

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**Background:** Electromyography refers to recording of action potential of muscle fibers firing singly or in a group near the needle electrode in a muscle.

**Methodology:** In this study Neurogenic and Myogenic lesions are included. It is performed by making the patient relax, inserting the electrodes inside the muscle by which the motor unit potential is recorded. For normal EMG, involves short duration insertional activity followed by motor unit action potential. For Abnormal EMG, involves various spontaneous activities like fibrillation potential, positive sharp wave, myotonic discharge etc.

**Conclusion:** Electromyography is a very beneficial procedure for myogenic and neurogenic conditions to make out appropriate diagnosis and prognosis.

**Keywords:** Electromyography, EMG, Neurogenic, Myogenic.



## ABSTRACT – 7

### COMPARISON OF PAIN NEUROPHYSIOLOGY KNOWLEDGE AMONG PHYSIOTHERAPY STUDENTS: A CROSS-SECTIONAL STUDY

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**Background:** A key tool for use in approaching chronic pain treatment is educating patients to reconceptualize pain. Thus, for physiotherapist it is fundamental to the transmission of pain information to patients. Because their understanding of pain is acquired during the educational process, the aim of this study was to compare the knowledge about pain neurophysiology in first through final-year students and interns from a single physiotherapy college to determine their gain in knowledge using a well-known questionnaire designed to evaluate the understanding of pain.

**Objectives:** The aim of this study was to determine the level of knowledge about the neurophysiology of pain in physiotherapy students.

**Methodology:** Revised Neurophysiology of Pain Questionnaire (12 closed-ended questions) was administered to students from first through final years of study in Physiotherapy. The percentage of correct responses was determined and comparisons of the results were analyzed between the first through final years and interns of study.

**Results:** The percentages of correct responses for students were as follows: First year, 48.6; Second Year, 43.6; Third year, 66.7; Fourth year, 59.7; Interns 50.7.

**Conclusion:** The students of the third and fourth years and interns have better understanding of the neurophysiology of pain compared to the first- and second-year students of college of Physiotherapy. Even so, their understanding may not be sufficient and does not guarantee an approach to chronic pain that will help patients reconceptualize their pain.

**Keywords:** Chronic pain, Education, Neurophysiology, Pain education, Pain knowledge, Physiotherapy



## ABSTRACT – 8

### RELATIONSHIP BETWEEN THE HAND DISCOMFORT AND THE DIMENSIONS OF HAND AND TOUCHSCREEN MOBILES”

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**Background:** With the development of communication technology, mobile phone seems to become an important personal device that everyone have. Texting is the most widely used mobile data service, with 74% of all mobile phone users worldwide being active users of it.

**Aim:** To find the relationship between hand discomfort and dimensions of mobile phone and hand.

**Methodology:** 150 college going girl in the age group 18 to 24 years was taken for this study by simple convenient sampling. A subjective questionnaire was used to collect details about hand dominance, type of touch screen mobile used, total hours of usage per day and type of activity predominantly done using the touch screen mobile after that Cornell hand discomfort questionnaire was given to the subjects who were having hand discomfort.

**RESULT:** The results were analyzed using ANOVA and there is significant positive correlation between hand discomfort and dimensions of mobile and hand.

**Conclusion:** The present study concluded that the diagonal length of touch screen, weight of mobile phones and duration of usage has significant contribution in development of hand discomfort.

**Keyword:** Touch screen, hand discomfort, dimensions.



## ABSTRACT – 9

### A COMPARATIVE STUDY ON EFFECTIVENESS OF MULLIGAN BENT LEG RAISING VS SLUMP STRETCHING ALONG WITH SWD IN MECHANICAL LOW BACK PAIN

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**Background:** Most of eighty percent of low back pains are due to “mechanical back pain” and is caused by muscle strain, ligament sprain. Unilateral pain with no referral below the knee is called mechanical low back pain or “lumbago”.

**Objectives:** The purpose of this study was to compare the effectiveness of MBLR vs Slump stretching along with SWD for reducing pain and improving SLR in patients with mechanical low back pain.

**Methodology:** A convenience sample of 30 patients was collected from department of physiotherapy, Sri Venkateshwaraa Medical College Hospital and Research Centre, Ariyur, Pondicherry based on inclusion and exclusion criteria. 30 patients were randomly assigned into 2 groups Group A (N=15) received mulligan bent leg raising and Group B (N=15) received slump stretching and both group received SWD before intervention. Pain and passive SLR was measured using VAS and Goniometer. These variables were assessed before and after intervention.

**Results:** Statistical showed improvement in passive SLR and reduction in pain was observed within groups. But between groups analysis showed slightly more significant in Group A than Group B.

**Conclusion:** This study concluded that, both the MBLR and slump stretching along with SWD were effective in mechanical low back pain. But Group A show mild significant than the Group B.

**Keywords:** Mechanical low back pain, Mulligan Bent Leg Raising, Slump Stretching, Visual Analog Scale, Passive Straight Leg Raising, Short Wave Diathermy.



## ABSTRACT – 10

### COMPARISON OF FULLTERTON ADVANCED BALANCE SCALE, MINI-BESTEST, AND BERG BALANCE SCALE TO PREDICT FALLS IN GERIATRICS

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**Background:** Falls are one of the major problems in the elderly and are considered as one of the “Geriatric Giants”. It is the leading cause of injury related visits to hospitals very often in persons over the age of 65 years. Therefore this study analyzed the most reliable tool among Fullerton Advanced Balance scale, Mini-Balance Evaluation System Test, and Berg Balance Scale which might contribute to the detection of fall risk in geriatrics.

**Objectives:** To find out the most reliable predictor among Fullerton Advanced Balance Scale, Mini Balance Evaluation System Test Scale and Berg Balance Scale which might contribute to the detection of fall risk in Geriatrics.

**Methodology:** Subjects were tested over three sessions per week alternate days, over 6 month’s interval. With this protocol, Fullerton Advanced Balance (FAB) scale, Mini-Balance Evaluation Systems Test (Mini-BESTest) and Berg Balance Scale (BBS) was used to assess Balance measurement to predict falls in geriatrics. Each participant underwent the same order of testing for the following tests: FAB scale, Mini-BESTest and BBS. Any item that was duplicated among the different balance scales was performed only once and scored using criteria from each scale.

**Conclusion:** Although other balance scales such as Mini BESTest and BBS may also provide valid prediction for fall in geriatric people, from the above results and discussion it was concluded that Fullerton advanced balance scale depicted more significant in prediction of falls in geriatrics than Mini BESTest and Berg balance scale.

**Keywords:** Falls, Fullerton Advanced Balance scale, Mini Best Evaluation System Test, Berg Balance Scale, Geriatrics.



## ABSTRACT – 11

### TO FIND OUT THE EFFECT OF HAND EYE COORDINATION EXERCISES IN REDUCING THE CHRONIC NON SPECIFIC LOW BACK PAIN IN YOUNGER ADULTS

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**Background:** Low back pain (LBP) is usually defined as pain, aching, or discomfort localized in the area between the costal margin and the gluteal folds. This study was conducted as a pilot study to find out the effects of Hand Eye coordination training to improve Pain and functional outcomes among college students with non specific low back pain.

