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Abstracts for Ph.D Scholars

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Effect of Plyometric Exercises on Metabolic Health, Motor Performance and Postural Control in Obese Children and Adolescents

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Abstract

Background: Childhood obesity is a growing global concern, linked to reduced physical fitness, poor postural control and metabolic abnormalities. Engaging in physical activity combined with dietary modifications has been proven effective in managing obesity. Among various exercise interventions, plyometric training has shown promise in improving these parameters. However, its full impact on childhood obesity and overall physical function remains underexplored.

Objective: This study aims to explore effects of plyometric exercise on metabolic health, motor performance and Postural Control in Obese Children and Adolescents

Methods: A literature review of randomized controlled trials (RCTs) and experimental studies published from 2014 was conducted to examine the effects of plyometric exercise on obese children and adolescents. Using keywords such as plyometric exercise, childhood obesity, postural control, foot posture, metabolic health, cardiovascular function, and motor performance, seven studies were selected based on the inclusion of overweight and obese participants aged 7–16 years. Interventions involved plyometric training alone or combined with other exercise modalities, with outcomes assessing postural control, metabolic health, cardiovascular function, motor performance, and inflammatory responses. Data extraction included sample size, intervention duration, exercise protocols, and key findings.

Results: Plyometric exercises offer significant health benefits for obese children and adolescents across multiple domains. It reduces BMI, enhances postural stability, functional mobility, and foot posture in children with flexible flatfeet. Additionally, plyometric training leads to greater reductions in plasma glucose, insulin resistance, and the leptin/adiponectin ratio, along with significant decreases in blood pressure, resting heart rate, and skinfold thickness. Improvements in muscle strength, flexibility, endurance, agility, and motor coordination have also been observed in overweight boys. These findings highlight the role of plyometric exercises in enhancing musculoskeletal, metabolic, cardiovascular, and motor health in obese children.

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Effects of Suspension Training on Handgrip Strength in Healthy Older Adults: A literature review

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Abstract

Background: Low muscle strength has been associated with an elevated risk of all-cause mortality in older adults, irrespective of total muscle. Handgrip strength measurements are an effective and reliable marker for general health and risk factors in the ageing process. Suspension training induce a variety of strength, balance, and endurance improvements due to its effects on core muscle activation, strength, and balance improvements in older adults. No research has yet assessed the collective effects of exercise training on handgrip strength.

Objective: The objective of this literature review is to examine the effects of Suspension Training on handgrip strength in older adults.

Methods: A systematic literature search was conducted using Google Scholar, PubMed, and SPORTDiscus. The keywords included "Hand Grip Strength," "Strength Training," "Suspension Training," "Aged," and "Elderly." Six randomized controlled trials (RCTs) published between 2017 and 2024 were selected based on the inclusion and exclusion criteria. The study included full-text research published in English, focused on healthy adults aged 60 and above, and the studies that analysed the effects of suspension training on handgrip strength as a primary or secondary outcome.

Result: The findings indicated that suspension training can contribute to improvements in handgrip strength by engaging stabilizing muscles and promoting development of functional strength. Suspension training also improved Balance, body composition, Gait speed and quality of life in older adults.

Conclusions: Suspension training appears to be a promising method for enhancing handgrip strength in healthy older adults, potentially improving functional independence. Incorporating suspension training into exercise programs can provide a safe and effective approach to maintaining muscle function and overall physical health in aging populations.

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Efficacy of pelvic floor exercises in Bharatanatyam dancers with Nonspecific low back pain

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ABSTRACT

Background: Back pain is the second most common ailment among Bharatanatyam dancers Dance performance requires sufficient core stabilization during dynamic dance movements. There is abundant literature supporting the effect of core stability exercises in back pain, but lack of evidence to support pelvic floor exercises in back pain.

Objective: To determine the efficacy of pelvic floor exercises in Bharatanatyam dancers with non specific low back pain.

Methods: 72 Bharatanatyam dancers were recruited in the age group 18-30 years with intervention consists of a supervised static and dynamic pelvic floor exercise performed for three days/week for 6 weeks. ODI and DFOS were measured initially with follow up post 6 weeks, 8 weeks, 3 months and 6 months. Unpaired t test was used to compare the time intervals between the experimental and control groups. Each group is compared within according to different time intervals by using Bonferonni t test. Karl Pearson's correlation is used to find correlation between the mean scores

Results: The outcomes (ODI,DFOS) demonstrated a significance reduction more in experimental than the control group till 8 weeks and by the time 6 months difference was found to be very highly significant($p<0.001$). Within experimental group, ODI and DFOS scores was reduced at each time interval with highly significant difference except 8 weeks to 3 months and 3months to 6 months where there was no significant difference. In control there was highly significant difference from pre to 8 weeks ,3 months, 6months and also with 6 weeks to 3 months, 6 months but then there was no difference between 8weeks and other time intervals The correlation is high($r=0.696$) in experimental group and control group($r=0.519$) and is very highly significant. ($p<0.001$)

Conclusion: Pelvic floor exercises are effective in Bharatanatyam dancers which is significant to reduce nonspecific low back pain.

Key Words: pelvic floor exercises, Bharatanatyam dancers, nonspecific low back pain

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Effectiveness of Tailored Pelvic Floor Strengthening on Stress Urinary Incontinence and Pelvic Floor Strength among Postmenopausal Women

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ABSTRACT

BACKGROUND: Menopausal transition begins with variability in menstrual cycle length accompanied by rising Follicle Stimulating Hormone levels and ends with the final menstrual period. The major consequences of menopause are related primarily to Oestrogen deficiency (Manu Agarwal et al., 2015)**.** One common problem that affects post-menopause is incontinence**.** Stress Urinary Incontinence is the most common type and represents 50% to 88% of all other types. It characterized by leakage of urine, which is caused by an increase in abdominal pressure (Elenora Russo et al.,2021). Many women still consider incontinence as natural symptom of aging. The study is to determine the effectiveness of Tailored Pelvic floor strengthening on reducing Stress Urinary Incontinence and improving Pelvic floor strength among Postmenopausal women.

METHODOLOGY: It is a single group experimental study which includes 18 samples who fulfilled the selection criteria. The subjects were given Tailored Pelvic floor strength for 4 days a week for 6 weeks. Stress Urinary Incontinence was measured using International Consultation on Incontinence Questionnaire - Urinary Incontinence Short form (ICIQ UI SF) and Pelvic floor strength was measured using Modified Oxford Grading scale.

RESULT: Comparing mean values of ICIQ UI SF and Pelvic floor strength scores between pre-test and post-test shows significant difference at $p \leq 0.001$. The study concludes that experimental group had shown significant improvement in reducing Stress Urinary Incontinence and improving Pelvic floor strength among Postmenopausal women.

NOVELTY: Beyond focusing solely on pelvic floor muscles, this program addresses other contributing factors such as theoretical part, posture, abdominal strength. This approach provides more comprehensive solution to incontinence, treating not only the symptoms but also potential underlying causes.

CONCLUSION: This study concludes that the Tailored pelvic floor strengthening is effective treatment method for reducing Stress Urinary Incontinence and improving Pelvic floor strength among Postmenopausal women.

KEYWORDS: Post menopause, Tailored Pelvic floor strengthening, Stress Urinary Incontinence, ICIQ UI SF, Pelvic Floor Strength.

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Effect of Plyometric training with Blood flow restriction on jumping ability and agility in male karate players - A Randomized controlled trail

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Introduction: Karate is a full-contact combat sport. The performance in Karate mainly depends on aerobic capacity but particularly on explosive muscular strength production. Plyometric training has been previously shown to increase power, strength, and explosive athletic ability. Basic principle of applying Blood flow restriction (BFR) with plyometrics exercises is to restrict the blood circulation of the working muscle by blocking the venous flow without significantly affecting the arterial circulation. The purpose of this study is to investigate the effect of plyometrics with blood flow restriction on jumping ability and change of direction in male karate players.

Methodology: 24 participants were selected based on inclusion and exclusion criteria and were randomized either to Group A (n=12) and Group B (n=12). Group A was given Plyometric training with Blood flow restriction and group B was given Plyometric training alone. Training was applied to the groups participating in the study for 3 days a week for 6 weeks. Vertical jump height performance was measured through the Sargent test and agility was measured using Agility T test. Both test were assessed during (t=0) and after (t=6) the intervention period.

Result: A significant effect from week 0 to week 6 ($p < .05$) was found in sargent test and agility T test in Group A receiving Plyometric with BFR.

Conclusion: Considering the combined effect of BFR with Plyometric training on jumping ability and change of direction, this study concludes that adding BFR with Plyometrics in regular training of karate players has an positive effect on jumping ability and change of direction.

Keywords: Vertical jump height, Karate, Plyometrics.

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Patient Satisfaction and Engagement in Immersive Virtual Reality among Stroke Population.

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ABSTRACT

Background: Immersive virtual reality (VR), which provides dynamic and captivating experiences, is a new therapeutic technique for stroke recovery. However, the degree of patient satisfaction and engagement continues to be crucial to its efficacy. Optimizing VR therapy requires a thorough understanding of patient engagement and satisfaction level. The purpose of this study is to examine stroke patient's levels of satisfaction and engagement in immersive Virtual reality therapy.

Methods: A quantitative, cross-sectional methodology was used in this study. A total of 20 stroke patients were scrutinized, the inclusion criteria were adults diagnosed with ischemic or haemorrhagic stroke, age range between 50 – 70 years, minimum voluntary control grade 2-3 in the affected side upper limb and exclusion criteria were like severe cognitive impairment, motion sickness, epilepsy. Intervention was given for 6-weeks which includes 4 sessions per week, each session last for 30 mins, Participants were engaged in immersive VR therapy sessions using the commercially available VR system, focused on motor tasks of upper extremity. After the 6 weeks, a validated Likert-scale questionnaires used to assess the level of satisfaction and engagement which was defined by the number of VR sessions attended.

Results: Descriptive statistics (mean, standard deviation) were calculated for all variables. Pearson's correlation coefficient was used to determine the relationship between satisfaction and engagement. The study shows a strong positive correlation between Satisfaction and Engagement: $r = 0.72$, $p < 0.01$. Patients with severe stroke demonstrated noticeably less participation in the Post-hoc Tukey's test than patients with moderate stroke ($p=0.02$).

Conclusion: Immersive virtual reality therapy is well accepted and engaging for the stroke patients. The results demonstrate high levels of satisfaction and engagement. It can be a potential innovative tool in rehabilitation which enhances the adherence to therapy sessions. However, the study also highlights severity of the stroke impacts engagement. Further research should explore on larger samples and extended therapy sessions and identifying the need of tailored interventions for severely affected population.

Keywords: virtual reality, patient satisfaction, engagement and stroke rehabilitation

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Effects of Brain Gym Exercises on Concentration among College Students with Concentration Deficits.

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ABSTRACT

INTRODUCTION: Brain Gym Exercises plays a crucial role in improving the concentration function among college students. It has a tremendous impact in improving cognition, after six weeks of implementation of brain gym program. There was an increase in memory, cognitive function, concentration, attention and alertness to reduce senility or dementia.

AIM OF THE STUDY: The aim of the study was to evaluate the effect of Brain Gym Exercises on concentration among college students with concentration deficits.

NEED OF THE STUDY: Concentration deficit can be frustrating, but most of the time they aren't cause for concern. There are many ways to improve cognitive skills, prevent lack of concentration and protect the grey matter. Brain Gym exercises were given to overcome such problems among college students.

METHOD: 20 Subjects from both the genders, in the age group of 19-22 yrs, who were noticed as suffering from concentration deficit, were separated into two groups, A & B. 10 subjects (A-experimental group) were given brain gym exercises and the remaining 10 subjects (B-control group) were given awareness program of brain gym exercises for a period of six weeks, one hour per day for 5 days per week. The outcome measure used was concentration questionnaire.

RESULT: The data collected were statistically analysed by paired t-test. From the result of the statistics, it was found out that the level of concentration of the subjects was increased.

CONCLUSION: The study concluded that brain gym exercise was more effective in improving concentration among adults.

KEYWORDS: Brain gym exercise, cognition, concentration, concentration questionnaire, Awareness program.

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Impact of Aerobic Training on Improving Cardiac Autonomic Function Among Chronic Alcoholics.

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Abstract

Background: Chronic alcohol consumption impairs cardiac autonomic function by increasing sympathetic dominance and reducing parasympathetic modulation, elevating cardiovascular risks[1].Aerobic exercise has been shown to restore autonomic balance by enhancing heart rate variability (HRV) and baroreflex sensitivity (BRS)[2]. This study evaluates the effects of a structured aerobic training program on autonomic function in chronic alcoholics.

Methods:A total of 40 male chronic alcoholics (age: 45.3 ± 5.2 years) were recruited and underwent a 6-week supervised aerobic training program, consisting of treadmill or cycling sessions at 60–75% heart rate reserve (HRR), five days per week, for 45 minutes per session[3]. Pre- and post-intervention assessments included HRV analysis (time and frequency domain measures), resting heart rate (RHR), and BRS.

Statistical Analysis: Data were analyzed using paired t-tests for within-group comparisons and repeated measures ANOVA for trend analysis.

Results: Post-intervention, significant improvements were observed in HRV parameters. RMSSD increased from 22.8 ± 4.5 ms to 34.2 ± 5.7 ms ($p < 0.01$), and HF power increased from 290± 85 ms^2 to 475 ± 95 ms^2 ($p < 0.01$), indicating enhanced parasympathetic modulation. The LF/HF ratio decreased from 2.1 ± 0.5 to 1.3 ± 0.4 ($p < 0.01$), reflecting reduced sympathetic dominance. Additionally, RHR decreased from 82.4 ± 6.1 bpm to 74.6 ± 5.3 bpm ($p < 0.05$), and BRS improved from 6.8 ± 1.2 ms/mmHg to 9.5 ± 1.4 ms/mmHg ($p < 0.01$).

Conclusion: A 6-week aerobic training regimen significantly improves cardiac autonomic function in chronic alcoholics by enhancing parasympathetic activity and reducing sympathetic dominance. Regular aerobic exercise may serve as a non-pharmacological intervention to mitigate cardiovascular risks in this population[4].

Keywords: Aerobic training, cardiac autonomic function, chronic alcoholics, heart rate variability, parasympathetic modulation, baroreflex sensitivity, exercise rehabilitation.

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The Effectiveness of Functional Strength Training in Improving Walking Ability in a Child with Cerebral Palsy: Case Report.

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Background: The walking ability in children with Cerebral Palsy is worse than their peers without disability and may get even worse with the age advancement. An effective intervention for children with cerbral palsy to preserve or to improve their motor functions is very important. Children with Cerebral Palsy walk slowly and have difficulty in performing activities like walking up and down steps and running. The objective of this study is to find out the effectiveness of functional strength trainig in improving walking ability in a child with Cerebral Palsy.

Materials: For functional stength training protocol, resisitances were added in functional movements like Sit-to-Stand, High Kneeling, Step forward,Lateral walk, for which a body vest with pockets to add weights is used. Outcome measures used were Gross Motor Function Measure 88(GMFM -88), Timed Up and Go Test(TUG) test.

Methods: A six year old male child with spastic quadriplegic type of Cerebral Palsy classified as level V according to Gross Motor Function Classification System(GMFCS), participated in the study. Assessments were done at baseline and 12 weeks post-intervention. A functional strength training protocol with resisted exercises and weight training is applied for 5 sessions in a week for 12 weeks is applied.

