

**The Abstracts Book of 21st One Day
National Level Conference on**

**HOLISTIC APPROACH TO
HEALTHY AGING AND GERIATRIC
REHABILITATION**

21/06/2022

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Institute of Physiotherapy
City Campus, Pandeshwar, Mangaluru

BOOK OF ABSTRACTS

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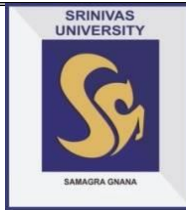
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Cordially invite you to the Inaugural function of

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One day National CME on

Dr. CA. A. RAGHAVENDRA RAO

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will preside over the function

Dr. Naveen Kulal

(District Vector Borne Disease Control Officer, Mangaluru)

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Dr. A. Mitra S Rao

(Secretary, A Shama Rao Foundation, Mangaluru)

will be the Guests of Honour

Date: 21/06/2022

Time: 10.30 a.m.

Venue: Hotel Srinivas Saffron, G.H.S Road, Mangaluru

Dr.S.Rajasekar

Dean, Physiotherapy & Organising Chairperson

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CORRELATION BETWEEN ANKLE PROPRIOCEPTION AND RISK OF FALL IN ELDERLY POPULATION WITH TYPE II DIABETES MELLITUS- A PILOT STUDY.

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Abstract

Background and Aim:

One of the major concerns associated with Type 2 Diabetes Mellitus (DM) in the elderly population is higher risk of fall. Along with that ankle proprioception is an important factor responsible for postural balance due to decrease in the reflex responses followed by a decrease in the speed of nerve conduction which leads to affection of joint position sense. Thus, the aim of this study is to find a correlation between ankle proprioception and risk of fall in elderly population with type II diabetes mellitus.

Methods:

16 elderly individuals (8males and 8 females) aged 60+ years with type II DM were recruited for this study after informed consent. Digital inclinometer was used to measure ankle joint position sense error of right and left lower extremities and Functional Reach Test was used to evaluate risk of fall in each individual. Spearman's correlation test was used to find the correlation between the variables.

Results:

A strong negative correlation was found between ankle joint position sense error and functional reach test for right leg ($r = -0.76$, $p = 0.001$) and left leg ($r = -0.67$, $p = 0.001$)

Conclusion:

The study found that with decrease in ankle proprioception, the risk of fall increases significantly in elderly individuals with type II DM. Ankle proprioceptive training could be essential to reduce risk of fall in elderly with Type II Diabetes Mellitus.

Keywords: Ankle proprioception, balance, diabetes Mellitus, elderly, risk of fall

EFFECT OF RESISTANCE TRAINING EXERCISES USING ELASTIC BANDS ON SARCOPENIA AND PHYSICAL FUNCTION IN ELDERLY: A LITERATURE REVIEW

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Abstract

Background and aim: Aging causes decline in biological function and increase in mortality. One of the most important changes that occurs in elderly is muscle atrophy or loss of skeletal muscle mass which is called sarcopenia causing reduction in muscle function and strength. This leads to hindrance of activities of daily living, progression of specific neuromuscular disorders, increase risks of falls, injuries and dependency. Resistance training helps in decelerating the progression of sarcopenia. It can be done using equipment like dumbbells, barbells, resistance bands etc. The aim of this literature review is to analyse the effect of resistance bands on sarcopenia and physical function in elderly.

Methods:

PubMed, Google Scholar, Scopus, PEDro, Cochrane was searched for literature. Initial search yielded 1732 articles. 38 articles were retrieved after title and abstract screening. 6 articles from 2018-2022 were chosen for detailed review.

Results:

1 systematic review and meta-analysis and 5 randomised control trials and were reviewed. Level 1a evidence showed greater gain in muscle mass when elastic band resistance training was done 1-2 times per week at an intensity >60% 1RM for ≥ 12 weeks. Level 1b evidence showed that resistance band training caused increase in muscle quality, muscle strength and physical performance. Lean mass gain was higher in lean subjects when compared to obese subjects.

Results: Resistance training using elastic bands is a safe, low cost and efficient approach for resistance training in older subjects which prevents adverse outcomes and improves muscle strength, injury prevention, functional strength, increase lean muscle mass and physical performance.

Keywords: Resistance training, elderly, aged, exercise, muscle mass, body Composition.

EFFECT OF NORDIC WALKING TO IMPROVE GAIT IN PARKINSON'S DISEASE- A LITERATURE VIEW

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Poster Presentation

ABSTRACT

BACKGROUND & AIMS:

Parkinson's disease is a chronic, degenerative, progressive disorder characterized by resting tremors, bradykinesia, rigidity and gait disorders with or without non- motor symptoms such as depression, constipation and sleep disorders. The most significant feature of PD is loss of dopaminergic neurons leading to loss of gait autonomy and balance. Their symptoms worsen over time, thereby causing patients to lose their confidence and decrease the measures of QoL. Conventional pharmacotherapy, can, however, decrease individual's balance and walking ability and increase risk of falling. Nordic walking is a low impact aerobic activity, to improve gait and postural control in individuals with PD. The poling action in Nordic walking provides a training effect on the coordination of reciprocal upper extremity movement that is an important element of gait pattern. This literature review can contribute as a guide to improve the gait problems in patients with Parkinson's disease. The objective is to review the published literature to determine the effect of Nordic walking to improve the gait problems in Parkinson's disease.

METHODOLOGY:

Pubmed, Google scholar, Science Direct, Cochrane was searched using keywords from 2017-2022.

RESULT:

Among 10 articles, 6 articles were selected for detailed review after staged screening and exclusion based on their relevance, 3 studies were randomized controlled trials, 2 systematic reviews and 1 experimental study were reviewed. The results showed improvements in gait symmetry, pattern and stride length.