**Method:** A pilot study design, college students with chronic non specific low back pain were selected under selection criteria and randomized into control and experimental group. Total 28 subjects, 14 subjects in each group; data were collected using the outcome measurements such as NPRS and ODI. Control group received the conventional therapy while study group received rocker driller exercise and conventional therapy for 4 weeks.

**Results:** The statistical analyses of pre and post values were done. There was a significant difference of (0.01) was noted between the pre and post test values of ODI and NPRS among college students with chronic non specific low back pain.

**Conclusion:** It is concluded that hand eye coordination exercise with conventional therapy found to be significantly effective than the conventional therapy in improving functional ability in college students with chronic non specific low back pain.

**Key words:** College students, chronic non specific low back pain, hand eye coordination exercise, Oswestry disability index, Numerical pain rating scale.



ABSTRACT – 12

**EFFECTIVENESS OF GROUND BASED WALKING WITH  
RELAXATION TECHNIQUES TO IMPROVE THE QUALITY OF LIFE  
IN COPD PATIENTS**

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**Background:** The aim of the study is to determine the effectiveness of ground based walking with relaxation techniques to improve the quality of life in patients with COPD

**Methodology:** 30 COPD patients were randomly assigned into experimental and control group with 10 patients each. The experimental group received ground based walking and control group received relaxation techniques only. Pre and post test evaluation is done using the Borg's scale and Clinical COPD Questionnaire

**Results:** There was significant improvement in COPD patients who received ground based walking and relaxation techniques both than the patients received relaxation techniques alone.

**Discussion:** The ground walking and the relaxation techniques play an important role in dyspnea reduction and also reduce the anxiety and improve health status in patients with chronic obstructive pulmonary disease. Hence based on the information presented, the independent 't' test was performed to analyze the results. The calculated 'T' value for Borg's scale 5.1278 and CCQ is 5.9153, which is greater than the table value of 2.048 in accordance to the level of significance of 0.05.

**Conclusion:** The present study proved that the both ground based walking and relaxation techniques are effective in improving the quality of life in COPD patients.

**Key words:** COPD- Chronic Obstructive Pulmonary Disease, Ground based walking Borg's Scale Clinical COPD Questionnaire.



## ABSTRACT – 13

### HEALTH RELATED QUALITY OF LIFE AMONG STUDENTS WITH POLYCYSTIC OVARIAN SYNDROME

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**Background:** Polycystic ovarian syndrome (PCOS) is a genetic, hormonal, metabolic and reproductive disorder that affects women. It is a leading cause of female infertility with amenorrhoea, oligomenorrhoea, excess hair growth, acne and obesity.

**Aim:** To determine Health related Quality of Life (HRQoL) in students with PCOS.

**Methodology:** This is a cross sectional study, in which 34 health-care students with an age range of 18-22 years diagnosed with PCOS as per Rotterdam criteria from Sri Ramakrishna Institute of paramedical sciences were recruited through purposive sampling. The PCOSQ was used for measuring HRQoL. Descriptive Statistics and Percentage analysis were used for statistical analysis.

**Results:** Out of the 34 participants, 64% were diagnosed as normal BMI and 38.23% of samples had long, irregular menstrual cycles. Among the 5 domains of PCOSQ, emotional disturbances (32.45% tired, 23.52% depressed) and menstrual problems (20.58% irregular periods, 26.47% abdominal bloating, and menstrual cramps respectively) had high impact on HRQoL. Body weight, body hair and infertility were the least worrying issues.

**Conclusion:** PCOS has an impact on the Quality of Life among Health Care Students, mainly on emotional aspect and abnormal menstruation. Appropriate counseling measures and medications need to be provided to them, modifying their life style to have a better reproductive life later.

**Keywords:** PCOS, HRQoL.





## ABSTRACT – 14

### TASK ORIENTED PROGRESSIVE RESISTANCE TRAINING VERSUS PERTURBATION BASED BALANCE TRAINING TO IMPROVE BALANCE IN ELDERLY PEOPLE- A COMPARATIVE STUDY

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**Background:** Falls are a leading cause of injury, hospitalization and even death among older adults. However, there is mixed evidence for significant reductions in falls incidence in frail older adults with some of the exercise interventions. This study will find the optimal Balance exercise protocol which will be safe and comfortable to elderly population prevent from fall. Hence this study compares the two most relevant exercises, Task Oriented Progressive Resistance Training and Perturbation based Balance Training to improve Balance.

**Objectives:** To compare the effectiveness of Task Oriented Progressive Resistance Training with Perturbation based Balance Training for the elderly people to improve balance.

**Methodology:** 30 subjects were assigned to two groups. All the subjects included in informed consent form will be taken from each of the subjects to participation. The subjects was assessed before the treatment and the end of 6 weeks treatment, measurement done by 8 foot timed up and go test and berg balance scale. Group A will do Task Oriented Progressive Resistance Training and Group B will do Perturbation based Balance Training.

**Conclusion:** This study conclude that the Task Oriented Progressive Resistance Training (group A) shows more significant when compared with Perturbation Based Balance Training (group B) in improving balance in elderly people.

**Key words:** Falls, 8 foot timed up and go, Berg balance scale, Task oriented progressive resistance training, Perturbation based balance training, Geriatrics.



## ABSTRACT – 15

### EFFICACY OF INTEGRATED PLYOMETRIC TRAINING PROGRAM VS PROPRIOCEPTIVE TRAINING PROGRAM FOR CHRONIC ANKLE INSTABILITY IN COLLEGIATE ATHLETES-A COMPARATIVE STUDY.

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**Background:** Lateral ankle joint sprain and the subsequent development of chronic ankle instability (CAI) are commonly encountered by clinicians involved in the treatment and rehabilitation of musculoskeletal injuries. It has been recently advocated that it can be reduced with Proprioceptive training and Integrated Plyometric training. Therefore, in this study the most significant program was sorted by comparing the effects of both the group.

**Objective:** The purpose of this study was to compare the effects of integrated plyometric and proprioceptive training program for chronic ankle instability in collegiate athletes.

**Methodology:** Thirty students of SVGI ( $19.46 \pm 0.306$ , age) participated in this study. Subjects were randomly divided into two groups (Group A=15, Group B=15). All subjects were tested for postural instability. Pre and post test of training program were evaluated by BESS and CAIT. Then the training program was given to both the groups for the duration of six weeks. (Three sessions per week)

**Result:** The effects of pre-test training on post-test training was significant in ankle postural stability. BESS and CAIT score of both the groups improved at the end of six weeks. Integrated plyometric training program group had significant reduction of error in BESS and increased score in CAIT than that of proprioceptive training program group, indicating better stability.

**Conclusion:** It can be concluded that integrated plyometric training can be suggested as a good program for achieving the highest effectiveness in postural stability for CAI in collegiate athletes.