Results: The child responded well to the treatment. Post rehabilitation, he was able to maintain sitting balance, initiate reach outs and able to stand with support from sitting position. There was significant improvement in walking ability. The GMFM score increased especially in dimentions D and E, and also the TUG score decreased after the strength trrainig.

Conclusion: The child showed improvement both clinically and with outcome measures. There fore an individualised functional stregth training is an effective alternative in reahabilitation of children with CP.

Keywords: Cerebral Plasy, Functional Strength training, Walking Ability, Gross Motor Functions

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Appraising Balance Control in Ambulatory Institutionalized Geriatric Population A Cross-Sectional Study.

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ABSTRACT

BACKGROUND: Balance is the ability to keep center of gravity within the base of support. Loss of balance can result from medications, balance disorders, or various medical conditions. Medical conditions such as diabetes, heart disease, stroke, vision problems, thyroid disorders, nerve issues, and blood vessel problems can contribute to balance difficulties. Balance issues affect 20-50% of older adults, with falls being common among them. Around 20-30% of older adults experience one or more falls annually. These falls often lead to serious injuries, including fractures, dislocations, or head injuries, with at least 10% of falls resulting in severe consequence.

OBJECTIVES: To assess the balance abilities in ambulatory geriatric population using TUG, BBS, FRT.

METHODOLOGY: The study was done in 60 individuals aged above 65 from Abhaya Bhavan and Navjeevan Trust, Arpookara, Kottayam. The study commenced after obtaining informed consent from the institution and the subject. A baseline geriatric assessment was taken and the outcome measures used are TUG, BBS, FRT. The collected data was subjected for statistical analysis. INCLUSION CRITERIA: Ambulatory elderly men and women aged 65 and above, Physical ability to participate in the study, Subjects in institutional settings, Conscious medically stabled oriented subjects, Cooperative patients by providing informed consent, Participants must be able to understand and communicate in the language used in the study. EXCLUSION CRITERIA**:** Severe cognitive impairment, acute medical conditions, Vision or hearing impairment.

RESULT: The study revealed that a significant number of geriatric people exhibit balance problems.

CONCLUSION: The results of the study demonstrate that a significant proportion of ambulatory geriatric individuals in institutionalized care experiences balance problems, increase their risk of falls.

KEYWORDS: Balance, Institutionalized care, TUG, BBS, FRT

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The Effectiveness of Concurrent Resistance Training VS Plyometric Training Exercises on Improving Sprint Ability and jump Game Performance in Water Polo Players

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BACKGROUND:
Water polo was the first team sport included at the modern Olympic Games in 1900. Water polo is a water-based contact sport in which players swim, throw, and defend. Water polo has a high injury rate among Olympic sports, ranging from 9.7% to 19.4%. Water polo players frequently use sprint and jump methods. The most popular regimens are high-intensity interval training and weighted jumping. Concurrent resistance training as well as plyometric training shows improvement for sprinting and jump among athletic swimmers. Hence there is a need to analyze which training shows more improve among water polo players.

MATERIALS:

The vertical jump and sprint swimming tests were measured in pre and post-test. Water parachute, hand paddles, stop watch, chalk piece and inch tape were used.

METHODS:
This comparison study included 30 young water polo players under the age of 25. They were divided into two groups. For 6 weeks, Group A (n=15) received concurrent resistance training while Group B (n=15) received plyometric training.

RESULT:
The data was analyzed using the unpaired "t" test for between-group analysis and the paired "t" test for within-group analysis. Both groups' analyses were significant ($p<0.001$), with group A being more significant than group B.

CONCLUSION:
When compared to plyometric training (GROUP-B), this study finds that concurrent resistance training (GROUP-A) enhances muscle strength and improves jump ability in water polo players, which will improve the game performance. Water polo players will be benefited from concurrent resistance training because it increases their strength, power, and endurance, which improves their swimming speed, shot accuracy, and game performance.

KEY WORDS:
Concurrent resistance training, plyometric training, vertical jump test, sprint swimming test.

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Analytical Study of Pelvic Floor Disability and Lower Limb Strength among Cesarean Section and Normal Labor: Pilot Study.

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BACKGROUND:
The rate of C-section deliveries in India increased from 17.2% in 2016 to 21.5% in 2021,In the private sector, these numbers stand at 43.1% (2016) and 49.7% (2021), meaning that nearly one in two deliveries in the private sector is a C-section. The researchers recommend that threshold levels for C-sections be applied cautiously, as several inter-category variations exist, and in states at advanced levels of demographic transition, need factors for C-sections may be more prevalent.C-section is often considered a safer option for women with certain medical conditions, vaginal delivery through normal labor has been associated with its own set of challenges, particularly concerning pelvic floor integrity. Studies found approximately 10% of women will experience some type of pelvic floor disorder which may require surgery, especially related to vaginal delivery.

PURPOSE:
Pelvic pain and strength has been decline in first 3 month of postnatal period . Long term pain and lower limb strength due to mode of delivery which impacts the quality of life is more common in cesarean or normal labour is not known. To analyse pelvic floor disability and lower limb strength among C- section and normal labor.

STUDY DESIGN: Analytical study.

METHOD:
The convenient sampling method was used for the collection of samples based on selection criteria. 30 samples for each group selected among 20-35 of age group. The tool used was pelvic floor disability index and modified sphygmomanometer test. Further results are concluded through statistical analysis.

CONCLUSION:
This study concluded that pelvic floor disability and lower limb strength has declined more in normal labor than cesarean section.

KEY WORDS:
Cesarean, Normal labor, Pelvic floor disability, Lower limb strength.

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Effectiveness of Medium Impact Exercise Program on Thyroid Function and Quality of Life in Subject with Subclinical Hypothyroidism.

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BACKGROUND:
Subclinical hypothyroidism is an important health factor as thyroid hormone deficiency is associated with various aspect of physical, mental and social wellbeing. Subclinical hypothyroidism is defined by an elevated serum thyroid -stimulating hormone and normal free thyroxine level. Studies shows that 4% to 20% of adults present with subclinical hypothyroidism which is higher in women (81.8%) than in men (18.2%). Regular exercise has been demonstrated to significantly influence the mechanism related to physiological deterioration and the progression from subclinical thyroid disease. Hence there is a need to find out the effectiveness of medium impact exercise program on thyroid function and quality of life in subject with subclinical hypothyroidism.

MATERIALS:
Thyroid functional test (TSH level) and Short from health survey (SF-36) Quality of life questionnaire were measured in pre and post-test.

METHODS:
In this pilot study, 20 females with subclinical hypothyroidism, aged between 18 to 25 were selected based on the inclusion and exclusion criteria. 8 weeks medium impact exercise program was given.

RESULTS:
The data analysis was done with paired ‘t’ test and the results show significant improvement on thyroid function and quality of life among individual with subclinical hypothyroidism with the value of significance $p< 0.001$ and $p<0.05$ respectively.

CONCLUSION:
This study concludes that 8 weeks medium-impact exercise program was beneficial for improving thyroid function and quality of life in people with subclinical hypothyroidism. Hypothyroidism is associated with adverse metabolic, cardiovascular, reproductive, maternal-fetal abnormalities and lowers quality of life, also the risk increases with older age. Therefore, subclinical hypothyroidism should be addressed in the younger age before progressing to hypothyroidism.

KEYWORDS:
Medium-impact exercise, Quality of life, Thyroid Function Test (TSH Level), SF-36 questionnaire.

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The Effect of Neurobic exercise on Cognition and Self Esteem among Medical Students.

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Abstract

Background: Cognition include different cognitive process like Learning, attention, Memory, Language, reasoning, decision making etc. which are the part of intellectual development and experience. Neurobic exercise releases brain-derived neurotrophic factor, which promotes synaptic plasticity and neurogenesis. Thus,neurobic exercise provides a neurotrophic platform for neuroplasticity. The stress and fatigue of sleep deprivation may exacerbate cognitive changes in young adults at risk.

Aim and Objectives: To assess the effect of Nerurobic exercise on cognition and self-esteem among medical students.

Methodology: This study was conducted in the department of Physiotherapy ,School Of Medical Education,Kottayam,Kerala.A total no of 20 medical students in between age group 19-23 were selected randomly assigned for 2 groups were given a 30 minute session for 6 months. Group A received Neurobic Exercise and Group B received Aerobic exercise. The participants were explained their role in the study and written consent was taken from the students. The Montreal Cognitive Assessment and Rosenberg Self-Esteem Scale (RSE) were explained to the students.Pre- and post-intervention data was analyzed using paired t-tests to determine statistical significance.

Results: The MoCA and RSE showed significant improvements ($p<0.005$) with in the experimental group post intervention. Statistical analysis done by using paired ‘t’ test and SPSS 24.5 version used for analysis and graph pad prism 7.0 version and $p<0.005$ as level of significance.

Conclusion: This study concludes that Neurobic Exercise has a significant effect on improvement in cognition and self-esteem among Medical students.

Keywords: Neurobic Exercise,Cognition,Medical Students,Self-esteem

Journal of Clinical and Biomedical Sciences

Effectiveness of Self Designed Posture Training Device on Lower Limb Loading and Functional Balance in Asymmetrical Weight Distribution Among Stroke Patients.

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BACKGROUND. After stroke the limb loading ability in the affected extremity becomes very poor or nil in early stages and later it results in learned non-use. Many research studies have concluded that falling as a major cause of morbidity, hospitalization and mortality among older people as well as among stroke patients.

OBJECTIVE: To test the effectiveness of Posture Training Device in improving symmetrical weight distribution among post stroke patients

METHODOLOGY: This Experimental study was done at Raghav Physiotherapy & Rehabilitation Centre with 20 Samples. After getting ethical clearance from the committee the Participants of the study was selected after fulfilling the inclusion & exclusion criteria as mentioned above along with informed consent. They were randomly allocated into two groups as Control Group (10 nos) and Experimental group (10 nos). Control group received regular physiotherapy sessions and Sit to Stand Training. The Experimental Group received limb loading training in Posture Training Device (Stance Train) along with the regular physiotherapy sessions as control group. Treatment duration is of 30 minutes with 5 minutes rest after every 10 minutes of training for five days per week of three weeks period. Pre test & Post test Measures were done with Posture Training device, Berg Balance Scale.

CONCLUSION: Statistical analysis concluded that Experimental group showed significant improvement than control group in both symmetrical weight distribution and Functional balance.

Clinical Implication: So this study paves the way in incorporating a device in clinical practice which is cost effective, patient friendly, productive and efficient enough with good outcomes to create a significant difference in functionality, learning and activities of daily living.

Key Words: Asymmetrical weight bearing, Stroke, Symmetrical Weight Distribution, Posture Training Device, Balance Training, Fall.

Journal of Clinical and Biomedical Sciences

Effect of virtual reality training on balance parameters in subjects with sarcopenia

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Background: In geriatric research and clinical settings, sarcopenia is a major public health issue among older adults. The prevalence of sarcopenia increases with age, ranging from 5–13% in those aged 60–70 to 11–50% in those 80 years and older. Evidence-based clinical practice guidelines usually strongly recommend physical activity as a primary treatment for sarcopenia.

Aim: To analyze the Effect of virtual reality training on balance parameters in subjects with sarcopenia

Methods: 10 subjects who fulfilled the inclusion and exclusion criteria will be taken for the study and randomly divided into two groups in which group A received virtual reality-based balance training and group B received balance exercises without virtual reality for 12 weeks, and outcomes were measured using berg balance scale, time up and go test and six-minute walk test.

Results: The pre-test p-value in Berg balance was found to be (.618), and the test p-value was found to be (.029), which showed statistical significance.

Conclusion: Both Group A and Group B showed statistically significant differences Group A was found to be more significant than Group B

Keywords: sarcopenia, non-immersive virtual reality, Berg Balance Scale, Mend device, time up and go test.

Journal of Clinical and Biomedical Sciences

Influence of Sensorimotor Training on Intrinsic Foot Muscle Function and Balance in Patients with Diabetic Neuropathy

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BACKGROUND

Diabetes mellitus (DM) remains one of the largest metabolic diseases in both developed and developing countries in the world. Diabetic Neuropathy(DN) is one among the commonest complication that usually 30% of the diabetic population encounter.This DN affects the somatic sensory, motor nerves and autonomic nerves.It has mainly sensory deficits and motor weakness which cause severe mobility ,which for the elderly population elevates the risk of fall. On the other hand Sensorimotor training (SMT) has been proposed as an intervention to improve postural control by enhancing intrinsic foot muscle (IFM) function. However, its effectiveness in strengthening IFMs and improving balance in DN patients remains unclear.

AIM AND OBJECTIVES

The aim of the study was to evaluate the influence of sensorimotor training on intrinsic foot muscle strength and balance in patients with diabetic neuropathy. This pre-post test experimental study included twenty six subjects with the mean age 56±8 years (range 56-65 years).

METHODOLOGY

Twenty six subjects were selected based on the inclusion and exclusion criteria. They were divided randomly into two groups: experimental and control group. Experimental group received 30 minutes of sensorimotor training for five sessions a week for four weeks. Control group received a standard care. The outcomes are measured through Toe Dynamometer test and Berg Balance Scale.

RESULTS

The pre and post test values of Toe Dynamometer and Berg Balance Scale (BBS) values are recorded. Preliminary findings indicate a significant improvement in foot muscle strength and balance in the experimental group compared to the control group ($p < 0.05$).

CONCLUSION

Thus, Sensorimotor training effectively enhances intrinsic foot muscle strength and balance in individuals with diabetic neuropathy, suggesting its potential as a targeted rehabilitation strategy for reducing fall risk.

Journal of Clinical and Biomedical Sciences

A Comprehensive review on Hypoglossal Nerve Palsy presenting with Cervical pain

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Abstract

Objective: To develop a narrative literature on examining the hypoglossal nerve for patients complaining about neck or cervical pain.

Methodology:A comprehensive literature search of Pubmed and Google Scholar was performed for articles published from 2012 to 2023. 67 articles were identified, and among those, 4 were relevant to reviewing the study based on cervical pain for examination of the HNP.

Results: A 38-year-old male who had tongue swelling revealed a history of severe headaches and lisping. MRA showed internal carotid artery dissection. An isolated HNP was found during the examination.

A 48-year-old male presented with neck pain and torticollis was diagnosed with C1-C2 TB with C1-C2 joint destruction. Antitubercular treatment and a Halo vest were given to the patient in order to avoid mobilization. After 3 months, he was affected by HNP, and tongue deviation was seen after 2 years.

During the first hospitalization, a patient met with a road accident; an occipital condyle fracture was not recognized, but 15 days later, HNP occurred. The screening of head trauma patients for occipital foramen fracture is done by the examination of the cranial nerves.

A 59-year-old male presented with severe neck pain, nausea, and vomiting of 1 day duration. Neuroimaging revealed a tumor in the cerebellomedullary fissure containing hemorrhage. Later, he was diagnosed with HNP.

Conclusion: These studies suggest that a careful neurological assessment and examination of cervical pain must be performed, which may lead to the diagnosis of HNP.

Key words: Hypoglossal Nerve Palsy, Cervical pain, Neck pain.

Journal of Clinical and Biomedical Sciences

Neurogenic and musculoskeletal Effects Under COVID Vaccine.

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Abstract

Background/ Objective: Corona virus disease 2019 (COVID-19) is a contagious disease caused by the coronavirus SARS-CoV-2. In the context of COVID-19, concerns over vaccine safety and side effects were considered one of the most primary barriers to vaccination The research has consistently highlighted the neurogenic and musculoskeletal complication which always emphasizing the further study of it will refers to development of safer and more effective COVID-19 vaccines. It leads to develop effective management and treatment strategies for individual experiencing complications

Methodology: An Observational study has been taken over the COVID-19 vaccine taken patients within a community-based areas. Peoples with age above 15 with taken vaccines were been included in this study, the Nordic scale questionnaire has been conducted to assess the study

Results: Findings suggest potential musculoskeletal discomfort at the injection site and rare neurological effects like transverse myelitis, myositis. Additionally, the antiviral drug Remdesivir is linked to adverse effects such as fatigue and back pain with the reference studies A pilot study has been conducted on several Covid-19 vaccine taken patients. According to the Nordic scale questionnaire questions been asked with regarding pain occurring areas. It found that, pain is present at the specific areas neck region 28%, shoulder region 32.8%, back region – 15.9%,elbow region – 4.8%.This study shows that questions are typically “forced-choice,” meaning respondents select from a limited set of answers like “yes” or “no” regarding pain in a specific region according to this the percentage has been calculated over the observation

Conclusion: The study underscores the importance of continuous research on COVID-19 vaccines to enhance safety and effectiveness while minimizing potential neurogenic and musculoskeletal complications.

Keywords: Covid-19 vaccine side effects, Nordic scale questionnaire, myositis, Remdesivir effects.

Journal of Clinical and Biomedical Sciences

Functional Independence and Quality Of Life In Traumatic Below T6 Level Spinal Cord Injury at Different Time Spans

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Background: Trauma is most frequent cause of spinal cord injury in Indian adult populations. Injury results from damaged caused by traumatic events such as motor vehicle accidents (40.4%), falls (27.9%), violence (15.0%), and sports (8.0%).

Aim: To find out level of functional independence and quality of life in a person with traumatic below T6 level spinal cord injury as the time progresses

Study Setting & Design: Tertiary care center, neuro-rehabilitation center & observational study

Methods and Material: Sample size was 45 and each group 15 spinal cord injury individuals. Inclusion were of both genders, traumatic incomplete below T6 level of spinal cord injury and sub-acute to chronic phase spinal cord injury was taken. Exclusion was traumatic head injury and recent trauma to the lower limb.

Statistical analysis: Analysis was done using SPSS V 26. Krushkal Wallis test was used for the non-parametric data, and the mean and standard deviation was calculated.

Results: WHOQOL and SCIM were the scales used and mean values of the same at 3 different time spans are as follows: for WHOQOL, Physical domain 48, 56, 56. , Psychological 39, 51, 54. c) Social 54, 60, 59, Environmental 52, 62, 64. Similarly, SCIM showed 36, 47 and 52

Conclusion: Study concludes that quality of life and functional capacity show a much better and significant improvement in the acute and subacute stage post injury after which there is stagnancy observed

Keywords: Quality of life, Traumatic, Spinal cord injury, Functional independence.

Journal of Clinical and Biomedical Sciences

Pulsed Electromagnetic Fields: An Advanced Therapeutic Intervention in Osteoarthritis of Knee

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Abstract

Background: Knee osteoarthritis (OA) is a common disorder that affects the joints, causing pain and reducing mobility. This randomized controlled trial compared two different therapies for treating knee OA: Pulsed Electromagnetic Field Therapy (PEMFT) and Interferential Therapy (IFT), both combined with exercises. Sixty adults of both genders aged between 50 and 75 with knee OA participated in this study. They were randomly assigned to the PEMFT or IFT group and received 10 treatment sessions, five days a week for two weeks. The study measured pain, balance, range of knee joint motion, and function using the Visual Analog Scale (VAS), Balance Master and WOMAC index, before and after treatment. The results showed that both therapies led to significant improvements. However, PEMFT was more effective, resulting in a greater reduction in pain, better WOMAC scores, and enhanced balance metrics, including step length and walking pace. The study concludes that PEMFT, when used with exercises, offers therapeutic benefits for managing knee OA compared to IFT. Despite these promising results, the study needs further research to confirm long-term benefits and explore other potential outcomes of PEMFT.

Keywords: Knee osteoarthritis, Pulsed Electro-Magnetic Field Therapy- PEMFT, Interferential Therapy- IFT, Pain, Balance, Functional Outcomes.

Journal of Clinical and Biomedical Sciences

The risk factors to chronic musculoskeletal pain: A critical review

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Background: Chronic musculoskeletal pain (CMSP) has multiple risk factors such as physiological, psychological, and social factors that reciprocally influence each other, leading to chronic and complex pain syndromes. Early identification of modifiable and non-modifiable risk factors helps to prevent chronic pain and reduces the global burden.

Design: The articles were included in a critical review, according to the inclusion and exclusion criteria, with a JBI score of 80 and above.

Methodology:

Setting: PubMed Database

Participants: Complete enumeration of articles from 2019 – 2024.

Exposure(s): The evaluated exposure includes demographic, genetic, psychological, physical health, social, occupational, and environmental factors, this study offers useful insights into the complex interactions that contribute to the development of CMSP.

Main Outcome: The review identified the risk factors and their association with CMSP by odds ratio and risk ratio

Results: The Modifiable risk factors included anxiety (highest OR 4.19), BMI (OR 0.88–2.37), occupational stress (OR 2.63), sleep problems (OR 4.02), and ergonomic challenges (manual handling OR 9.03, mechanical pressure OR 20.15) and Non-modifiable risk factors included age (40–49 years, OR 3.15), female gender (highest OR 4.11), and immigrant status (AOR 1.86). Genetic predispositions, including parental multisite pain (AOR 2.56), were noted.

Conclusion: The current review emphasizes the biopsychosocial aspects of CMSP exploring both well-known and novel risk factors and highlights modifiable risk factors such as physical health, psychological well-being, and lifestyle behaviors help to prevent CMSP by addressing these risk factors

Relevance: The study findings highlight the importance of early identification and individual-specific management of CMSP and prevention of chronification of pain and to improve patient outcomes also it gives insights to the public to especially address the socio-economic risk factors and environmental factors that contribute to CMSP.

Journal of Clinical and Biomedical Sciences

Impact of Scapular Strengthening along with Wrist Extensor Strengthening Versus Scapular Strengthening on Pain, Grip Strength in Subject with Lateral Epicondylitis.

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Abstract

BACKGROUND: Scapular muscles play an important role in the upper limb function. A disturbance in the peri-scapular muscle strength may alter the kinetic forces, this increases the work load at the distal joints which may lead to a pathology like Lateral epicondylitis.

OBJECTIVE: To find the impact of scapular strengthening along with wrist extensor strengthening versus scapular strengthening on pain, grip strength and muscle strength in subjects with lateral epicondylitis.

METHODOLOGY: Pre and post experimental study that includes 36 subjects. Subjects were divided into two groups. Group- A (Experimental Group-A) received Scapular strengthening along with wrist extensor strengthening and conventional therapy, Group- B (Experimental Group-B) received scapular strengthening along with conventional therapy alone. Treatment duration was 3 days per week for 6 weeks. Numerical Pain Rating Scale, Hand Held Dynamometer and Fitmust Hand Held Dynamometer were used as the outcome tool for assessing the pain, grip strength and muscle strength respectively.

RESULT: The scapular strengthening along with wrist extensor strengthening and conventional therapy group showed significant reduction in pain and greater improvement in grip strength when compared with the scapular strengthening along with conventional therapy alone group, but there was no significant difference in muscle strength for two groups.

CONCLUSION: This study concluded that Scapular strengthening along with wrist extensor strengthening is effective in subjects with lateral epicondylitis in reducing pain and on improving grip strength and muscle strength.

KEY WORDS: Lateral Epicondylitis, Scapular Strengthening, Wrist Extensor Strengthening, pain, grip strength and muscle strength

Journal of Clinical and Biomedical Sciences

Hope in Every Breath: The Role of Pulmonary Rehabilitation in Interstitial Lung Disease – A Case Report

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Abstract

Background: Interstitial lung disease (ILD) is a chronic and progressive lung disorder characterized by fibrosis and inflammation of the pulmonary interstitium, leading to progressive dyspnea and a decline in quality of life. Pulmonary rehabilitation (PR) is an essential component of non-pharmacological management, aimed at improving functional capacity and symptom control.

Case Presentation: A 59-year-old male with no known comorbidities presented with complaints of shortness of breath for ten days, which had an insidious onset and was gradually progressive, classified as MMRC Grade 1, worsening with exertion and associated with an occasional cough producing whitish sputum. The patient also reported generalized weakness and weight loss. High-resolution computed tomography (HRCT) of the chest suggested non-specific interstitial pneumonia (NSIP) under evaluation, with a need to rule out tracheobronchomegaly. Pulmonary function tests (PFTs) indicated a restrictive pattern with decreased lung volumes.

Intervention: The patient was enrolled in a structured pulmonary rehabilitation program, which included warm-up Circuit training, including strength training, endurance, and aerobic exercises, followed by a cool-down session, along with breathing exercises and patient education on energy conservation. The sessions were conducted three times per week for eight weeks under supervised conditions.

Outcome: Post-rehabilitation, the patient demonstrated a significant reduction in dyspnea, an improvement in exercise tolerance assessed by the 6-minute walk test (6MWT), and an increase in functional capacity. The patient reported a reduction in corticosteroid dosage. PFTs demonstrated improved lung function parameters. Additionally, the patient experienced an enhanced quality of life with better symptom management.

Conclusion: This case highlights the positive impact of pulmonary rehabilitation in managing interstitial lung disease. Structured rehabilitation programs play a crucial role in improving pulmonary function, exercise tolerance, and overall quality of life in ILD patients. Further research is needed to assess long-term benefits.

Keywords: Interstitial Lung Disease, Pulmonary Rehabilitation, Physical Therapy

Journal of Clinical and Biomedical Sciences

Digital Dementia and its impact on human cognitive and emotional functioning

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Abstract:
Digital dementia refers to the cognitive and emotional decline caused by excessive reliance on digital devices, particularly in the context of an increasingly connected world. The term describes the detrimental effects of overexposure to technology on memory, attention, and executive functions. Digital tools, such as smartphones, computers, and tablets, are integral to modern life, but their overuse is thought to contribute to cognitive decline by impeding brain processes traditionally fostered by more conventional learning methods. The phenomenon manifests in symptoms resembling those of early-onset dementia, such as poor memory recall, reduced attention span, and difficulty in processing complex information.

Excessive digital engagement impacts the brain's neuroplasticity—the ability to form and reorganize synaptic connections in response to learning experiences. As people become more dependent on digital devices for tasks such as navigation, scheduling, and communication, they often rely less on their own memory and cognitive skills. promote cognitive health while using technology mindfully and responsibly.

Objective:
The primary objective of this study is to explore the impact of digital technology on cognitive and emotional functioning, specifically focusing on the phenomenon of digital dementia. It aims to assess how overreliance on digital devices affects memory, attention, and overall cognitive health, as well as its emotional and psychological consequences, such as increased anxiety, stress, and reduced focus.

Methodology:
This research employs a qualitative approach with a literature review of existing studies on digital dementia and related cognitive disorders. Data is gathered from peer-reviewed journals, psychological studies, and surveys on the behavioral effects of technology overuse.

Conclusion:
Interventions focusing on reducing screen time, encouraging memory exercises, and fostering emotional regulation are necessary to mitigate the negative impact of technology overuse. Future research should focus on developing practical guidelines for integrating technology into daily life without sacrificing cognitive health.

Keywords:
Digital Dementia, Cognitive Decline, Emotional Well-being, Technology Overuse, Memory Impairment, Neuroplasticity

Journal of Clinical and Biomedical Sciences

Combining Fascial Manipulation and Motor Control Training for Osteoarthritis Rehabilitation: A Case Report

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Background:

Osteoarthritis (OA) is a leading cause of mobility impairment and reduced quality of life, particularly in older adults. It involves progressive degeneration of articular cartilage, subchondral bone changes, and synovial inflammation. Fascial manipulation aims to improve tissue mobility by addressing restrictions in collagen and elastin fibers, while motor control training enhances movement patterns and neuromuscular coordination, often compromised in OA.

Objective:

To evaluate the combined effect of fascial manipulation and motor control training on pain, range of motion, and functional outcomes in a patient with knee osteoarthritis.

Case Description:

A 75-year-old male with grade 3 right knee OA (Kellgren-Lawrence scale) presented with pain, stiffness, and significant difficulty in walking, stair climbing, prolonged standing, and sit-to-stand movements, along with a varus deformity. His medical history included bypass surgery and a prior stroke with resolved right-sided hemiparesis. Clinical assessment revealed coarse crepitus, restricted knee range of motion (flexion: 80° from a 30° starting position), fascial densifications in the trunk and lower limbs, and impaired quadriceps and hamstring activation.

Intervention:

The patient underwent a four-week rehabilitation program, including one session of fascial manipulation per week and low-load motor control training five days per week. Pain, range of motion, functional mobility, and quality of life were assessed using the Numeric Pain Rating Scale (NPRS), goniometry, Timed Up and Go (TUG) test, and the Knee Injury and Osteoarthritis Outcome Score (KOOS). Fascial manipulation followed the Stecco model, targeting centers of fusion, while motor control exercises focused on activating key muscle groups to enhance joint stability and movement efficiency.

Results and Conclusion:

Pre- and post-intervention comparisons will determine the effectiveness of combining fascial manipulation with motor control training in reducing pain, improving joint mobility, and enhancing functional outcomes in individuals with knee osteoarthritis.

Keywords: Osteoarthritis, fascial manipulation, motor control training, rehabilitation.

Journal of Clinical and Biomedical Sciences

Impact of structure education program on outcomes of activity, participation and quality of life in persons with spinal cord injury and their care givers

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Background: Functional status, participation and quality of life for post traumatic spinal cord injury survivors (PTSCI) and their caregivers are concern in India especially rural India. There is substantial evidence that multimodal education strategy can have an positive impact on these outcomes. Thus the aim of this study was to explore the sequence of multimodal education strategy on learning and adherence to positive health behaviors

Objective: Assess the impact of various sequences of multimodal formal training on functional outcome and quality of life using SCIM and WHOQOL- Bref and Comprehensive rehabilitation outcome measures in PTSCI and Caregivers

Methodology:
Study design: One group pretest to posttest quasi experimental study design,
Sampling design: Convenience sampling
Sample size: 422 PTSCI individuals and their caregivers

Procedure: All participants were recruited from three rehabilitation centers with three outcome measures collected at baseline and at end of 6 months. Participants were divided into 3 groups and educational material was given in three modes- Hard copy, Electronic media through YouTube and social media through whatsup. At the end of two months and four months the material was exchanged between the groups.

Results: All three groups showed change in the functional status and quality of life, but group two had an significant change compared with other two groups.

Discussion: As multimedia approach involves both audio and video which is considered to be one of the best materials for adult educational program as it closely adheres the principles of adult education. Though the sequence of electronic media was well appreciated the hard copy was considered as better as the electronic media is highly relied on stable internet network which was challenging in rural India

Conclusion: Multimedia has an positive impact on QOL and functional outcome and electronic media was considered better than hard copy but not well appreciated in rural India

Journal of Clinical and Biomedical Sciences

Accessible public environment in Mysore: a case study of malls

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Abstract

Purpose

Barrier-free environments are the rights of everyone, regardless of any disability. In India, society's attitude towards people with disabilities (PWDs) is changing and PWDs are participating in the mainstream of society. Therefore it is essential to study the existing accessibility standards of buildings that are open to the public and the ways to improve access in the public gathering places.