**Key words:** Lateral Ankle Sprain, Chronic Ankle Instability, Integrated Plyometric Training, Proprioceptive training, Balance Error Scoring System, Cumberland Ankle Instability Tool.



## ABSTRACT –16

### INFLUENCE OF PRIMAL REFLEX RELEASE TECHNIQUE IN SUBJECTS WITH PLANTAR FASCITIS

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**Background:** Plantar fasciitis (PF), is a common condition affecting physically active individuals, is typically treated with orthotics, two to four months of stretching programs, and surgery. Primal Reflex Release Technique (PRRT) is thought to reduce over – arousal of the nervous system through down- regulation of the primal reflexes. Studies are limited to find which technique has shown effective over the other due to lack of control group. The purpose of this study to find out the influence PRRT to reduce severity of pain and the level of disability in subjects with PF.

**Method:** In this study, total 30 subjects, 15 subjects in each group; data was collected who completed the study. Control group received the conventional therapies (ultrasound therapy and stretching) while study group received PRRT and conventional therapies (ultrasound and stretching) for 3days per week for 12weeks. Outcome measurements such as Numeric Pain Rating Scale (NPRS) and the Foot and Ankle Disability Index (NPRS) were used.

**Results:** There is statistically significant difference ( $p<0.001$ ) showing improvement in means of NPRS and FADI before and after intervention within the groups and there is statistically significant difference when the post intervention means 12 weeks of treatment were compared between the study and control group.

**Conclusion:** Hence it was concluded that PRRT is an effective therapeutic option for the treatment of plantar fasciitis.

**Key words:** PRRT, primal reflex, regional interdependence, plantar fasciitis.



## ABSTRACT – 17

### EFFECTIVENESS OF SUSTAINED NATURAL APOPHYSEAL GLIDE (SNAG'S) IN THE MANAGEMENT OF CERVICOGENIC HEADACHE

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*Kamalam Viswanathan College of Physiotherapy, Trichy*

**Background:** Cervicogenic headache is a common condition affecting the younger age groups particularly IT & bench workers.

**Objective:** To highlight the effectiveness of SNAGs in the management of Cervicogenic headache.

**Methodology:** 30 subjects were selected with occipital headaches and 20 were selected through special testing procedures in GVN Multi Specialty hospital, Trichy. Pain was measured pre & post therapy to measure the prognosis. All the patients were treated for 3 weeks, two sessions per week. The pre & post pain scores were noted and carefully analyzed.

**Results:** After the 3 weeks, significant reduction in pain highlights the effectiveness of therapy.

**Conclusion:** SNAGs has been found to be an effective technique in management of Cervicogenic headache.

**Keywords:** Cervicogenic headache, SNAGs, IT & bench workers.



## ABSTRACT –18

### EFFICACY OF MANUAL PHYSICAL THERAPY TO TREAT FEMALE INFERTILITY”

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**Background:** Female infertility has been a major cause of stress among younger women, having a wide variety of diagnosis mainly caused due to adhesions.

**Objective:** To emphasis the importance of manual physical therapy in treating underlying adhesive disease leading to infertility.

**Methodology:** 50 females were selected with various causes of infertility from OG department in GVN hospital.18 matched the inclusion criteria with adhesion as the major compliant. Out of 18, 10 were selected between the age group of 26 to 30.

**Intervention:** All the patients underwent manual physical therapy which focused on restoring mobility motility to structure affecting reproductive function. The patient underwent treatment sessions for a total period of 20 hours that is 4 hours/day for 5 days.

**Outcome measures:** Improvements demonstrated were measure by improvements in tubal patency or by pregnancy.

**Results:** Result included with 50% rate of pregnancy & 50% with clearance in adhesions affecting pregnancy.

**Conclusion:** Manual physical therapy is considered more effective adjunct in the conservative treatment for female diagnosed with infertility due to adhesions.

**Keywords:** Manual physical therapy, Female infertility.



## ABSTRACT – 19

### EFFECTS ON GRASTON TECHNIQUE ALONG WITH PNF (HOLD AND RELAX) IN IMPROVING HAMSTRING FLEXIBILITY FOR LOW BACK PAIN

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**Background:** Low back pain is a common cause of disability and work loss in western society. Studies have indicated that approximately 80% of the adult population will experience LBP at some time. Hamstring tightness may be result in decrease in ROM of the knee joint, it increases posterior pelvic tilting and reduces lumbar lordosis contributing to a flat back that can result in low back pain. This project study is an experimental study to assess the effect of Graston technique along with PNF (hold and relax) in improving hamstring flexibility for low back pain with the help of following outcome measures, NPRS (Numerical pain rating scale) and SRT (Sit and reach test).

**Objectives:** To find out the effect on Graston technique along with PNF (Hold –Relax) to improving hamstring flexibility to Low back pain.

**Methodology:** An experimental study design. Procedure: 30 subjects, 15 subjects in group A received Graston technique along with PNF (hold and relax) and shortwave diathermy and 15 subjects in group B received the PNF (hold and relax) and the shortwave diathermy.

**Results:** Statistical analysis done with using both paired and unpaired “t” test which showed more significant improvement in group A.

**Conclusion:** The Graston technique along with PNF (hold and relax) technique showed decrease in pain and improves the hamstring flexibility than PNF (hold and relax) technique alone in the subjects with low back pain.

**Keywords:** Graston technique; PNF (hold and relax) technique; hamstring flexibility.



## ABSTRACT – 20

### TO FIND OUT THE EFFECT OF MUSCLE ACTIVATION TECHNIQUE USING EMG AS A TOOL IN SHOULDER IMPINGEMENT SYNDROME

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**Background:** Shoulder pain is the third most common musculoskeletal condition. In India it has been estimated that the incident rate of shoulder pain is approximately 14.7 per 1000 patients with a lifetime prevalence of up to 70%. The term “shoulder impingement” was introduced by Neer. According to him impingement syndrome is compression of the rotator cuff muscle and subacromial bursa against the anterior surface of acromion and coracoacromial ligament, especially during elevation of arm. This present study is to find out the effect of muscle activation technique using EMG for the patients those who are all having shoulder impingement syndrome.

**Objectives:** The aim of the present study is to find out the effect of muscle activation technique using EMG for the patients in shoulder impingement syndrome.

**Methodology:** An experimental study design. The total no of participants in the study is about 14 in which 7 subjects in group-A received Muscle Activation Technique and 7 subjects in group-B received conventional treatment.

**Results:** Statistical analysis done with using both paired and unpaired “t” test. In which experimental group showed more significant than the control group with the p value of ( $p < 0.005$ ).

**Conclusion:** The study concludes that Muscle Activation Technique (MAT) improves the Supraspinatus muscle activity on shoulder impingement syndrome

**Keywords:** Muscle Activation Technique, Electromyography, Maximal Voluntary Contraction, Shoulder Impingement Syndrome.