The current study aimed to assess the accessibility standards of malls in Mysore.

Methods

An onsite audit of the physical accessibility of malls was done using the physical accessibility audit checklist prepared by the AIC and the malls were selected based on convenience sampling.

Results

Our study found that both malls audited had accessible parking, entrance, reception and lobby, and toilets. However, these areas were not fully accessible as it was not accommodating the needs of people with different disabilities.

Conclusion

Our study concluded that malls in Mysore are not completely equipped to cater to the needs of PWDs. The malls should be able to accommodate the diverse needs of all groups of PWD to make these buildings truly accessible.

Implications

The findings from this study will help to pen down the accessibility standards provided by these malls so that people with disability can utilize these facilities at their optimum. In addition, the recommendations from this audit will help the authorities of these malls and policymakers to uplift the facilities to accommodate the accessibility needs of people with disability.

Keywords: access audit, people with disability, malls, disability, barrier-free environment, built environment

Journal of Clinical and Biomedical Sciences

Effect of ESWT on hand with Crush injury, nerve injury and hypertrophic scars: A Case Report.

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Background: Flexor tendon injuries still remain a challenging condition to manage and to ensure optimal outcome for the patient. The common complications post-surgery includes adhesion formation, tendon rupture and stiffness of the joints. Extracorporeal Shock wave therapy (ESWT) is expected to reduce pain and pruritus, regenerative effects on various tissues, ligaments, bones and scar tissue and improve joint mobility by generating a mechanical stimulus that induces two physical effects (mechanotransduction and cavitation) while structured physical therapy exercises will aim to optimize grip strength and hand function.3,4

Case description: A Year-old male with crush injury sustained during an assault with a sickle. The injury resulted in fractures of the Thumb and little finger, along with multiple tendon injuries leading to the need for tendon repair, k-wire fixation, and median nerve repair. Despite two months of physiotherapy at a local centre, the patient presented with complaints of stiffness, weakness and significant difficulty in performing hand activities, gripping, holding objects, writing and buttoning cloths. Clinical assessment revealed presence of hypertrophied scar, restricted wrist and hand range of motion, visible swelling, bruising, deformity of hand and impaired sensation of median nerve.

Intervention and method: the patient will undergo a four-week rehabilitation program with one session of Extracorporeal shockwave therapy (ESWT) every week whereas Scar mobilization, ultrasound massage for the scar, joint mobilization, range of motion exercises, electrical stimulation for median nerve and resistance training will be given 5 days per week. Pain, range of motion, functional mobility and grip strength will be assessed using Numeric pain rating scale (NPRS), goniometry, Disability of Arm, shoulder and Hand (DASH), Jebsen -Taylor Hand Function test respectively. Extracorporeal shockwave Therapy will involve of conducting focused shock waves to the most hypertrophied scar and stiffened joint and median nerve repair point by using Duolith SD-1 device, while structured physiotherapy will focus on improving joint ROM, grip strength and hand function.

Result and conclusion: The pre- and post-intervention results will highlight the effectiveness of Extracorporeal shockwave therapy in reducing pain, improving joint mobility, and enhancing functional outcomes in post flexor tendon injury.

Key words: Extracorporeal shockwave therapy, flexor tendon injury, crush injury, nerve injury, hypertrophic scar.

Journal of Clinical and Biomedical Sciences

Comparative Study of Pilates Training Exercise and Nordic Hamstring Exercise to Improve Hamstring Flexibility and Agility in Amateur Soccer Player.

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Background: Hamstring injuries are the most common muscle injuries in male amateur soccer players, Muscular tightness is an common intrinsic risk factor for the development of muscle injuries. Lack of flexibility is also a predisposing factor to hamstring tightness.

Objective: To find out and compare the effectiveness of Pilates training exercises and Nordic hamstring exercise to improve hamstring flexibility and agility in amateur soccer players.

Method: This is a comparative study design. 30 amateur soccer players were included based on eligibility criteria and randomly allocated into two groups using close envelope method. Within group analysis of both group's were analyzed by paired t test and between group analysis by unpaired t test after 8 weeks

Result and conclusion: After completion of the intervention, the hamstring flexibility and agility were increased in Nordic hamstring group ($P<0.05$)

Conclusion: Finally, the study concluded that both groups showed significant improvement but Nordic hamstring exercise showed significant improvement than Pilates training exercise in hamstring flexibility and agility among amateur soccer players.

Journal of Clinical and Biomedical Sciences

Impact of Lowload Resistance Training with Blood Flow Resistance Training and Without Blood Flow Restriction Training on Pain, Functional Disability and Grip Strength among Subjects with Tennis Elbow.

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BACKGROUND OF THE STUDY: Blood flow restriction (BFR) is a training method by partially restricting arterial inflow and fully restricting venous outflow in working musculature during exercise. According to APTA, BFR training is the scope of physiotherapy practice. There is no study which examined the effectiveness of BFR among chronic lateral epicondylitis subjects, so purpose of the study is to find out the impact of low load resistance training with BFR training on pain, functional disability and grip strength among subjects with chronic lateral epicondylitis.

METHODS: This is a comparative study design. 30 subjects with chronic lateral epicondylitis were included based on the eligibility criteria and randomly allocated into 3 groups using closed envelope method. Within group analysis of both groups were analyzed by using paired T test and between group analyses were analyzed by using one way ANOVA and bonferonni post HOC test after 8 weeks.

RESULTS: After completion of the intervention, the Pain and functional disability was decreased and the grip strength was increased in BFR group ($p < 0.05$).

CONCLUSION: Finally, the study concluded all groups have showed improvements but low load resistance training with BFR showed significant improvement in the pain, functional disability and grip strength among subjects with chronic lateral epicondylitis. BFR training is a new boon to musculoskeletal rehabilitation, game changer in field of geriatric rehabilitation and still researches going on to find its effects in various systemic disorders.

KEY WORDS: BFR training, Chronic lateral epicondylitis, Low load resistance training, PRTEE, Hand held dynamometer.

Journal of Clinical and Biomedical Sciences

The Effect of Quadriceps Strengthening Exercises and Cryotherapy on Pain, Range of Motion and Muscle Function after Anterior Cruciate Ligament Reconstruction.

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ABSTRACT:

BACKGROUND OF THE STUDY:
Joseph M Hart et al (2014), stated that the application of the ice pack is an effective method for reducing pain and improving knee ROM after ACL reconstruction. Similarly Quinette Louw et al (2017), states that there is concern that quadriceps exercises result in increased anterior-posterior knee laxity and improves range of motion. The anterior cruciate ligament (ACL) of the knee may get lower extremity pain which is caused by sudden pivoting during sports injuries, also during work injuries in ACL injury.

AIM OF THE STUDY
This study aim is to compare the effect of cryotherapy and quadriceps strengthening exercise on pain, range of motion and muscle function after ACL reconstruction surgery.

METHODS:
This study includes 30 patients, both male and female who fulfilled the inclusion criteria within the age group 20 to 40 years of age and they are divided into Group A and Group B. both the groups receive the treatment sessions of alternate days, upto 4 weeks and duration is 20 mintues / day. Each group contains 15 members. Group A receives quadriceps strengthening exercises and Group B receives cryotherapy. The outcome measure used in the study is pain (visual analogue scale), range of motion (goniometer) and muscle function (hop test).

RESULT AND CONCLUSION:
The results of the study states that each group shows p value however, It is concluded that group A quadriceps strengthening was more effective than group B cryotherapy application in reducing pain, increasing range of motion and improved muscle function.

KEYWORDS:
Anterior cruciate ligament reconstruction (ACLR), quadriceps, cryotherapy, anterior cruciate ligament, hop test, Range of motion.

Journal of Clinical and Biomedical Sciences

Hypopressive Exercises and Reverse Kegels Exercises on Postnatal Mothers with Urinary Incontinence

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Background

PURPOSE OF THE STUDY: The purpose of the study is to find the Effectiveness of Hypopressive Exercises versus Reverse Kegels Exercises on Postnatal Mothers with Urinary Incontinence

METHODS: 30 Mothers (between age group of 25 – 35 years) clinically pre diagnosed with urinary incontinence with PERFECT score were included in the study. with informed consent, they were divided into two groups, the protocol was explained to the subjects. Group A (n=15) Mothers were given hypopressive Exercises and Group B (n=15) Reverse Kegels Exercises Mothers were given for 3 sessions per week for 4 weeks. This session lasted between 30 to 40 minutes. The outcome measure of the Exercises was measured using UI – QUID and PERFECT test. Results were tabulated using statistical analysis.

RESULT: The analysis shows that the mothers underwent Hypopressive Exercises have significant reduction in urinary incontinence (p-value) $P<0.0001$.

CONCLUSION: This study concluded that the mothers underwent Hypopressive Exercises have significant reduction in Urinary Incontinence and increase in Pelvic Floor Muscle Strength

IMPLICATIONS: The Hypopressive Exercises strengthens the Deep Core Muscles which increases body awareness by training the Pelvic Floor Muscles in women and reduces Urinary Incontinence. These Exercises not only pays attention in maintaining proper body posture and Pelvic Floor Muscles activation. But also had a positive impact on the Quality of Life and reduction of incidents of urine leakage among mothers.

KEY WORDS: Post natal mothers, Urinary Incontinence, Hypopressive Exercises, Reverse Kegels Exercises, PERFECT test, Questionnaire for female Urinary Incontinence Diagnosis (QUID).

Journal of Clinical and Biomedical Sciences

Effectiveness of mckenzie's exercise versus rocabado's technique on pain and ROM among neck pain patients with coexisting temporomandibular joint pain

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INTRODUCTION:-
The temporomandibular joint (TMJ) is a hinge joint that connects the jawbone (mandible) to the skull, specifically to the temporal bone. It plays a crucial role in various jaw movements, including chewing, speaking, and yawning. Temporomandibular joint disorders can occur due to various reasons, such as trauma, arthritis, teeth grinding, stress, or improper alignment of the jaw. Symptoms of Temporomandibular disorder may include jaw pain, clicking or popping sounds when moving the jaw, difficulty in opening or closing the mouth, and headaches.

AIM OF THE STUDY:-
The Aim of the study is to to find the effectiveness of Mckenzie exercise and Rocabado's technique on Temporomandibular joint with neck pain

OBJECTIVE OF THE STUDY:-
To find the effectiveness of Mckenzie's exercise versus Rocabado's technique in the intervention to reduce the pain, ROM and improve the ADL in Temporomandibular joint pain.

METHODOLOGY:-
Thirty participants aged between 20 and 40 years were selected based on specific criteria and randomly divided into two groups: Group A (15 participants) received Mckenzie Exercises, while Group B (15 participants) received Rocabado's Technique. Pain levels were evaluated using the Numerical Pain Rating Scale, and range of motion was assessed using a plastic Vernier caliper and quality of life by fonseca's questionnaire

RESULTS AND CONCLUSIONS:-
When comparing pre-treatment and post-treatment scores of pain and disability, mean and standard deviation were calculated for both Group A and Group B. The results revealed that Group A exhibited greater improvement in mean and standard deviation across numerical pain rating scale, Fonseca'squestionnaire, and range of motion values compared to Group B

The study demonstrated that Group A exhibited superior progress in both pain reduction and functional disability compared to Group B.

KEYWORDS:-
Temporomandibular disorders, Mckenzie Exercises, Rocabado's Technique, Numerical pain Rating Scale, Fonseca's Questionnaire.

Journal of Clinical and Biomedical Sciences

Effectiveness of breath hold technique in bronchial asthma patients to improve pulmonary functions and quality of life – A case study

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Abstract

Background and Objectives: According to WHO, Asthma is a major noncommunicable disease (NCD), affecting both children and adults. Inflammation and narrowing of the small airways in the lungs cause asthma symptoms. Inhaled medication can control asthma symptoms and allow people with asthma to lead a normal, active life. Avoiding asthma triggers can also help to reduce asthma symptoms. Many patients with difficult asthma have improper inhaler techniques. Schatz M, Thoonen BP, Park J et al, evidences indicate that improving compliance and inhaler technique results in better asthma outcome, including improved control and quality of life. The objective of this study is to find the effectiveness of breath hold technique in bronchial asthma patients to improve pulmonary functions.

Methodology: With the convenience sampling method samples from private practice and hospital and community volunteers satisfying the inclusion criteria. All subjects had the cognitive ability to follow complex instructions and were able to demonstrate them. No subject had a known history of any neurologic deficits. Any subject who did were excluded from the study. Outcome measures included the Pulmonary function test according to American Thoracic Society criteria with parameters FEV1 and FVC for functional assessment. Pre- and post-intervention data were analyzed using paired t-tests to determine statistical significance.

Results: Statistical analysis using both dependent and independent ‘t’ test showed that breath hold technique along with conventional therapy improved FEV1 value and FVC. All the pulmonary function parameters increased more in the experimental group than in the control group.

Journal of Clinical and Biomedical Sciences

Injury prevalence ratio in professional cricketers

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BACKGROUND: T20 (20 over) cricket has emerged in the last decade as the most popular form of cricket. International consensus cricket definitions, first published in 2005, were updated in 2016 to better reflect the rise to prominence of cricket.

METHODS: Study design is Analytical, Study type is Questionnaire method, Sampling method is Simple random sampling, Sample size is 78, Study duration was 6 Months, and Study setting was TNCA league team players, Exercise doctor, Kodambakkam.Study included all Professional Cricketers who are presently participating in leagues, age group 16 years -30 years. Study excluded Cricketers who are with academy, neurological disorders and doped earlier.

PROCEDURE : Injury incidence and prevalence rates were calculated using the new international methods and units for elite cricketers over the past decade (season 2015–2016 TO Present). In a Questionnaire Format via Google forms and physical forms, asked to fill with the consent of team's Physio.

RESULTS AND CONCLUSION: The prevalence ratio was based on 10 years of history in musculoskeletal region were, hamstring strain has emerged from being one of the many common injuries in elite cricket is the most common injury in the sport at the elite level. This is presumably in association with increased T20 cricket. Lumbar stress fractures in fast bowlers are still the most prevalent injury in the sport of cricket at the elite level, although these injuries are more associated with high workloads arising from the longer forms of the game. Domestic and international matches have very similar match injury incidence rates across the formats as they play for most of the year without a substantial off-season.

KEYWORDS: Injury surveillance, incidence, prevalence, cricket, bowling

Journal of Clinical and Biomedical Sciences

A review on semont plus maneuver for posterior semicircular canal benign paroxysmal positional vertigo

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ABSTRACT:

BACKGROUND: Vertigo is a feeling of movement when there is no actual movement such as spinning or whirling. Bppv is a syndrome characterized by short lived episode of vertigo in association with rapid change in position. Bppv is of 2 types' canalithiasis and cupulolithiasis. The reported prevalence between 10.7 & 64.0 cases per 1 lakh population and life time prevalence of 2.4%. The common cause appears to be head trauma and vestibular neuritis and the incidence is between 50 & 70 years.

MATERIALS AND METHODS: In this study I reviewed 2 articles in that, they have taken 205 patients were randomized. 99 were allocated to SM and 106 to SM + and it is a prospective randomized trial. Outcome measures are vertigo and effects of single liberatory maneuver either SM or SM+. In another supporting article they were taken 195 patients were randomized 97 allocated to epleys and 99 to SM+ and it is a randomized clinical trial. Outcome measures are vertigo and effect of single maneuver.

RESULTS: The results revealed that semont plus maneuver experienced resolution and it is superior in terms of the time until positional vertigo could be induced.