## ABSTRACT – 21

### EFFICACY OF SCAPULAR DYSKINESIS EXERCISES IN IMPROVING THE FUNCTIONAL ACTIVITIES FOR THE PATIENTS WITH PERIARTHRITIS SHOULDER

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**Background:** Periarthritis shoulder is a common painful condition of the shoulder joint which gradually limits the range of motion and functional ability of the individual affected with this condition. Various physiotherapy approaches are available to treat the patients with periarthritis shoulder. This study was an attempt to prove the efficacy of scapular dyskinesis exercise in improving the functional activities for the patients with periarthritis shoulder.

**Objective:** The objective of this study was to find out the efficacy of scapular dyskinesis exercise in improving the functional activities for the patients with periarthritis shoulder.

**Methodology:** 30 subjects with Periarthritis shoulder were divided into 2 groups (experimental group & control group) which consists of 15 subjects each. Experimental group received scapular dyskinesis exercises, standardized shoulder exercises and ultrasound therapy. Control group received standardized shoulder exercises and ultrasound therapy.

**Result:** All the value were tabulated & statistically analyzed by using the paired and unpaired 't' test. There was a significant difference between the experimental group and control group in the SPADI outcome 62.33 & 43 respectively and for LSST (Hands on hip & maximum abduction and internal rotation (1.1866 & 0.5266) and (1.2066 & 1.4133) respectively.

**Conclusion:** This study proves that scapular dyskinesis exercises, standardized shoulder exercises with ultrasound therapy was found to be effective in improving the functional activities and altering the scapular abnormalities in patients with periarthritis shoulder.

**Keywords:** Periarthritis shoulder, Scapular dyskinesis, SPADI, LSST, standardized shoulder exercise.





## ABSTRACT – 22

### A COMPARATIVE STUDY BETWEEN THE EFFECT OF POST ISOMETRIC RELAXATION (PIR) TECHNIQUE VERSUS EMMETT TECHNIQUE IN THE TREATMENT OF ILIOTIBIAL BAND TIGHTNESS FOR ATHELETES

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**Background:** Iliotibial band tightness is clinically present in many musculoskeletal patients due to repeated friction and overuse injury of IT band in many athletes with the incidence of 12%. The Post Isometric Relaxation technique and Emmett technique are effective treatment techniques in improving the flexibility of tight fascia. As there are no studies up to our knowledge reports to compare the effectiveness of both techniques in the treatment of iliotibial band tightness for athletes. Therefore the purpose of this study is to compare the effectiveness of Post Isometric Relaxation versus Emmett technique in improving the flexibility and functional range of IT band tightness for athletes.

**Methodology:** A comparative study design, athletes with chronic iliotibial band tightness were selected under selection criteria were randomized into group A and group B. Total 50 subjects, 25 subjects in each group; data were collected using the outcome measurements such as AROM and LEFS functional scale. Group A received the Post Isometric Relaxation technique of treatment while the group B received the Emmett technique for 18 sessions. (6 weeks; 3 sessions per week alternatively)

**Result:** The statistical analysis of pre and post values were done. There was a significant difference of (pre <0.01) was noted between the pre and post test values of AROM and LEFS among athletes with chronic IT band tightness included in our study.

**Conclusion:** It is concluded that Post Isometric Relaxation technique found to be significantly effective than Emmett technique in improving the functional range and flexibility of IT band tightness among athletes.

**Key words:** Athletes, chronic iliotibial band tightness, Post Isometric Relaxation, Emmett, Active range of motion, lower extremity functional scale.



## ABSTRACT – 23

### SPECIALIZED TRUNK TRAINING PROGRAM TO IMPROVE FUNCTIONAL ABILITIES A PATIENT WITH GBS – (CASE STUDY)

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**Background:** Acute inflammatory demyelinating polyradiculopathy or Guillain Barre Syndrome (GBS) is an autoimmune disease characterized by a sudden onset and progressive involvement of the nerve root and peripheral nerve of the extremities. GBS is the most common cause of acute and sub – acute flaccid paralysis in infants and children. GBS occurs all year round and can occur at any age but it is rare in children under the age of 2 year.

**Methodology:** A case study was carried out on one GBS patient from SVMCH & RC. The subject were diagnosed GBS. The duration of the study is up to 3 months. The outcome measured by hughes scoring system.

**Conclusion:** The study concluded that the combined effect of physiotherapy training program and specialized trunk training program was effective in improving functional abilities in GBS patient. There was improvement is functional abilities with specialized trunk training in GBS patient.

**Keywords:** Guillian Barre Syndrome, specialized trunk training program.



## ABSTRACT – 24

### EFFECTIVENESS OF COMBINED INTERVENTION WITH PATENTED TECHNIQUE ON IMPROVING THE SHOULDER RANGE OF MOTION ON SUBJECTS WITH FROZEN SHOULDERS

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**Background:** Frozen shoulder was characterized by non- traumatic, unilateral, restriction of both active and passive ROM.

**Objective:** The aim of this study was to understand the biomechanics in shoulder complex and applied anatomy towards designing the technique of the treatment for frozen shoulder.

**Methodology:** We have taken 10 subjects with frozen shoulder and after consent was obtained underwent the hot packs and gleno-humeral joint mobilization, scapulothoracic mobility along with patented technique for 10 sessions. We used Goniometer to measure the Shoulder ROM.

**Result:** The Shoulder ROM increased significantly after intervention ( $p < 0.05$ ).

**Conclusion:** This study concludes that the combination of the gleno-humeral mobilization and patented technique for scapula-thoracic movements shows better improvement in Shoulder ROM on subjects with frozen shoulder.

**Keywords:** Adhesive Capsulitis, Exercise intervention, Range of motion.



**ABSTRACT – 25**

**EFFICACY OF PILATES EXERCISE AND AEROBIC EXERCISE ON  
REDUCING PHYSIOLOGICAL AND MENTAL STRESS AMONG  
WORKING POPULATION**

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**Aim:** The aim of the present study was to find out the effect of Pilates exercise and aerobic exercise among the working population who is undergoing physiological stress and the mental stress.

**Materials and method:** Twenty healthy female subjects and ten male subjects were participated in the study, aged between 24-50 years. The outcome measure was taken from the perceived stress scale.

**Results:** The Pilates and aerobic exercises, shows the significant result on reducing the stress. On the regular practice of exercise subjects can improve the positive emotion, self-efficacy, mind and body, self-esteem, problem focused coping and positive expectancy.

**Conclusion:** Pilates and aerobic exercise plays a vital role in reducing stress among the working people. Exercise program is associated with the significant reduction in depressive symptoms and anxiety.

**Keywords:** Pilates exercise, aerobic exercise, positive emotion, depression, anxiety.



## ABSTRACT – 26

### Correlation of Cervical stabilizers and hand intrinsic muscles in enhancing upper limb functional activities in elderly women

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**BACKGROUND:** Upper limb plays one of the major roles in enhancing the functional activities of daily living. Women's with advanced age have multitude of problems associated with them due to increase in degenerative processes. Cervical stabilizers play one of the major roles in enhancing intrinsic muscle strength. So this study was aimed to know the correlation between cervical stabilizers and hand intrinsic in enhancing upper limb functional activities in elderly women.

**Methodology:** Quasi experimental study was done for 50 community dwelling elderly women from "Sahaya" old age home with mean age of 73±4 years were selected based on inclusion criteria. Proximal stabilization exercises for cervical deep flexors and extensors, therapy ball and putty clay for the hand intrinsic along with the neural mobilizations for ulnar nerve and followed up for 3 weeks. The pre- test and post- test values were assessed using hand held dynamometer, manual muscle testing and upper extremity functional index.

**Result:** There was significant difference in hand held dynamometer, manual muscle testing and upper extremity functional index  $p < 0.05$  in improving the cervical stabilizers intrinsic muscles and upper limb functional activities.

**Conclusion:** Hence, the study concludes that there is a co-relation between cervical stabilizers and hand intrinsic muscles in enhancing upper limb function.

**Key words:** Isometric exercises, Neural Mobilization, Therapy ball exercises, upper extremity functional index.



## ABSTRACT – 27

### A STUDY ON OUTCOME OF YOGA VERSUS AEROBIC EXERCISES IN OVER WEIGHT YOUNG WOMEN

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**Background:** The world health organization describes “escalating global epidemic” of obesity as “one of the today most bluntly visible yet most neglected health problem”. Overweight is associated with severe health problems and early death due to diabetes, hypertension, cardiovascular diseases and other non-communicable diseases. Hence managing weight is one factor in preventing such chronic diseases. Regular physical activity can improve quality of life. Hence in this study we can discuss the effectiveness of yoga versus aerobic exercise on overweight young women.

**Objectives:** Study the effectiveness of yoga versus aerobic exercise in reducing weight of overweight young women and its effects on pulmonary function.

**Methodology:** As per selection criteria 40 students were selected and divided into two groups randomly with 20 in each group. Group A started with yoga practice and group B started with aerobic exercise which helps in reducing weight. The material that used were weighing machine, inch tape, spirometer to measure BMI, waist-hip ratio, pulmonary functions respectively.

**Result:** Statistical analysis was done for comparison of both groups. After applying “t” test pre yoga practice and aerobics also post yoga and aerobics practice data Show highly significance difference between mean and standard deviation values of all parameters in group B (aerobics group).

**Conclusion:** Our study concludes that regular practice of yoga and aerobic exercise is really helpful in weight reduction & improves the pulmonary functions.

**Keywords:** Overweight, yoga, aerobics.



## ABSTRACT – 28

### A STUDY TO COMPARE THE EFFECT OF DUAL TASKING EXERCISE VERSUS MULTIMODAL EXERCISE IN PATIENTS WITH DEMENTIA

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**Background:** Dementia is one of the most frequently occurring diseases in the elderly, and the World Health Organization has declared dementia a public health priority. Dementia is the chronic progressive disease in which there is Deterioration in cognitive function [I.e., ability to thought process] beyond what might be expected from normal. It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language and judgment. Dementia is a syndrome which comprises several different types of usually chronic and impairments such as progressive diseases of the brain (ex: Alzheimer disease or Vascular Dementia).In this study, the Dementia patients with cognitive impairment are selected with most reliable Questionnaire – MMSE and compare the effect of Dual Task Exercise & Multimodal Exercise in patients with Dementia.

**Objectives:** To compare the effectiveness of Dual Tasking Exercise program Versus Multimodal Exercise program for the patient with Dementia.

**Study design:** A comparative study design. Out of 30 subjects, 15 subjects in group A received Dual tasking exercises with pre and post test. And 15 subjects in group B received Multimodal Exercise with pre and posttest.

**Results:** Statistical analysis done with using both paired and unpaired “t” test which showed more significant improvement in group A.

**Conclusion:** This study concludes that the Dual Tasking exercise (GROUP A) have significant effect in improving cognition than Multimodal exercise (GROUP B) for patients with Dementia.

**Keywords:** Dual Tasking Exercise, Multimodal Exercise, MMSE, Cognitive impairment.



## ABSTRACT – 29

### EFFECTIVENESS OF BOSU BALL TRAINING TO IMPROVE PHYSICAL PERFORMANCE IN DIABETIC PERIPHERAL NEUROPATHY

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**Background:** Diabetic Peripheral Neuropathy (DPN) is a debilitating microvascular complication among the patients with Diabetes Mellitus. It is estimated that every fifth individual diagnosed with DM is likely to have DPN. About 60% to 70% of diabetes has mild to severe forms of nervous system damage. In addition the disease may cause a variety of impairment and complications some of which are muscle weakness, loss of ankle reflexes, decreased balance, coordination and gait control. This study is to find out the effect of BOSU BALL training to improve Physical Performance in Diabetic Peripheral Neuropathy.

**Methodology:** An experimental study was carried out on 30 DPN subjects with the age of 50 to 65 years from SVMCH & RC. Total 30 subjects, 15 subjects in each group were taken. The recruited subjects were diagnosed for Diabetic Peripheral Neuropathy. Control group received the conventional therapy while the experimental group received BOSU BALL training along with conventional therapy. The duration of the intervention is up to 4 weeks. The outcome was measured by Physical Performance Test.

**Result:** Statistical analysis was done using paired 't' test and the result were assessed by pre and post test value of Physical Performance Test. After analysis experimental group showed significance with  $p < 0.01$ . This shows that the experimental group is significant than the control group.

**Conclusion:** This study concludes that BOSU BALL training is effective to improve Physical Performance in Diabetic Peripheral Neuropathy.

**Keywords:** Diabetic Peripheral Neuropathy, Physical Performance, BOSU BALL training, Physical Performance Test.





## ABSTRACT – 30

### MANUAL PELVIC PHYSICAL THERAPY FOR PATIENTS WITH ENDOMETRIOSIS ADHESIONS – CASE SERIES

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**Background:** Endometriosis is a chronic often exceedingly painful disease diagnosed in menstruating women which presents with endometriotic adhesions and endometriomas in its chronic stage. These endometriosis adhesions are mainly formed due to retrograde menstruation. Increase in endometriosis adhesion and cyst size increases chronic pelvic pain and dysmenorrhea. There are some theories proving that site specific manual therapy reduces adhesion and increases mobility.

**Objective:** This study was intended to examine the rates of successful treatment of endometriosis women using a protocol of manual pelvic physical therapy to address endometriosis adhesions and endometriomas that may lead to infertility.

**Methodology:** It was a 2 weeks protocol with 5 sessions of treatment per week. Each session lasts for 2 hours. Patients from Sri Venkateshwara College of Physiotherapy, underwent protocol of manual physical therapy, which is focused on restoring mobility and motility to structures affecting reproductive function. Ultrasonography and NPRS were used as outcome measure to detect adhesions/cyst and chronic pelvic pain.

**Result:** The result showed mean difference of 0.368cm thickness of endometriosis adhesion/ cyst in USG and NPRS shows mean difference of 0.64 which proves manual pelvic physical therapy was beneficial in reducing endometriosis adhesions and chronic pain.