CONCLUSION: The semont plus maneuver appears to be promising and effective technique for treating posterior canal bppv, but further research is needed to optimize its application and confirm its place as a first line of treatment.

KEY WORDS: benign paroxysmal positional vertigo, vertigo, semont plus maneuver, posterior semicircular canal

Journal of Clinical and Biomedical Sciences

A Study to Compare the Effects of Suboccipital and Sternocleidomastoid Release Technique Versus Mckenzie Exercises in Forward Head Posture Among College Students

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ABSTRACT

Background: Forward head posture is most common misalignment found among college students due to lack of muscle strength and prolonged anterior positioning of cervical spine. Suboccipital and sternocleidomastoid release technique is effective in lengthening the muscle and correction of abnormal craniovertebral angle. The aim of study is to correct the posture and decrease neck disability.

Methods: The participants were selected according to selection criteria. The study design was a comparative study. Totally 30 participants, divided into 2 groups Suboccipital and sternocleidomastoid release technique group A (n=15) and McKenzie exercise protocol group B (n=15) with these were performed (4 weeks/3 sessions). The measurements were Craniovertebral angle and neck disability Index.

Result: The statistical analysis done with the Group A and Group B. Compare with the Suboccipital and sternocleidomastoid release technique and McKenzie exercise protocol improved significantly greater in both groups after 4week the improvement was significantly greater 0.0001 in Suboccipital and sternocleidomastoid release technique than the McKenzie exercise protocol.

Conclusion: The study concludes that both Myofascial Release and McKenzie exercise protocol are significant. However, the Suboccipital and sternocleidomastoid release technique is effective in reducing neck pain and increasing craniovertebral angle.

Keywords: Myofascial release technique, McKenzie exercise protocol, craniovertebral angle.

Journal of Clinical and Biomedical Sciences

Abstracts for PG Students

7th & 8th March 2025, RLJCOPT, SDUAHER, Kolar

Journal of Clinical and Biomedical Sciences

Enhancing the Effectiveness of Manual Therapy Through Cognitive-Behavioural Strategies: A Literature Review

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Abstract

Background: This literature review examines the integration of cognitive-behavioural strategies (CBS) with manual therapy in managing musculoskeletal conditions. Psychological factors like fear-avoidance, self-efficacy, and maladaptive beliefs significantly influence physical health outcomes, and addressing this alongside manual therapy may improve treatment effectiveness.

Objective: To evaluate current evidence on the combined effects of manual therapy and CBS on pain, range of motion, disability, and quality of life.

Methods: A comprehensive search across PubMed, Scopus, and Web of Science using keywords "manual therapy," "cognitive-behavioural strategies," "pain management," "range of motion," and "disability" identified 756 articles. After screening for relevance, 8 studies (systematic reviews, meta-analyses, and RCTs) were included.

Results

- **Pain Reduction:** Studies by Yang et al. and Zhang et al. showed significant pain relief with CBS integration.
- **Improved Range of Motion:** Athanasiadis et al. reported enhanced joint mobility and flexibility.
- **Reduced Disability:** Zhang et al. and Qian Zhang et al. found improved functional capacity.
- **Quality of Life & Psychological Outcomes:** O'Keeffe et al. noted better self-efficacy and reduced fear-avoidance behaviors, while Bernardy et al. highlighted improved social engagement and lower pain susceptibility.

Conclusion: Integrating CBS with manual therapy offers a holistic approach to musculoskeletal management, addressing both physical and psychological aspects. Future research should refine intervention protocols, assess long-term effectiveness, and expand studies across diverse populations to optimize clinical outcomes.

Key words- cognitive-behavioural strategies, Manual Therapy, pain management

Journal of Clinical and Biomedical Sciences

Effect of Theraband Flexbar Exercise versus Vibration Resistance Exercise on Pain, Range of Motion and Grip Strength in Lateral Epicondylitis

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ABSTRACT

BACKGROUND: lateral epicondylitis, commonly known as tennis elbow characterized by pain, decreased range of motion (ROM) and reduced grip strength due to overuse of extensor tendons of the forearm. The study aimed to compare the effect of Thera Band flex bar exercise with conventional exercises and vibration resistance exercise with conventional exercises to reduce pain, improve range of motion and grip strength in individuals with lateral epicondylitis.

MATERIALS AND METHOD: A pre-test and post-test comparative study design; 60 patients with unilateral lateral epicondylitis were selected and randomized into two groups. Experimental group 1 (n=30) received Thera Band flex bar exercise with conventional exercises and experimental group 2 (n=30) received vibration resistance exercise with conventional exercises. The interventions lasted for 6 week. Inclusion criteria are 18-35 years old, confirmed diagnosis of lateral epicondylitis by healthcare professional, positive Mill's and Cozen's tests and subjects who provided informed consent. Exclusion criteria are Rheumatoid arthritis, cutaneous infection, any dislocation of the elbow and humerus and elbow fractures. Outcome measures are (a) Pain intensity as measured with Visual Analog Scale (VAS); (b) Goniometer to measure the (ROM) of wrist flexion and wrist extension (c) Hand-held dynamometer to measure the handgrip strength.

RESULT: Both interventions significantly improved pain, ROM and grip strength. Experiment group 1 has slightly better improvements in the mean values of VAS, ROM, and handgrip strength as compare to Experimental group 2. Significance level; p-value of < 0.05 considered statistically significant.

CONCLUSION: The study conclusion demonstrated reduced pain, improved ROM and handgrip strength in TheraBand flex bar exercise with conventional exercises is more effective than vibration resistance exercise with conventional exercises in treating patients with lateral epicondylitis.

KEYWORDS: lateral epicondylitis, pain, range of motion, grip strength, Thera Band flex bar exercise, vibration resistance exercise.

Journal of Clinical and Biomedical Sciences

Cardiovascular endurance in football and basketball playing college students

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ABSTRACT

OBJECTIVE: Cardiovascular endurance measures the ability and efficiency of the heart and lungs to supply oxygen to the muscles during medium to high intensity physical activity. As the energy requirements and the cardiovascular fitness required for football and basketball is dissimilar, this study aims to find if there is a difference in the cardiovascular endurance among recreational football and basketball playing college students.

MATERIALS AND METHODS: In this clinical measurement, a comparative study was conducted among 20 male college students- 10 recreational football players and 10 recreational basketball players and were assessed for their cardiovascular endurance using the cooper test and Karvonen formula. The heart rate of the samples was measured pre and post test by a pulse oximeter to calculate the Karvonen formula.

DISCUSSION: The duration of the match and the intensity required for both football and basketball is different with football having longer duration with intermittent bursts of high-intensity and basketball match having shorter duration with high-intensity requirements, thus the cardiovascular endurance for both the sport is different. This study used the Karvonen formula to measure the target heart rate and the Cooper test by making the samples cover as much distance as possible within 12 minutes. Due to the distinct energy requirements and cardiovascular fitness it revealed that football players had better VO_2max compared to that of basketball players.

CONCLUSION: The cardiovascular endurance was found to be better in recreational football players than in recreational basketball playing college students.

Keywords: cardiovascular endurance, students, football players, basketball players, Karvonen formula, VO_2max

Journal of Clinical and Biomedical Sciences

Virtual Steps to Stability: Telerehabilitation for Balance and Gait in Parkinson's Disease : A Literature Review.

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ABSTRACT

Background: Parkinson's disease, a prevalent neurodegenerative disorder, leads to progressive motor impairments, notably in balance and gait, which significantly increase fall risk and diminish quality of life. Telerehabilitation has emerged as a viable alternative to in-person therapies, particularly for patients with limited access to traditional rehabilitation services. Innovations such as virtual reality and wearable devices provide additional opportunities to address these challenges, enhancing the accessibility and effectiveness of interventions.

Aim: To review and synthesize existing literature on the effectiveness of telerehabilitation in enhancing balance and gait in individuals with Parkinson's disease (PD).

Methods: A literature searched on PubMed, Google scholar identified articles that determine the effectiveness of telerehabilitation on balance and gait in Parkinson's disease, studies including randomized control trails, systematic review and meta-analysis were analysed.

Results: The literature search revealed that telerehabilitation interventions, including virtual reality and wearable technologies, are effective in improving balance and gait in individuals with PD. Randomized controlled trials demonstrated significant improvements in postural stability and dynamic weight-shifting abilities. The use of wearable devices and smartphone-based platforms further enhanced patient engagement and adherence, contributing to positive outcomes in mobility and balance.

Conclusion: The study highlights that telerehabilitation is found to be feasible, safe and effective alternative to traditional rehabilitation for managing balance and gait impairments in mild to moderate PD. Gaps to be addressed are long term studies are needed to confirm its sustained efficacy and explore its applicability in more advanced stages of PD.

Keywords: Telerehabilitation, Parkinson's disease, Balance and Gait.

Journal of Clinical and Biomedical Sciences

AI-Assisted Posture Evaluation and Physiotherapy Interventions: A Pilot Study on Young Adults

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Abstract

Background: Smartphone overuse is linked to postural abnormalities, such as rounded shoulders and forward head posture, straining cervical and spinal muscles and potentially causing musculoskeletal problems. Early detection and intervention are vital. This pilot study investigates whether structured physiotherapy, guided by the AI Posture Evaluation and Correction System (APECS), a non-radiographic mobile application for accurate postural assessment, can improve postural alignment and reduce musculoskeletal risks. The study also evaluates APECS's ability to detect postural abnormalities.

Materials and Methods: Six university students (3 male, 3 female, aged 20-25) with spinal discomfort and daily smartphone use exceeding two hours were recruited via convenience sampling. Baseline postural alignment was assessed using APECS across anterior, posterior, and sagittal planes. Participants then completed a three-week personalized physiotherapy program (neck mobility, spinal flexibility, strengthening, and stretching exercises) performed six days a week, both supervised and at home. Post-intervention APECS assessments evaluated postural changes.

Results: Each participant concluded the intervention. With mean percentage variations in postural deviations ranging from 0.09% to 24.48%, postural analysis showed improvements. More substantial improvement was seen in subjects with higher initial misalignment. These findings lend credence to the efficacy of structured physical therapy in addressing abnormalities in posture brought on by excessive smartphone use.

Conclusion: This pilot study demonstrates the advantages of focused physiotherapy therapies for enhancing postural alignment in young adults and validates APECS as a useful objective tool for posture assessment. According to the results, physiotherapy can successfully reduce postural abnormalities brought on by extended smartphone use. To further validate these findings, a larger-scale randomized controlled trial is advised.

Keywords: Posture assessment, APECS, physiotherapy intervention, smartphone usage, postural deviation, musculoskeletal disorders, artificial intelligence, postural correction.

Journal of Clinical and Biomedical Sciences

Comparison of high intensity workout exercises and blood flow restriction low intensity workout in Geriatrics: A Literature review

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Abstract

Background: Blood flow restriction (occlusion training) also called KAATSU is a new way to exercise using specialized cuffs or elastic bands to reduce blood flow. Reducing blood flow to working muscles produces metabolic waste product accumulation. With the BFR it may need low to moderate intensity of exercise sufficient to produce the results. BFR is part of PT's scope of practice, PTs may trained well in the physiology and anatomy of the cardiovascular system and also clinical rehabilitation

Objective: To showcase the effect of blood flow restriction occlusion training with low intensity workout exercises and high intensity workout exercises in older age population.

Methods: A literature search was done through sources like PubMed, Google scholar, and the publications were reviewed and presented in visual format.

Result: Low intensity workout with blood flow restriction is more effective than high intensity workout exercises.

Conclusion: Practicing the low intensity workout exercises with blood flow restriction will be more effective to train older age population for gaining muscle mass, strength, for bone related condition

Key words: Blood Flow Restriction training, low intensity workout exercise, high intensity workout exercise, old age population

Journal of Clinical and Biomedical Sciences

A study on the effectiveness of muscle energy techniques versus neck strengthening exercise in patient with non-specific chronic neck pain.

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Abstract

Background: Chronic neck pain is one of the most common health problems and a frequent complaint in the general population. The underlying causes of neck pain can be structural or functional disorders of the spine, muscles, ligaments, joints, or poor posture.

Objective: To find out the effectiveness of muscle energy techniques versus neck strengthening exercise in patient with non-specific chronic neck pain.

Methods: In this comparative study 70 subjects diagnosed with non-specific chronic neck pain were considered for study. After evaluation 70 subjects were divided into two groups' i.e. Group- A and Group-B. Each group consist of 35subjects. Neck strengthening exercise was given for Group A and muscle energy technique was given for group B. Pain and neck disability were assessed before and after intervention by VAS and NDI.

Result: The Data was analysed using mean scores within the two groups paired 't' was performed. When comparing the mean values of (Group A and Group B), Group A subjects treated with muscle energy techniques showed more difference than Group B Neck strengthening exercise with the level of significance $p < 0.001$.

Conclusion: The statistical result shows that there is improvement in both the groups. But when comparing both it is found that muscle energy techniques is more effective than neck strengthening exercises in reducing pain and neck disability among non-specific chronic neck pain.

Clinical implication: 50-70% of people who have experience neck pain will experience another episode within 1-5 years or they will have continuing neck pain, hence this study focuses on treating the non-specific chronic neck pain and prevent the further episodes.

Keywords: Non-specific chronic neck pain, Muscle energy technique, Neck strengthening exercises, post isometric relaxation.

Journal of Clinical and Biomedical Sciences

CHALLENGES AND BENEFITS OF EARLY MOBILISATION IN TRAUMATIC BRAIN INJURY- A CASE STUDY

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Abstract

BACKGROUND: Traumatic Brain Injury (TBI) is a significant cause of disability, affecting cognitive, motor, and sensory functions. Severe TBI, particularly Diffuse Axonal Injury (DAI), poses challenges in rehabilitation due to prolonged immobilization, ICU-acquired weakness (ICU-AW), and associated complications. Early mobilization (EM) plays a crucial role in improving functional outcomes. This case study explores the impact of EM on the recovery of a 17-year-old female with severe TBI.

MATERIALS: The case involves a 17-year-old female who sustained TBI following a head-on collision as a pillion rider on a two-wheeler. She presented with a Glasgow Coma Scale (GCS) score of 7T (E3VTM4) and Rancho Los Amigos (RLA) Level II. CT imaging revealed a left caudate bleed, intraventricular haemorrhage, diffuse cerebral oedema, and Grade 3 DAI. Initially, she required BiPAP ventilation, followed by a tracheostomy and transition to SIMV-PRVC mode.

METHODS: A structured rehabilitation program started as early as 4th day of ICU admission, incorporating positioning, Chest percussion, vibration, passive wheelchair mobilization, active-assisted exercises, trunk movements, and gait training, was implemented over six weeks. Outcome measures included Ranchos Los Amigos Scale (RLA), Mini-Mental State Examination (MMSE), and Berg Balance Score (BBS).

RESULTS: RLA scores increased from level-II generalised response to VII appropriate response within ICU setup, MMSE from 18(moderate) to 24 (mild cognitive impairment) in a week, BBS from 4(high fall risk) to 32(medium fall risk) over 15days and patient was ambulatory with MMT 4/5. The patient regained ambulation with minimal support.

CONCLUSION: The case study presents acute phase of rehabilitation which focuses primarily on early mobilization in TBI rehabilitation enhances functional recovery, reduces ICU-AW, and shortens hospital stays. A multidisciplinary approach and family involvement play crucial roles in patient recovery. Further research is needed to optimize EM strategies in acute TBI management.