**Conclusion:** The present study suggested that many cases of endometriosis adhesion and endometriomas are treatable by a distinctive site specific protocol of manual soft tissue therapy.

**Key words:** Endometriosis, manual pelvic physical therapy, ultrasonography, adhesions, endometriomas, chronic pelvic pain.



## ABSTRACT – 31

### A STUDY TO COMPARE THE IMPACT OF SCAPULAR STABILIZATION EXERCISES VERSUS SCAPULAR PNF TECHNIQUE IN PATIENT WITH ADHESIVE CAPSULITIS

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**Background:** Adhesive capsulitis is a painful condition characterized by gradual loss of both active and passive glenohumeral range of motion at least two direction most notably shoulder abduction and external rotation. The causes of adhesive capsulitis were unknown. Hot pack, Laser therapy, Ultrasound therapy, Transcutaneous electrical nerve stimulation (TENS) and Wax therapy were commonly used physiotherapy approaches to treat adhesive capsulitis, however the treatment involving Scapular Stabilization exercises and Scapular PNF techniques were also used for the management of adhesive capsulitis.

**Objectives:** To compare the impact of scapular stabilization exercises versus scapular PNF technique in patients with adhesive capsulitis.

**Methodology:** A comparative study design. Procedure: 30 subjects, 15 subjects in group A received scapular stabilization exercises along with wax bath therapy with pre and posttest. 15 subjects in group B received scapular PNF technique along with wax bath therapy with pre and posttest. Numerical pain rating scale (NPRS), Lateral scapular slide test (LSST) and Goniometer has been used as outcome measures.

**Results:** Statistical analysis done with using both paired and unpaired “t” test which showed more significant improvement in group A.

**Conclusion:** Scapular stabilization exercises in addition with wax therapy were found to be effective in decreasing pain and increasing the ROM and functional ability of scapula by restoring scapula humeral rhythm in adhesive capsulitis.

**Keywords:** Scapular stabilization exercises; Scapular PNF techniques; Scapular dyskinesis; Range Of Motion, LSST.



ABSTRACT – 32

**PREVALENCE OF DISABILITY IN NON SPECIFIC LOW BACK PAIN AMONG FARMERS OF PUDUCHERRY**

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**Background:** Non-specific low back pain is defined as mechanical back pain which is not attributable to any recognizable, known specific pathology and is common musculoskeletal disorder in farmers. Low back pain was considered as the world wide cause of disability. Even though the association between Non specific Low back pain and disability is established. This relationship has not yet been observed in the agricultural workers population of Pondicherry. This study aims to find the prevalence of disability in Non specific low back pain among agricultural workers in Pondicherry using Tamil version of Oswestry disability questionnaire.

**Methodology:** Participants are selected based on selection criteria. The need and purpose of the study was verbally explained prior to the participation. After the participants agreed to participate in the study, the ODI Questionnaire sheet was administered to all of them individually. Once filled, the questionnaire was collected and Scoring was done on the same sheets.

**Result:** Statistical analysis has done using spearman correlation formula. Analysis of data showed that 26% of farmers had minimal disability, 36.6% had moderate disability, 19.3% had severe disability, 12.6% farmers were crippled and 3.3% were bed bound. Spearman's correlation analysis shows positive correlation between age and disability due to low back pain with  $r=0.63$ .

**Conclusion:** The study concludes that presence of disability related to low back pain was seen in farmer's population of Pondicherry.

**Keywords:** Non specific low back pain, Oswestry disability questionnaires in Tamil, Disability.



## ABSTRACT – 33

### THE EFFECT OF STATIC STRETCH DURATION ON THE FLEXIBILITY OF HAMSTRING MUSCLES

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**Background:** Static stretching is one of the safest and commonly performed stretching methods used to increase muscle length. But the frequency and duration of static stretching have not been extensively examined and the duration of flexibility gains after a single stretching session and maintaining a stretching muscle of different architecture. So this study was designed to determine optimal duration of static stretching to increase and sustainability of hamstring muscle flexibility, as measured by knee extension.

**Objective:** To find out the most effective duration of static stretching protocol on hamstring muscle flexibility.

**Methodology:** Sixty female students were recruited and evaluated for hamstring flexibility using Active Knee Extension Test. They were randomly assigned in to four groups; hamstring muscle was stretched for 15, 30, 60 and 90 seconds respectively to each group. The stretch was given at a frequency of 3 repetitions for all the groups and the post session measurement was carried out immediately and lasting effects measured at 15 to 30 minutes.

**Results:** Significant improvement of hamstring flexibility attained in all the groups with the f value of 203.180 and p value is 0.000 which is  $<0.05$ . While comparing between the groups with regard to immediate and lasting effect, the result revealed that none of the stretch duration doesn't make a significant difference with f value of 0.896 and p value is 0.471, which is  $>0.05$ , thus a stretch of 15 seconds is recommended.

**Conclusion:** There were no significant differences between the stretching protocols on improving hamstring flexibility. A short stretch of 15 seconds shows optimal benefits of stretching, were as with increase in time the muscle returned slowly to its original length.



## ABSTRACT – 34

### EFFECTIVENESS OF MYOFASCIAL RELEASE TECHNIQUE ON MANAGEMENT OF PLANTAR FASCIITIS

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**Background:** Plantar fasciitis is one of the most common musculoskeletal pathologies of the foot. Although the etiology of it is not clearly understood, obesity, occupation related activity, anatomical variation, poor bio mechanics, over exertion and inadequate foot wear are the contributing features. The incidence of plantar fasciitis peaks in people between the ages of 40 – 60 years with no bias towards either sex.

**Objective:** To find out the effectiveness of myofascial release technique on management of plantar fasciitis

**Methodology:** 30 subjects with unilateral plantar fasciitis were randomly assigned into 2 groups. Group A – experimental group [N = 15]. Group B – control group [N = 15]. Group A receives myofascial release technique along with ultrasound and home programme. Group B receives ultrasound and home programme. Pre & post assessment for pain and functional status were assessed using NPRS and FFI respectively. The obtained values were tabulated and analyzed statistically.

**Result:** From the data analysis, the mean difference of NPRS is 3.93 in group A and 1.87 in group B. Here tabulated 'p' value is 0.001, which is statistically significant. Likewise, the mean score of FFI in group A and group B are 36.35 and 17.93 respectively. Here tabulated 'p' value is 0.001, which is statistically significant. When comparing the group A and group B, there was significant change in pain relief as per the NPRS score ( $t = 6.254$ ), ( $p = 0.00$ ) and functional ability as per foot function index ( $t = 9.488$ ), ( $p = 0.001$ ).

**Conclusion:** The study concluded that myofascial release technique is effective in reduction of pain and improvement of foot function in the management of plantar fasciitis.

**Keywords:** Plantar fasciitis, myofascial release technique.



## ABSTRACT – 35

### NORMATIVE DATA FOR HOPPING AMONG OBESE COLLEGE INDIVIDUALS - AN OBSERVATIONAL STUDY

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**Background:** Obesity is one of the major evolving problem in life among young individuals which leads to further primary and secondary problems reduced physical activities is one of the major cause for reduced calorie burn and fat deposition and reduced low cardiovascular endurance, hence this study aim's to know the normative data for hopping among obese college individual's.

**Methodology:** An observational study was conducted for 50 obese college students in school of physiotherapy, in VISTAS. Based on inclusion criteria the participants were asked to do 6minute hop test and their pre and post-test values was taken to assess their immediate effects on cardiovascular changes (resting heart rate, blood pressure, and resting respiratory rate) and number of hops done by using left leg and right leg was noted.

**Result:** Among 50 obese college individual's, the mean was  $49 \pm 3$  for 6 minute hop-test, there was significant difference in heart rate, respiratory rate and blood pressure  $p < 0.05$ . There was no significance difference between right and left leg hopping.

**Conclusion:** This study concludes that in six min hop test the mean hopping for obese individuals were  $49 \pm 3$  and also has an impact on cardiovascular changes, hence it can be used to maintain and promote cardiovascular endurance among obese individuals.

**Keywords:** Obesity, Cardiovascular endurance, hopping, Body Mass Index.



## ABSTRACT – 36

### “POOL BIRTH IS A COOL BIRTH”

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**Objectives:** To compare the effectiveness of hydrotherapy on warm tub bath versus warm shower bath to relieve pain during labor and its progression.

**Methodology:** As per inclusion criteria 24 mothers were selected according to the availability of hydrotherapy pool and warm shower. Group A (intervention group) consists of 9 members who were given hydrotherapy on immersion of warm tub and group B (control group) consists of 15 members who were given warm shower bath which helps in relieving pain during labor. Numeric rating scale (NRS) is used to measure the pain intensity. The materials used were warm water tub and warm shower.

**Result:** Statistical analysis was done for comparison of both groups. After applying “t” test the data show highly significant difference between mean and standard deviation value of all parameters in group A.

**Conclusion:** Hydrotherapy helps women in coping and progression of labor helping and avoids unnecessary interventions.

**Key words:** Hydrotherapy pool, pain, delivery, labor.



## ABSTRACT – 37

### A STUDY TO FIND OUT THE EFFICACY OF OPTOKINETIC STIMULATION THERAPY ALONG WITH GANS MANEUVER IN PATIENTS WITH VERTEBRO BASILAR INSUFFICIENCY

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**BACKGROUND:** Vertebrobasilar insufficiency is induced by head rotation that impairs the flow through the basilar or vertebral arteries, leading to ischemia of the posterior aspect of brain, affecting adult of any age. It is usually confirmed using vertebral artery test.

**OBJECTIVE:** To find out the effectiveness of Optokinetic Stimulation Therapy along with Gans Maneuver in patients with VBI.

**METHODOLOGY:** 30 patients with diagnosed VBI from Department of Physiotherapy, SVMCH&RC were taken for the study and divided into two groups. 15 subjects of Experimental group received Optokinetic Stimulation Therapy along with Gans Maneuver and 15 subjects of Control Group received Optokinetic Stimulation Therapy alone. Dizziness Handicap Inventory [DHI] and Motion Sensitivity Quotient scoring [MST] were used as outcome measures.

**RESULTS:** The result shows that Experimental Group is very much significance than Control Group in reducing the severity of dizziness.

**CONCLUSION:** The study concluded that Optokinetic Stimulation Therapy along with Gans Maneuver was most effective in reducing the severity of dizziness and nystagmus in patients with VBI.

**KEYWORDS:** Vertebro Basilar Insufficiency, Vertebral Artery Test, Optokinetic Stimulation Therapy, Gans Manuever, Dizziness Handicap Inventory, Motion Sensitivity Quotients.





## ABSTRACT – 38

### THE EFFECT OF BOWEN TECHNIQUE IN DENTIST WITH CHRONIC TRAPEZITIS- AN EXPERIMENTAL STUDY

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**Background:** Bowen technique is a simple and cost effective treatment technique in treating various musculoskeletal conditions. As there are no studies up to our knowledge reports the effect of Bowen technique combined with conventional therapies on chronic trapezitis among Dentist. Therefore the purpose of this study is to find out the effectiveness of Bowen Technique in improving the functional abilities and cervical spine lateral flexion in Dentist with chronic trapezitis.

**Method:** An experimental study design, Dentist with chronic trapezitis were selected under selection criteria and randomised into study and control group. Total 30 subjects, 15 subjects in each group; data were collected using the outcome measurements such as CROM and NDI. Control group received the conventional therapy while study group received Bowen Technique and conventional therapy for 10 sessions (3-4 weeks, alternate days per week).

**Results:** The statistical analyses of pre and post values were done. There was a significant difference of ( $p < 0.01$ ) was noted between the pre and post test values of NDI and cervical joint range of motion among Dentist with chronic trapezitis included in our study.

**Conclusion:** It is concluded that Bowen Technique with conventional therapy found to be significantly effective than the conventional therapy in improving the cervical spine lateral flexion and functional abilities in Dentists with chronic trapezitis.

**Key words:** Dentist, Chronic trapezitis, neck pain, Bowen technique, cervical spine lateral flexion, neck disability index.



## ABSTRACT – 39

### A STUDY TO COMPARE THE SLACKLINE TRAINING VERSUS PERTUBATION TRAINIING TO IMPROVE BALANCE TRAINING IN ACL RECONSTRUCTED PATIENTS

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**Background:** ACL injuries are the most common major knee injuries among the Athletes or Sports person. This injury leads to loss of balance control and increase in the postural sway. Various physiotherapy approaches are available to treat the patients with ACL injury. This study was an attempt to compare the Slack line training Vs Perturbation training to improve balance in ACL Reconstructed patients.

**Objective:** The objective of the study was to find out the effect of Slackline training Vs Perturbation training in improving balance for ACL reconstructed patients.

**Methodology:** 30 patients with ACL reconstructed were selected based on the inclusion and exclusion criteria. They were randomly allocated into two groups (Group A and Group B) consists of 15 subjects each. Group A received Slack line training and Group B received Perturbation training.

**Results:** The statistical analysis of pre and post values was done. There was a significance difference of (0.01) were noted by using the paired and unpaired 't' test. There were significant difference between the Group A and Group B of Anterior, Posterior, Right Lateral and Left Lateral Sway.

**Conclusion:** This study concluded that Slack line training is more effective than Perturbation training which improved the balance and postural stability.

**Keywords:** ACL Reconstruction, Slack line training, Perturbation training, Lord's Sway meter, Balance.



## ABSTRACT – 40

### THE EFFECT OF FEMORAL ARTERY MASSAGE TECHNIQUE ON POLYCYSTIC OVARIAN SYNDROME IN OBESE COLLEGE STUDENTS

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**Background:** Polycystic Ovarian Syndrome is the most common endocrine disorder of reproductive aged women, with an estimated prevalence of 11.2%. PCOS is the condition in which women has an imbalance of female sex hormones. It is associated with reproductive, metabolic and psychological dysfunction including anovulatory infertility, increased risk of the metabolic syndrome, impaired glucose tolerance, type 2 diabetes, cardiovascular diseases, anxiety and depression. PCOS is closely associated with obesity, which is seen more common. In fact, approximately 50% of PCOS women are overweight or obese. This study is to find out the effect of Femoral Artery Massage technique on Polycystic Ovarian Syndrome in Obese College students.