KEYWORDS: Traumatic Brain Injury, Early Mobilization, Diffuse Axonal Injury, ICU-Acquired Weakness, Rehabilitation, Physiotherapy, Functional Recovery.

Journal of Clinical and Biomedical Sciences

EFFECTIVENESS OF HOPPING EXERCISES ALONG WITH MOBILISATIONSON FUNCTIONALITY AND DISABILITY IN ANKLE SPRAIN

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ABSTRACT:

BACKGROUND: Ankle sprain is one of the most common musculoskeletal injuries with a high incidence among physically active individuals. Ankle sprain may initially look like minor injury but it can cause serious damage to skeletal muscles and impose high cost on health system. It has been suggested that individuals who sustain ankle sprain may develop residual physical disabilities that impact function from ADL's to sport specific tasks, without adequate care it can result in chronic ankle instability.

METHOD: Twenty patients of both sexes with grade I or II unilateral ankle sprain were participated in the study with at least 2 weeks after acute injury. They were randomly assigned to two groups, one the experimental group received hopping exercises and mobilisations, other the control group received conventional treatment for 4 weeks. Functionality was assessed by measuring ROM using goniometer and disability was assessed by foot and ankle disability index.

RESULT: The pre and post intervention scores of both groups were compared using Goniometer and FADI by paired and independent t-test for analyzing the effects using Xcel. The experimental group showed significant effect on functionality and disability ($p < 0.0001$) in subjects with ankle sprain.

CONCLUSION: This study investigated the effectiveness of hopping exercises combined with mobilizations on functional ability, disability, range of motion in individuals with ankle sprains. The results demonstrate that the addition of hopping exercises to a standard mobilization program can enhance functional ability, reduce disability, and improve range of motion.

KEYWORDS: Ankle sprain, hopping exercises, Mobilisations.

Journal of Clinical and Biomedical Sciences

ADVANCED PHYSIOTHERAPY INTERVENTIONS AMONG FEMALES WITH PRIMARDYSMENORRHEA: A LITERATURE REVIEW

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ABSTRACT

INTRODUCTION: Menstrual pain also known as dysmenorrhea, is a commonly reported menstrual disorder, affects nearly half of reproductive age women. The worldwide prevalence varies between 16% to 91% where 90% in adolescent's girls and about 50% in menstruating women. Dysmenorrhea is classified as primary and secondary dysmenorrhea. Primary dysmenorrhea is due to increased or abnormal uterine activity because of increased production and release of prostaglandins. Clinical features of primary dysmenorrhea are frequent and crampy pain which mainly affects the lower abdomen and radiates to the back or thigh.

AIMS AND OBJECTIVES:
• To identify the effect of advanced physiotherapy available for primary dysmenorrhea.
• To analyse the quality of evidence and summarize the results of available literature.

METHODS: PubMed and Google Scholar database was used for literature search and articles on Randomized Control Trail between 2019 to 2024 were included. Search based on PICO framework was established using a combination of keywords, mesh and Boolean operators to identify the relevant articles. Articles were focused on Physiotherapy Interventions, Primary dysmenorrhea, and Quality of Life.

RESULT AND CONCLUSION: After reviewing six articles based on the result from the available literature Kinesio taping, TENS, Sprint Exercise, LASER, Thermotherapy and uterus manipulation and cranial electrotherapy manipulation was effective.

KEYWORDS: Physiotherapy Interventions- Physical Therapy, Exercise therapy, Exercise
Primary dysmenorrhea – Painful menstruation, Menstrual pain, Pain, Quality of life

Journal of Clinical and Biomedical Sciences

EFFECTIVENESS OF KABAT REHABILITATION WITH MOTOR IMAGERY TECHNIQUE VERSUS MIME THERAPY WITH MOTOR IMAGERY TECHNIQUE ON FACIAL DISABILITY AND SYNKINESIS IN BELL'S PALSY

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ABSTRACT

BACKGROUND: Bell's palsy is an idiopathic paralysis characterized by sudden facial paralysis that often results in significant functional impairment, facial disability, and synkinesis. The face is psychologically vital, crucial for self-concept, communication, and expressing emotions through muscle movement that creates aesthetic symmetry. Various rehabilitation approaches, including Kabat rehabilitation, motor imagery, and mime therapy, have been proposed, but their combined efficacy in Bell's palsy remains underexplored.

METHOD: Thirty individuals (aged 18-50 years) with Bell's palsy, who had been diagnosed within the past six months, were enrolled. Those with other neurological disorders or unable to participate were excluded. Participants were randomized into two groups: Group A received Kabat rehabilitation with motor imagery and electrical stimulation, while Group B underwent Mime therapy with motor imagery and electrical stimulation, both for five days a week over four weeks. Pre- and post-interventions were assessed using the House-Brackmann Scale (HBS) and the Facial Disability Scale (FDS).

RESULTS: HBS and FDS scores were compared pre- and post-intervention using t-tests (paired and independent). Both groups showed significant improvement ($p<0.0001$), but Group A had a more significant post-mean value than Group B.

CONCLUSION: The present study states that both the interventions, Kabat rehabilitation with motor imagery technique and mime therapy with motor imagery technique found to be individually effective in subjects with Bell's palsy. But, when both the groups where compared, Kabat rehabilitation with motor imagery technique was found to be more effective than mime therapy with motor imagery technique.

KEYWORDS: Bell's palsy, Kabat rehabilitation, Motor imagery, Mime therapy.

Journal of Clinical and Biomedical Sciences

EFFECT OF ISCHEMIC COMPRESSION THERAPY ON PAIN AND FUNCTIONAL DISABILITY IN INDIVIDUALS WITH CERVICOGENIC HEADACHE

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Abstract:

Background: Cervicogenic headache, a distinct clinical entity first described by Norwegian neurologist Sjaastad in 1980's, is a type of headache disorder that originates from cervical spine. Despite its prevalence, it often remains underdiagnosed, leading to inadequate management and a significant impact on individual quality of life. Various therapeutic approaches such as physical modalities, exercises, injections, and even surgical procedures were proposed.

Methods: A total of 30 participants with Cervicogenic Headache based on International headache society (IHS) criteria were selected and divided into two groups I & II respectively. Group I was ICT group that received Ischemic compression therapy for 3 sessions a week for 4 weeks and group II was control group with no treatment. To record the pain intensity and functional disability., Numerical pain rating scale and neck disability index were used.

Result: The pre and post intervention scores of both groups were compared using NPRS and NDI by paired and independent t-test for analyzing the effects using Xcel. The ICT group showed significant effect on pain and functional disability ($p < 0.0001$) in cervicogenic headache subjects.

Conclusion: This study investigated the effectiveness of ischemic compression therapy in reducing pain and functional disability in individuals with cervicogenic headache. The results demonstrate that ischemic compression therapy is a valuable treatment approach for managing cervicogenic headache, yielding significant reductions in pain intensity and functional disability.

Keywords: Cervicogenic headache, ischemic compression therapy, pain management, functional disability.

Journal of Clinical and Biomedical Sciences

"Development and Validation of a Questionnaire on Patients' Knowledge and Beliefs About Chronic Pain Among Chronic Low Back Pain Individuals in India"

Ms. Nithya Shree N (MPT),Dr. Vijayakumar RV (PT), Dr. Jasrah Javed (PT)

Abstract:

Background: Chronic pain, now recognized as a disease, is a leading cause of disability worldwide. Chronic low back pain (CLBP) remains the second most common reason for clinical visits. The biopsychosocial model highlights the importance of integrating physiological treatment with patient engagement through pain science education and self-management. Understanding patients' knowledge and beliefs about chronic pain is essential for implementing these approaches effectively in India.

Objective: This study aims to develop and validate a qualitative questionnaire that explores how patients' beliefs about chronic pain causal mechanism influence their treatment choices and recovery expectations.

Methods: The study follows a two-phase process. Phase 1 (Completed) involved an extensive literature review to identify key factors and develop an open-ended questionnaire. Thirteen key dimensions were identified, forming the basis for 17 open-ended questions. Phase 2 focuses on validation through qualitative pretest interviews with patients and physiotherapists to assess clarity and relevance. Item refinement has be conducted based on feedback, and content validity will be confirmed by physiotherapists, pain experts, and patients.

Results and Outcomes: The developed questionnaire showed an overall agreement of 80% and a Content Validity Index (CVI) of 0.87, indicating strong validity for assessing chronic pain knowledge and beliefs regarding chronic pain, treatment choices, and recovery expectations among individuals with chronic low back pain.

Conclusion: This tool is expected to support tailored pain education and enhance physiotherapy management for CLBP in India.

Keywords: Chronic pain, chronic low back pain, patient knowledge, beliefs, qualitative analysis

Journal of Clinical and Biomedical Sciences

Comparison of Myofascial Release and Rood's Approach on Spasticity and Motor Function of Upper Limb in Stroke Patients: A Literature Review

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Abstarct

BACKGROUND:- Around eighty percent of patients had a stroke, with an ischemic stroke being the most prevalent form. The goal of therapeutic techniques like MFR the Rood sensory-motor approach is to reduce upper extremity muscle stiffness while improving motor control. To determine how effectively it improves motor function or control spasticity in stroke patients. The aim of the study is to assess and compare the efficacy of various approaches in stroke patients.

Method: Various electronic databases, such as PubMed, Google Scholar, and Scopus, were thoroughly searched. The study examines papers published between 2018- 2025 and includes full texts, English-language articles, RCTs, and systematic reviews published in peer-reviewed journals. Standardized measures such as the MAS, FMA, WMFT, and Barthel Index were used to examine the results, and non-human participants, children, were excluded. The study design, intervention procedures, and outcome measures such as improvement in motor function, reduction of spasms, and ADLs were the primary focuses. Eight articles in all were selected.

Results: The review of selected studies showed Both MFR and Rood's Approach demonstrated minimizing spasticity and enhancing motor function. Spasticity Reduction -Parikh et al., 2021, Derakhshanfar et al., 2023 MFR demonstrated significant reduction in spasticity. Shaikh et al., 2022; Chaturvedi & Kalani, 2020 Rood's Approach, showed moderate effectiveness in reducing spasticity. Motor function improvement**:-** enhanced range of motion, improved grip strength, better performance in functional tasks (Tariq et al., 2022; Noor Ul Ain et al., 2023).

Conclusion: MFR and Rood's approach both work effectively to improve upper limb motor function and reduce stiffness in stroke patients. Although Rood's approach is useful for neuro-facilitation in long-term rehabilitation, MFR has stronger results for immediate spasticity reduction and functional mobility. For stroke survivors, additional research should look at combined regimens to optimize therapeutic outcomes.

Keywords :- Myofascial Release(MFR) , Rood's Approach ,Upper Limb Spasticity, Motor Function, Stroke Rehabilitation.

Journal of Clinical and Biomedical Sciences

"ENHANCING WELL-BEING: THE IMPACT OF CLINICAL PILATES ON GERD SYMPTOMS IN POST-MENOPAUSAL WOMEN"

Subapradha Jayamoorthi[1] , Paulraj Manickavelu[2] , Ajithkumar Arumugam[3].

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ABSTRACT

BACKGROUND

Post-menopausal women experience a significantly higher prevalence of gastro-esophageal reflux disease (GERD), with symptoms occurring two to three times more often than in pre-menopausal women. This increase is mainly attributed to hormonal changes that affect the function of the lower esophageal sphincter, leading to weakened control of acid reflux. These changes contribute to more frequent and severe GERD symptoms. Clinical Pilates, a low-impact exercise focusing on core strength, flexibility, and posture. By enhancing diaphragmatic function and improving overall posture, Clinical Pilates may offer effective symptom relief for postmenopausal women.

MATERIAL

This study included 20 post-menopausal women, aged 40 to 60, who had been menopausal for over a year and had GERD. The participants were selected based on a score above 8 on the Gastroesophageal Reflux Disease Questionnaire and a DeMeester score ranging from 14.7 to 100, indicating mild-to-moderate GERD. Women with recent surgeries, injuries, fractures, or neurological conditions were excluded. The participants completed pre- and post-assessments with outcome measures.

METHODS : The study comprised 20 women aged 40-60, who were post-menopausal for more than a year and had a diagnosis of GERD. Participants were assessed before and after the intervention using the Reflux Disease Questionnaire and DeMeester score to evaluate GERD symptoms. The intervention consisted of Clinical Pilates sessions, lasting 45 minutes each, conducted daily for four weeks. Statistical analysis was used to compare the pre- and post-intervention scores and evaluate the effectiveness of the Pilates program in improving GERD symptoms.

RESULT: After four -weeks of Clinical Pilates, participants showed impressive improvements in GERD symptoms. Statistical analysis of pre- and post-intervention scores from the Reflux Disease Questionnaire and DeMeester score revealed substantial symptom relief. These results demonstrate the effectiveness of Pilates in managing GERD, presenting it as a promising, non-invasive solution for postmenopausal women seeking relief from discomfort.

CONCLUSION: This pilot study suggests that Clinical Pilates effectively alleviates GERD symptoms in postmenopausal women, enhancing diaphragmatic function and overall quality of life. Clinically, Pilates presents a complement conventional GERD therapies, offering a safe, accessible way to manage symptoms and improve health outcomes.

KEYWORDS: Post- menopausal womens , clinical pilates exercise, GERD.

Journal of Clinical and Biomedical Sciences

"Test-Retest Reliability of a Single Leg Heel Raise Test Measuring Device for Calf Muscle Endurance Assessment".

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Abstract:

Background determines the consistency and reproducibility of measurements, providing evidence ensuring the device's clinical applicability and its effectiveness as a reliable tool for evaluating calf muscle endurance in various populations.
It establishes the test-retest reliability of a heel raise test measuring device, providing clinicians and researchers with a validated tool for assessing calf muscle endurance. Reliable measurement is crucial for effective rehabilitation, injury prevention, and enhancing athletic performance, supporting evidence-based physical therapy and sports sciences practices.

Materials and Methods- Following necessary approvals, calf muscle endurance was assessed using an ankle measure for endurance and strength (AMES) device. Thirty healthy adults (20-30 years old, male and female, and within normal BMI) were included in the study. Test-retest was assessed on two occasions (one week apart).

Analysis: Data analysis was performed using SPSS Jamovi 2.6.13 version. Data was tested for normality, and interrater reliability was calculated by intraclass correlation coefficient (ICC).

Result - After performing a Shapiro-Wilk test, the data is normally distributed with the mean heel raises of 24 and 23.9 on the right and left, respectively. As the data is normally distributed, a paired sample t-test was performed, which showed excellent interrater reliability between two trials (ICC-0.989.95%CI:0.983 to 0.997). No adverse events were reported.

Conclusion- It is fundamental for effective diagnosis, treatment planning, monitoring in both clinical and athletic settings. It ensures consistent, accurate assessment of calf muscle function, patient care, and research outcomes. The device was reconstructed referring to the study Amy D. Sman "Design and Reliability of a Novel Heel Raise test measuring device for plantarflexion Endurance in 2014.

Implication: This device can be used for further studies to assess the normative values for a particular population's rehab progress.

Keywords- Heel raise test device, calf muscle endurance, single leg heel raise test, test-retest reliability.

International Conference on Physiotherapy Education and Research

"ENHANCING RECOVERY: THE IMPACT OF HYDROTHERAPY AND VIRTUAL REALITY ON LOWER EXTREMITY FUNCTION AND INDEPENDENCE IN POST-STROKE SURVIVORS"

Ajithkumar Arumugam[1],Subapradha Jayamoorthi[2] , Jeyanthi.S[3] .