**Methodology:** A pilot study was carried out on 14 obese subjects with the age of 17 to 22 years, from SVMCH & RC. The recruited subjects were diagnosed for Polycystic Ovarian Syndrome. They were taken as single PCOS group and underwent Femoral Artery Massage technique. The duration of the intervention is up to 2 complete cycles of menstruation (32 sessions). The outcome was measured by ovarian volume in ultrasonography.

**Result:** Statistical analysis was done using paired 't' test and the result were assessed by pre and post test value ovarian volume .After analysis PCOS group showed significance with  $p < 0.0001$ .

**Conclusion:** This study concludes that Femoral Artery Massage is effective on Polycystic Ovarian Syndrome in Obese College students.

**Key words:** Polycystic Ovarian Syndrome, obese College students, ultrasonography and femoral artery massage technique.



## ABSTRACT – 41

### PREVALENCE OF UPPER CROSS SYNDROME AMONG THE PHYSIOTHERAPY STUDENTS OF VENKATESHWARA COLLEGE OF PHYSIOTHERAPY

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**Background:** Upper cross syndrome is becoming more prevalent in today's population especially for the people who prone to work continuously in the neck flexed posture and the syndrome is expressed as a postural disorder presenting with over active pectoralis musculature and upper trapezius musculature.

**Objectives:** The purpose of the study is to determine the prevalence of upper cross syndrome among the physiotherapy students.

**Methodology:** A convenience sample of 150 physiotherapy students was selected from Sri Venkateshwaraa college of physiotherapy, Pondicherry, based on inclusion and exclusion criteria. The research was a cross sectional observational study and self-administered questionnaires were circulated among participants and the data was analyzed using SPSS version 21. Reed-co-scale was used to analyze the proper alignment of head, neck and shoulder:

**Results:** The study have revealed that 29% population of the students have neck pain and 14% was found to have poor posture and the results have concluded that prevalence of upper cross syndrome among physiotherapy students of Sri Venkateshwaraa College of physiotherapy is low when compared to other profession.

**Conclusion:** In this study relation between upper cross syndrome and bad posture were seen and it was found that the individuals suffering with upper cross syndrome were somehow related to bad posture or indulge in activities which make individual to adopt a posture of high physiologic cost there by leading to muscular imbalance.

**Keywords:** Mid-pectoral Fascial lesion, Upper cross syndrome, Torsional upper cross syndrome, over inhibition, over facilitation, thoracic kyphosis.



## ABSTRACT – 42

### EVIDENCE BASED PHYSIOTHERAPY – A SYSTEMATIC REVIEW ANALYSIS

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**Background:** Evidence based physiotherapy is an emerging and increasing theme in rehabilitation and physiotherapy the world confederation for physical therapy has defined evidence based physiotherapy as a commitment to use the best available evidence to inform decision making about the care of individuals that involves integrating physiotherapist practitioners and individual professional judgment with evidence gained through systematic research. (British medical journal,1996)

**Objectives:** The aim and objective of this presentation is to highlight the importance of evidence based practice in physiotherapy profession.

**Methodology:** Articles from the authentic which is been published from 1996 to 2018 has been reviewed in this presentation physiotherapy. Articles on physiotherapy evidence Database (PEDro) has also been reviewed for accuracy.

**Result:** Many physiotherapist hold positive attitudes towards evidence base physiotherapy. However, this does not necessarily translate into consistent, high quality evidence based physiotherapy. Many barriers to evidence based physiotherapy implementation are apparent including lack of time and skills, and misperceptions of evidence based physiotherapy.

**Conclusion:** Thus we conclude that Clinical instruction are in a unique position to fulfil this role, and therefore, the clinical and the academic environment need to collaborate to ensure that Clinical practioners become competent in evidence based practice. Clinical instruction role modeling Evidence based practice could be the right step towards clinically integrated teaching of evidence based practice; in line with the existing evidence base.

**Keywords:** EBP, PEDro, autonomy.



ABSTRACT – 43

**OBESITY WITH HIGH INTENSITY EXERCISES - AND INNOVATIVE  
CASE CONTROL STUDY WITH EVIDENCE**

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**Background:** An alarming prevalence of obesity is globally recorded. Physiotherapy as a role and prevention of complications and treatment associated with obesity.

**Objectives:** of this case control study was to evaluate high intensity exercises on a obese subject.

**Methodology:** 48 year old female postmenopausal was treated with weekly twice high intensity exercises for 12 weeks.

**Result:** Pre and Post waist circumference and HR-QOL have shown statistically significant ( $p < .05$ ).

**Conclusion:** High intensity exercises can be included for diabetic, musculoskeletal subjects as indicated by this study outcome.

**Keywords:** Obesity, High Intensity, Exercises.



ABSTRACT – 44

PHYSICAL ACTIVITIES ON COGNITIVE DEVELOPMENT OF  
CHILDREN – SYSTEMATIC ANALYSIS

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**Background:** Physical inactivity with technological advancements leads to developmental issues & lifestyle related disorder. Specific physical activities and their role in enhancing cognitive growth and development are under focused. Aims & Objectives of this original presentation was to scientifically evaluate with evidence various forms o physical activities on cognition of children.

**Methodology:** 50 Authentic journals were surfed to obtain relevant details of various levels of physical activities from 2010 – 2018 the primary sources includes CINHAL, Google Scholar.

**Results:** Various physical activities such as Dancing, Swimming, Yoga, Aerobic, Resisted, Group Activities, Plays, High intensity, Games were analyzed and displayed with their impact on cognition of children.

**Conclusion:** Physiotherapist can take lead to promote cognitive skills among children as an alarming rise in Autism, Dyslexia, ADHA are reported.

**Keywords:** Physical activities, Cognitive growth, Cognition of children, Autism, Dyslexia.



## ABSTRACT – 45

### HAMSTRING INJURY RTP- GAMBLING AGAINST RECURRENCE SYSTEMATIC REVIEW

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**Background:** Sports injuries are getting common along with the role of physiotherapist in their rehabilitation getting prominent. Hamstring injuries are quite often reported. Aims and Objective of this systematic review was to analyze the incidence, role of physiotherapy, period of rehabilitation, level of progress, mechanism of injury, associated tissue damaged.

**Methodology:** 50 published journals from CINHAL, pub med, scholar, Elsevier, science direct during the period from 2010 to 2018 were searched by using the relevant terminologies.

**Results:** The collected details were discussed based on the strata.

**Conclusion:** Proper rehabilitation in sports injuries early and efficient return to sports as evidenced in this presentation, hence physios involved in sports injuries to be more familiar, confident and successful is ascertain our role.

**Keywords:** Hamstring, Sports injury, Rehabilitation, journals.