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ABSTRACT

BACKGROUND: Stroke survivors frequently struggle with impaired lower extremity function, which significantly affects their mobility and independence. This prevalence highlights the need for effective rehabilitation strategies. Hydrotherapy and virtual reality are emerging as promising therapies to improve balance, core strength, and lower extremity function. Integrating these innovative approaches may enhance recovery, enabling stroke survivors to regain independence , engage in daily activities, improving their quality of life.

MATERIALS: This study included 10 participants, both male and female, aged between 40 and 60 years. Inclusion criteria were based on a Lower Extremity Functional Scale (LEFS) score below 50 and a Tinetti Balance score ranging from 19 to 24, indicating moderate fall risk. Participants with recent surgery, injury, hearing or vision impairments, severe spasticity, or other neurological conditions were excluded. The intervention lasted for four weeks, the effectiveness was evaluated, with notable improvements observed in the participants.

METHODS: A pilot study taken with totally 10 post stroke survivors with reduced lower extremity function , balance and core stability between the age of 40- 60 yrs were selected under the selection criteria . post stroke survivors were given virtual reality training combined with hydrotherapy. Post test taken for 10 samples with regular follow up. The lower extremity functional scale and tinette balance scale is an outcome measure that is used before and after the treatment.

RESULT: After completing the four –weeks of intervention shows significant improvements in lower extremity function and balance among the 10 post-stroke survivors following combined hydrotherapy and virtual reality training. Pre- and post-treatment assessments using the Lower Extremity Functional Scale and Tinetti Balance Scale indicated enhanced mobility and stability, supporting the effectiveness of these interventions in rehabilitation.

CONCLUSION: In conclusion, combining hydrotherapy and virtual reality improves lower extremity function and balance in post-stroke survivors. These findings highlight the effectiveness of these innovative rehabilitation methods in enhancing mobility, supporting independence, and boosting the overall quality of life for stroke recovery. Future studies involving larger and more diverse populations could further validate these approaches, providing deeper insights into their long-term benefits.

KEYWORDS: Virtual reality , post stroke survivors , hydrotherapy .

Potential of Haptic Feedback in Reducing Hyperactivity and Preventing Neurological Issues in Children: A Literature Review.

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Abstract

Background: Hyperactivity, commonly associated with ADHD, is characterised by impulsivity, restlessness, and difficulty maintaining focus. If left untreated, it can contribute to long-term neurological challenges. Early intervention is crucial to mitigate these risks. Wearable devices, particularly smartwatches with haptic feedback, offer real-time monitoring and behaviour regulation. These non-invasive tools provide a discreet and personalised approach to managing hyperactivity and supporting early intervention strategies.

Material and Methods: A comprehensive literature search was conducted across PubMed, Scopus, and Web of Science using the keywords "haptic feedback," "hyperactivity," "ADHD," "wearable devices," and "neuro developmental disorders." A total of 548 articles were identified. After applying inclusion and exclusion criteria, 40 studies (systematic reviews, meta-analyses, and randomised controlled trials) were selected. The included studies focused on the effectiveness of wearable devices, especially smartwatches, in tracking activity levels, providing real-time feedback, and supporting early intervention for children with ADHD or related neurological conditions.

Results: Findings suggest that wearable devices utilising haptic feedback can help reduce hyperactivity and improve behavioural regulation in children. These devices enable real-time activity tracking and provide discreet, immediate feedback, aiding children in enhancing focus and self-regulation without the need for disruptive interventions.

Conclusion: Smartwatches with haptic feedback offer a promising, non-invasive strategy for managing hyperactivity in children. As digital technology becomes increasingly integrated into healthcare, wearable devices present a novel opportunity for early intervention and long-term neurological development. Future research should explore their long-term efficacy and integration into pediatric care strategies.

Keywords: Haptic feedback, hyperactivity, ADHD, wearable devices, neurodevelopmental disorders

Fall Risk Prediction in Knee Osteoarthritis Patients Using the OneStep App: An Observational Pilot Study of Gait Parameters

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Abstract

Background: Osteoarthritis is a degenerative joint disease where new bone grows at joint edges as articular cartilage is destroyed.[1] Individuals with knee OA have a higher fall risk compared to healthy older adults.[3] Falls are a leading cause of health issues in the elderly, resulting in significant financial strain on the healthcare system due to their associated complications. [3] Reduced gait speed, poor double-support and swing phase performance, and a 10-step cadence drop increased fall risk. Clinical walking evaluations lack consistent procedures, relying on examiner skills to identify abnormalities. [2]The OneStep app effectively assesses gait in healthy adults, being precise, cost-effective, and convenient, serving as a motion lab alternative.[7]

Methods: Participants aged 55-85 with grade 2+ knee osteoarthritis per Kellgren-Lawrence criteria, able to walk unassisted with or without technology were included.Participants with severe neurological diseases impacting gait, significant cognitive impairment, limb length disparities, recent knee surgery, congenital lower limb deformities, or other neurological or developmental impairments will not be eligible to participate.were excluded. Eight participants participated and the mobile was strapped to participants' thigh for gait assessment using the OneStep app. Participants walked a 10-meter path at their own pace for 5 minutes. The app recorded cadence, speed, stride length, swing phase, and double support.To detect higher fall risk, criteria included: 91.8 step/min or lower cadence, 85.10 cm/s or slower gait speed, 102.5 cm or less stride length, swing phase equal to or under 26.6%, and double support phase at 36.6% or more.

Results: Based on OneStep app data, Subjects 3 and 8 in the study were identified as high fall risk due to decreased stride length and speed. Despite varied double support phase, cadence and swing phase were consistent. These findings suggest the app effectively detects gait issues associated with fall risk in some participants.

Conclusion: The OneStep app assesses gait metrics in knee osteoarthritis patients, aiding fall risk identification. This user-friendly tool, demonstrated in a pilot study, is portable and accurate for clinical settings. Further research in larger samples is needed to validate its effectiveness in predicting fall risk for early interventions.

Key words: Osteoarthritis, OneStep, Gait Parameters, Fall risk

Journal of Clinical and Biomedical Sciences

CME on "Drug targets in therapy"

24th April 2025, Pharmacology, SDUMC, Kolar-563101

In **the month of April 2025 on 24th CME "Drug targets in therapy"** was conducted by Department of Pharmacology along with Guest speakers Dr. KNV Prasad, Dr. Belinda George, Dr. Lavanya SH followed by Dr. Srinivas C .

Following are the list of Topics arranged during the session.

1. **Dr. KNV Prasad** carried out a session on Childhood obesity is a major health concern and precursor to adult Non communicable health disease.
2. **Dr. Belinda George** explained about strategies to lose weight using medications extent of lose weight and lifestyle modifications.
3. **Dr. Lavanya SH** focused mainly on treatment of Osteoporosis. She pointed out that anabolic drugs followed by Anti Resorptive drugs are effective treatment for osteoporosis.
4. **Dr. Srinivas C** Rheumatologist explain role of various drugs used in Rheumatic diseases.

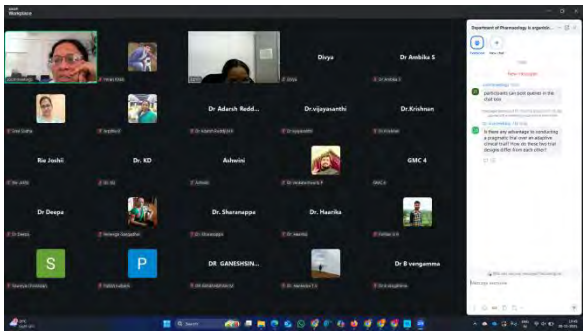
Over 60 delegates attended the session with Department of Pharmacology and staff with students and **4 guest speakers**.

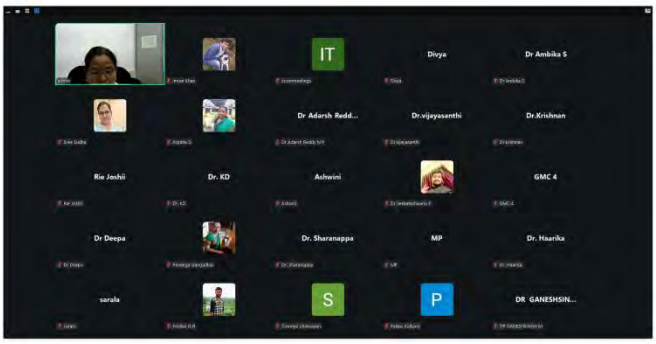
Journal of Clinical and Biomedical Sciences

Guest Lecture/Webinar-"Pragmatic trials" National level Organized

28th November 2025, Pharmacology, SDUMC, Kolar-563101

Guest Lecture/ Webinar was conducted on 28-11-2025, on the Topic "**Pragmatic trials**" National level organized and hosted on Zoom platform from 10:00 a.m. to 11:00 a.m. **Dr. S Seethalakshmi** the speaker defined various terminologies associated with Pragmatic trials. She then explained the importance; advantages of Pragmatic Trials, along with that she also discussed the types of Pragmatic trials with methodology. Later she concluded the talk by comparing Pragmatic trials, Randomised clinical trials also adaptive clinical trials. Delegates all over the country at National level attended the session **about 66 delegates along with Department of Pharmacology SDUMC** were present for the session.



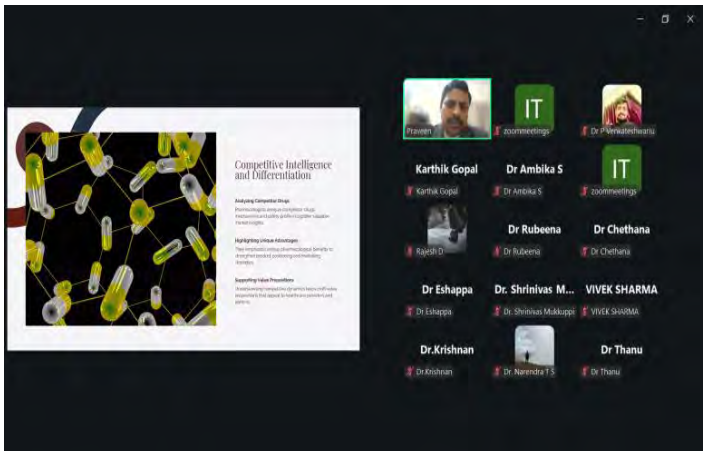


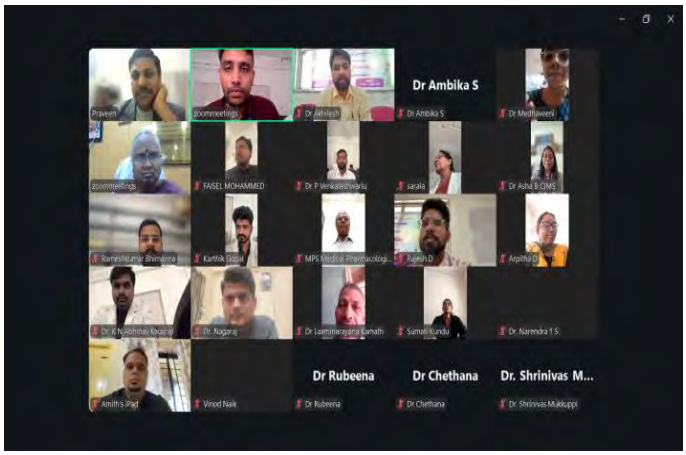
Journal of Clinical and Biomedical Sciences

Guest Lecture on Role of Pharmacologist in Industry for Entrepreneurship

11th December 2025, Pharmacology, SDUMC, Tamaka, Kolar-563101

Dr. Praveen R Alumni of SDUMC gave a guest lecture on 11th December 2025 about the topic Role of Pharmacologist in Industry for Entrepreneurship, Pharmacovigilance and as a Scientist contributing for the scientific research and other roles important for the future of Pharmacologist for Post graduates about 66 delegates attended the guest lecture in Nation level.





Journal of Clinical and Biomedical Sciences

"International day against drug abuse and illicit trafficking"

26th June 2025, Psychiatry, SDUMC, Kolar-563101

S/N	EVENT REPORT
1	**Name & Level of Event:**
	Awareness Program on International Day Against Drug Abuse and Illicit Trafficking – Institutional Level Event
2	**Background / Introduction:**
	The Department of Psychiatry, Sri Devaraj Urs Medical College, Kolar, in collaboration with the NSS Unit, observed the International Day Against Drug Abuse and Illicit Trafficking on 26th June 2025 at the Silver Jubilee Auditorium, SDUAHER. This observance aligns with the global effort to strengthen action and cooperation in achieving a drug-free world. The theme of this year's campaign focused on promoting respect, empathy, and evidence-based care for individuals affected by substance use, while combating stigma and discrimination. This event was organised as a part of the **Sri R L Jalappa Birth Centenary Year Celebrations**, further highlighting the institution's dedication to social responsibility and public health. The programme aimed to spread awareness, educate students and staff about the legal, psychological, and societal aspects of substance abuse, and inspire a community-level commitment to a drug-free environment. It reflected the institute's ongoing commitment to student mental health, holistic well-being, and community outreach.
3	**Venue**: Silver Jubilee Auditorium, SDUAHER,Tamaka, Kolar
4	**Sponsors**: SDUAHER
5	**Inauguration:** The formal inauguration of the programme was held at 10:30 AM, in the presence of esteemed dignitaries and law enforcement officials. The chief guests for the event were: - Mr. H C Jagadeesha, K.S.P.S., Addl. SP of Police, Kolar - Mr. Rajesh R, K.S.P.S., DySP of Police (Cybercrime, Economic Offences, Narcotics), Kolar The Dignitaries were Dr B Vengamma (Vice chancellor, SDUAHER), Dr Muninarayana (Registrar, SDUAHER), Dr Prabhakar (Principal & Dean FOM, SDUMC), Dr Aravind Natarajan (Dean FAHCP), Dr Krishnappa J (Medical Superintendent, RLJH & RC), Dr Mohan Reddy (Prof & HOD dept of Psychiatry). Their presence underscored the vital role of law enforcement in addressing drug-related issues and enforcing legal frameworks effectively

	Speakers / Judges / Chairman / Panel Team
	The event featured an interdisciplinary panel of experts from Psychiatry, Clinical Psychology, Law Enforcement, and Student Welfare: - Dr. Pradeep T S – "Numbers behind substance abuse in the community – how big is the problem?" - Dr. Rajshekhar Y – "Journey from recreation to rehabilitation" - Mr. H C Jagadeesha – "Legal Aspects of Drug Abuse" - Mr. Rajesh R – "Cybercrime & Online Betting" - Asso. Prof. Damodar Rao – "Psychological Aspects of Drug Abuse & Addiction"
7	**Participants & Delegates in Number:** The programme saw enthusiastic participation from: - Undergraduate and postgraduate students of SDUMC and allied health sciences - Faculty members from various departments - NSS and YRC volunteers - Psychiatry department staff and social workers An estimated 800+ attendees were present for the awareness programme.
8	**Valedictory function:** The event concluded with a Vote of Thanks by Dr. Purushotham A, Assistant Professor, Department of Psychiatry. All participants were appreciated for their active engagement and were encouraged to continue promoting awareness on substance use prevention within their respective communities.
9	**Any other information:** **Highlights of the Event** - Thought-provoking and data-driven presentations from psychiatry and public health experts - Interactive legal and cybercrime discussions by senior police officials - A strong emphasis on mental health, rehabilitation, and compassionate care - Participation from a multidisciplinary audience including students, doctors, and allied professionals - NSS coordination for awareness dissemination and community outreach - The Nasha Mukt Bharat Abhiyaan pledge was administered publicly by the Addl. SP of Police, creating a moment of collective solidarity


AND ILLICIT TRA
Venue-
SDUAHER
26th June
Jubile
Auditorium


ILLICIT TRAFFICKING
On 26th June 2025
Silver Jubilee Auditorium
Organised by
IONAL DAY AGAINST DRUG ABUSE
TRAFFICKING
June 2025
TAMAKA, KOLAR-563103 Cordially invites you
Observation of
INTERNATIONAL DAY AGAINST DRUG ABUSE
AND ILLICIT TRAFFICKING
On 26th June 2025
TAMAKA, KOLAR-563103 Cordially invites
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INTERNATIONAL DAY AGAINST DRUG ABUSE
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On 26th June 2025
Venue- Silver Jubilee Auditorium
Organised by
SDUAHER


INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING
On 26th June 2025
Venue- Silver Jubilee Auditorium
Organised by
This would include
1.Cannabis Plants(ganja)
a)HASHISH (CHARRAS)
b) HASHISH OIL
2. Opium(POPPY PLANT)
Codeine
SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
CYBER CRIME
ATTACKS


body and mind when being taken in
the body.
• A drug is something that affects your
• Drugs pass through the body and
brain's neurotransmitters.
LATE SRI R.L JALAPPA BIRTH CENTENARY YEAR CELEBRATION
SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A Deemed to be University)
TAMAKA, KOLAR-563103 Cordially invites you to the
Observation of
INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING
On 26th June 2025

Journal of Clinical and Biomedical Sciences

"Awareness Programme and Poster Presentation Competition on "World Suicide Prevention Day-2025"

10th and 11th September 2025, Psychiatry, SDUMC, Kolar-563101

Journal of Clinical and Biomedical Sciences

Name of the event: AWARENESS PROGRAMME AND POSTER PRESENTATION COMPETITION ON WORLD SUICIDE PREVENTION DAY.
Date of the event: 10th September 2025
Name of the department: Department of Psychiatry , SDUMC.

Sl. No.	Event Report
1	**Level of the event**
	district level
2	**Background / Introduction**
	The department of Psychiatry ,SDUMC, conducted awareness program on 10/09/2025 on the event of world suicide prevention day with the theme, "Changing The Narrative On Suicide-Start The Conversation". This triennial theme is with the call to action "Start the Conversation". It is about transforming how we perceive this Complex issue and shifting from a culture of silence and stigma to one of openness, understanding, and support. By initiating these vital conversations, we can break down barriers, raise awareness, and create better cultures of support. The program was held in government first grade collage, kolar. With gathering of students of about 200 in number. The program began with the welcome address by Prof. Patrick. This was followed by inauguration ceremony with watering of plants. The keynote speech was given by Dr. jagadeash (clinical psychologist) and Dr. Mohan Reddy, (professor and HOD dept. of psychiatry). Points such as markers for identification of a person prone to suicide and ways to identify them, how to prevent suicide, the reason for increasing incidence of suicide that too mainly in younger population , how can they seek for help during these problems have been mainly highlighted.
3	**Venue**
	The program was held in government first grade collage, kolar
4	**Sponsors**
	SDUAHER
5	**Valedictory** The program was concluded with the Vote of thanks by Patrik Rajkumar, professor.
6	**Any other information**
	Photos of the enclosed

Photos of the event


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EDICAL COLLEGE
- 563103.
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REVENTION DAY
SUICIDE-START THE CONVERSATION"
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(Affiliated to Bangalore North University)
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PROGRA


SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
SRI DEVARAJ URS MEDICAL COLLEGE
Tamaka, Kolar - 563103.
DEPARTMENT OF PSYCHIATRY
WORLD SUICIDE PREVENTION DAY
THEME : " CHANGING THE NARRATIVE ON SUICIDE-START THE CONVERSATION "
VENUE :
10th SEPTEMBER
Govt First Grade College, Kolar
(Affiliated to Bangalore North University)
YOUTH RED CROSS WING
PROGRAM:

Journal of Clinical and Biomedical Sciences

Date of the event: 11th September 2025
Name of the department: Department of Psychiatry, SDUMC.

Sl. No.	Event Report
1	**Level of the event**
	district level
2	**Background / Introduction**
	The department of Psychiatry ,SDUMC, conducted awareness program on 11/09/2025 on the event of world suicide prevention day with the theme, "Changing The Narrative On Suicide-Start The Conversation". This triennial theme is with the call to action "Start the Conversation". It is about transforming how we perceive this Complex issue and shifting from a culture of silence and stigma to one of openness, understanding, and support. By initiating these vital conversations, we can break down barriers, raise awareness, and create better cultures of support. The program was held in Janatha High School Kembodi. With gathering of students of about 400 in number. The program began wih the welcome address by V. Venkateshappa. The keynote speech was given by Dr. Muninarayana C registrar sduaher, Dr. Purushotham A, assistant profesor, and S. Chandrappa principal of school. Points such as markers for identification of a person prone to suicide and ways to identify them; how to prevent suicide, the reason for increasing incidence of suicide that too mainly in younger population, how can they seek for help during these problems have been mainly highlighted. This was followed by distribution milk with biscuit. By Dr. Muninarayana C and Dr. Mohan Reddy M.
3	**Venue**
	The program was held on Janatha High School Kembodi
4	**Sponsors**
	SDUAHER
5	**Valedictory** The program was concluded with the Vote of thanks by Manjunath, teacher.
6	**Any other information**
	Photos of the enclosed.

Photos of the event


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SRI DEVARAJ URS MEDICAL COLLEGE
GPS Map Camera
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Lat 13.141725° Long 78.204237°
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ಹಳೆಯ ವಿದ್ಯಾರ್ಥಿಗಳ ಸಂಘ (ನೋಂ)
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GPS Map Camera
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Journal of Clinical and Biomedical Sciences

"CME on "World Alzheimer's Day-2025"

19th September 2025, Psychiatry, SDUMC, Kolar-563101

S/N	EVENT REPORT
1	**Name & Level of Event:**
	Dementia awareness Program on "Breaking silence, reducing stigma, enabling timely care: Ask about Dementia, Ask about Alzheimer's"
2	**Background / Introduction:**
	The Department of Psychiatry & Physiology, SDUMC in collaboration with Dementia India Alliance and AAPI, Bangalore chapter. The program began with a welcome address by the final year postgraduate, who highlighted the importance of observing such day at the district level to strengthen public awareness and community participation. Inaugurated by watering a plant.
3	**Venue**: SNR District hospital, Kolar
4	**Sponsors**: SDUAHER
5	**Inauguration:** By Guest Speakers and Chief guests Dr B Vengamma (Vice chancellor, SDUAHER), Dr. Jagadeesh (District Surgeon), Miss Vaishnavi (Guest speaker), Dr Mohan Reddy (Prof & HoD department of Psychiatry), Dr. Shilpashree (HoD department pf psychiatry in SNR), Dr. Ashok Reddy(Proff. General medicine SNR) . They addressed the participants about importance of dementia and its impact on everybody's life.
6	**Speakers / Judges / Chairman / Panel Team**
	a) Vice Chancellor Dr. G Vengamma, Sri Devraj urs medical college delivered the keynote address, stressing the global and national burden of Alzheimer's disease. She emphasized the need for early screening, family support, and integration of dementia care into primary health services. b) District Surgeon Dr. Jagadeesh spoke about the local scenario, availability of diagnostic and treatment facilities at the district hospital, and the role of primary health centres in identifying early symptoms. He encouraged families to seek timely medical attention. c) Dr. Mohan Reddy Head of the Department of Psychiatry from SDUMC, highlighted clinical features of Alzheimer's disease, its progression, and management strategies. He also discussed the psychosocial challenges faced by caregivers and the role of counselling and support groups. d) Miss Vaishnavi from Dementia alliance in India gave a talk on the signs and symptoms of dementia, how to identify the illness, need for early approach to prevent the prognosis and treat the illness. Establishment od memory clinics in all medical setups for early identification of Dementia symptoms and treatment. The event included:• An awareness session for patients and caregivers in the OPD block. • Distribution of informational leaflets in local languages. • An interactive question–answer session where caregivers shared their experiences and concerns. • A pledge by hospital staff and students to continue awareness activities beyond the event. Followed by a Skit performed by the Under graduate students, which focused on identification of symptoms, approach for treatment and prevention and to reduce the stigma. Outcome of the Program The program succeeded in: • Enhancing awareness among the public and health workers regarding early warning signs of Alzheimer's. • Reducing myths and stigma surrounding dementia through expert talks. • Strengthening coordination between different departments for dementia care at the district hospital. • Motivating caregivers through shared experiences and assurance of support.

	Conclusion: The World Alzheimer's Day celebration at SNR District Hospital was well-received by both the medical fraternity and the public. The active participation of the Vice Chancellor, District Surgeon, and Head of Psychiatry ensured that the objectives of awareness, education, and community engagement were effectively met. The program concluded with a vote of thanks and a collective commitment to improve dementia care services in the district.
7	**Participants & Delegates in Number: Total= 100**
8	**Valedictory function:** The vote of thanks was given by Dr. Ruth Sneha, Associate Professor, Department of Psychiatry.
9	**Any other information: Screenshots and photos**

Dignitaries inaugurating the CME Chief guests and resource persons attending the program


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Kolar, Karnataka, India
44hp+m4q, Bangarpet Rd, Kanakanapalya, Kolar, Karnataka 563101, India
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World Alzheimer's Day 2025
SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A Deemed to be university)
Cordially invites you to the Observation of
WORLD ALZHEIMER'S DAY
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World Alzheimer's Day 2025
ವಿಶ್ವ ಅಲ್ಜೈಮರ್ ದಿನ 2025
21 September 2025
SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
Cordially invites you to the Observation of
WORLD ALZHEIMER'S DAY
On 19th September 2025
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Journal of Clinical and Biomedical Sciences

"Institutional Level CME- Awareness Program on "World Alzheimer's Day-2025"

23rd September 2025, Psychiatry, SDUMC, Kolar-563101

S/N	EVENT REPORT
1	**Name & Level of Event:**
	AWARENESS PROGRAM ON WORLDS ALZHEIMERS DAY Institutional Level
2	**Background / Introduction:**
	The Department of Psychiatry & General Medicine, SDUMC in collaboration with Dementia India Alliance conducted an awareness program from 8:30 pm onwards, as a part of "WORLD ALZHEIMER'S DAY" on 23-09-2025 with the theme "Ask About Dementia. Ask About Alzheimer's". The program began with Welcome Address, and inauguration.
3	**Venue**: IMA Hall, Kolar
4	**Sponsors**: Dementia India Alliance
5	**Inauguration:** By Guest Speakers and Chief guests Dr B Vengamma (Vice chancellor, SDUAHER),Dr Prabhakar (Principal, SDUMC), Dr Narayanaswamy (IMA President),and Dr Mohan Reddy (Prof & HOD dept of Psychiatry).
6	**Speakers / Judges / Chairman / Panel Team**
	Dr B Vengamma, started the day with an overview of dementia and its pharmacological management, and further emphasized the importance of early detection of reverible causes of dementia and reference to respective departments.She also emphasized newer treatment options are available to delay the progression of illness . The Guest speakers, Mr . Sumith addressed regarding psychological management of Dementia, both sessions chaired by Dr K Prabhakar , Dr. M Narayanaswamy and Dr. Mohan Reddy.M.It was highly interactive session with audience asking questions and active participation.The participants appreciated the informative session by DR Vengamma.Dr Prabahakr,Principal emphasized the importance of early identification of cognitive deficits and reference to Neurology/Psychiatry for further management.
7	**Participants & Delegates in Number: Total=65**
8	**Valedictory function:** The vote of thanks was given by Dr. K Prabhakar , principal , Department of Medicine , SDUMC, Kolar
9	**Any other information: Screenshots and photos**

Dignitaries inaugurating the Program Chief Guests and resource persons attending the program Chief guests on the stage


INDIAN MEDICAL ASSOCIATION KOLAR
Cordially invites you to the Observation of
WORLD ALZHEIMER'S DAY


INDIAN MEDICAL ASSOCI
Cordially invites you to the Observation of
WORLD ALZHEIMER'S DAY
On 21st September 2025
THANK YOU

Guest Speakers addressing the audience

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"Zonal Level CME- "Access To Services – Mental Health In Catastrophes And Emergencies" As Part Of World Mental Health Day 2025"

10th October- 2025, Psychiatry, SDUMC, Kolar-563101

S/N	EVENT REPORT
1	**Name & Level of Event:**
	Zonal Level CME on "Access to Services – Mental Health in Catastrophes and Emergencies" as part of **World Mental Health Day 2025**
2	**Background / Introduction:**
	The Department of Psychiatry, SDUMC, organized a Zonal Level CME to commemorate World Mental Health Day 2025 on 10th October 2025 at BC Roy Hall (Library 1st Floor), Sri Devaraj Urs Medical College, Kolar.This year's theme was "Access to Services – Mental Health in Catastrophes and Emergencies." The program highlighted the urgent need to strengthen mental health response systems during disasters and crises. It aimed to enhance preparedness, resilience, and interdisciplinary collaboration among healthcare professionals to ensure timely access to mental health services during catastrophes.
3	**Venue**: BC Roy Hall (Library 1st Floor), SDUMC, Tamaka, Kolar.
4	**Sponsors**: Sri Devaraj Urs Academy of Higher Education and Research (SDUAHER)
5	**Inauguration:** The CME was inaugurated by the Honorable Guests and Dignitaries, including- Dr. B. Vengamma (Vice Chancellor, SDUAHER), Dr. Prabhakar K (Principal, SDUMC), Dr. J. Krishnappa (Medical Superintendent, RLJH & RC), and Dr. Mohan Reddy M (Organizing Chairperson & Professor & HOD, Dept. of Psychiatry).
6	**Speakers / Judges / Chairman / Panel Team**
	Dr. Manjunath, I/c HOD, Dept. of Radiation Oncology — delivered a session on Psycho-oncology. Dr. Vengamma B, Vice Chancellor & Neurologist, SDUAHER — spoke on Integration of Neurology and Psychiatry in Emergencies. Dr. Veda N. Shetageri, Professor of Psychiatry, East Point College of Medical Sciences — presented on Access to Services: Mental Health in Catastrophes and Emergencies. **Panel Discussion:** "Bridging Gaps in Crisis Care," moderated by Dr Yesudas KF , Dr Mohan Reddy . panel members were- Dr Manjunath, Dr Vengamma B, Dr J.Vinodh Kumar, Dr Veda N Shetageri, Dr Rajesh. The sessions were highly engaging, with active interaction from delegates and postgraduate students across various institutions.
7	**Participants & Delegates in Number: Total=110**
8	**Valedictory function:** The event concluded with a Vote of Thanks delivered by Dr. Kamran Chisty, Organizing Secretary, Department of Psychiatry. **2 KMC Credit Points** were awarded to all registered participants
9	**Any other information: Screenshots and photos** The event also included a Zonal Level Psychiatry Quiz (2:00 PM – 4:00 PM), followed by the announcement of winners. The CME was well-received by participants, who appreciated the blend of academic enrichment and practical discussion on crisis mental health care. Refreshments and lunch were provided for all delegates.

The CME was well-received by participants, who appreciated the blend of academic enrichment and practical discussion on crisis mental health care. Refreshments and lunch were provided for all delegates.

Innaugration of the programme.

Guest Lecture by the speaker

acilitation of the speaker

Panel discussion