CONCLUSION:

The study provides evidence that Nordic walking training in Parkinson's disease is effective for improving gait and thus improving their QoL.

KEYWORDS:

Parkinson's disease, gait problems, Nordic walking training.

EFFECTS OF AEROBICS EXERCISE AND YOGA ON POSTMENOPAUSAL ELDERLY WOMEN

Monali Jadhav

ABSTRACT

BACKGROUND :

Menopause is the permanent cessation of ovarian function and causing by falling estrogen levels. About 3 quarters of all women experience complaints during menopause, mainly hot flashes, night sweats, fatigue, pain, decreased libido, sleep disturbances and mood changes. These symptoms often persist for several years post-menopause with considerable impact on quality of life of menopausal women. Yoga and exercise have been suggested as useful non-pharmacologic treatments for midlife women.

OBJECTIVE:

Summarizing evidence of yoga and chair aerobics in postmenopausal women.

METHODS:

Databases search included Pub Med, Google scholar, Research Gate.

This search was limited to outcome studies published between 2016-2022.

14-15 articles were retrieved out of which 6-7 articles found that the aerobics exercise and yoga is very effective in postmenopausal women and improving quality of life of them.

**EFFECTIVENESS OF PHYSIOTHERAPY PROGRAM TO REDUCE CANCER
RELATED FATIGUE IN ELDERLY PERSONS: A LITERATURE REVIEW**

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ABSTRACT

Background And Aim :

Fatigue is an extreme feeling of tiredness or lack of energy, often described as being exhausted. The fatigue that often comes with cancer is called cancer related fatigue. Approximately 80 to 100% of people with cancer report that they experience cancer related fatigue. Recent evidence indicates that physical activity reduces fatigue and improves muscle strength. Aim of this study is to review the recent literature on effectiveness of physiotherapy program to reduce cancer related fatigue in elderly population.....

Methodology:

Articles were searched using search engine Google scholar & PubMed where 112 articles appeared in initial search with the initial screening 28 articles between the year 2018 to 2022 were found to be relevant to this study, among them 6 articles were chosen for detailed review.

Result :

6 articles were selected for detailed review in which, 1 is Systematic review, 3 Randomised control trials ,1 interventional study and 1 retrospective study. Systematic review concluded that exercise plays an important role in decreasing cancer related fatigue and enhance physical fitness and Randomized control trial provides the evidence that exercises reduce perceived fatigue and increase functional capacity in breast cancer survivors. Interventional study concluded that clinical exercise program can be effective at improving physical fitness, fatigue, and depression. Retrospective study indicates that exercise improves cardiovascular fitness, fatigue, and pain in people with cancer history.

Conclusion: Physiotherapy program including aerobic, resistance, stretching is effective in reducing fatigue in older patient with cancer.

Keywords: Cancer, cancer related fatigue, aerobic exercise, geriatrics, resistance exercise.

RELATIONSHIP BETWEEN DYNAPENIC ABDOMINAL OBESITY AND FALL RISK IN OLDER ADULTS: A LITERATURE REVIEW

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Abstract

BACKGROUND AND AIM

Aging is characterized by increase in fat mass and a decrease of muscle mass with important consequence on strength and physical performance. Dynapenicabdominal obesity is an emerging cause of high risk of fall and fall event, faster decline in walking speed, high risk of functional decline, higher rate disability, mortality and hospitalization. This review aimed to study published literature on relationship between the dynapenia abdominal obesity and fall of risk, balance in older adult.

METHODOLOGY

Articles were searched using search engine - Pubmed, Google Scholar where 17400 appeared in initial search. With the initial screening 10 article between the year 2018-2022 were found to be relevant to this study. Among them 5 articles were chosen for detail review.

RESULT

5 cross sectional study were considered for the review. The finding indicates significant greater risk of fall in those who have dynapenic abdominal obesity.

EFFECT OF EXERCISE ON COGNITIVE FUNCTION IN OLDER PEOPLE WITH DEMENTIA – A LITERATURE REVIEW.

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ABSTRACT

INTRODUCTION

Dementia is characterised by progressive neurodegeneration and severe functional loss. It is a leading cause of disability and dependence in older people worldwide. People living with dementia experience progressive and irreversible loss of memory and other cognitive functions,

which is severe enough to affect daily functioning. In healthy older adults, both aerobic and strength exercise are associated with improvements in cognitive functions such as executive function, inhibitory control and episodic memory, and physical functions i.e. muscle strength, balance, functional reach, mobility and endurance.

OBJECTIVE

To review the recent literature on effectiveness of exercise on cognitive function in older people with dementia.

METHODOLOGY

Google scholar, PubMed were searched using the keywords from the year 2012- 2022, 63 articles appeared in the initial screening, 12 articles were selected from which 5 articles have fulfilled the selection criteria and were included in this review.

RESULT

The study included 5 randomised controlled trials. All these studies were aimed at evaluating the efficacy of physical exercise program in improving brain and mental health in older adults

with memory problems and attention deficits associated with dementia. Exercise was seen to improve the cognitive status which was measured using Mini mental state examination (MMSE), trail making test (TMT), Alzheimer's disease assessment scale-cognitive subscale in persons with dementia.

CONCLUSION

The results provided evidence that functional exercise program can improve cognitive function

in older people with dementia.

KEYWORDS: Dementia, Cognitive function, Elderly People, Exercise, Balance.

EFFICACY OF OTAGO-BASED EXERCISE IN FALL PREVENTION FOR ASSISTED LIVING FACILITIES (ALFS)-RESIDING OLDER ADULTS: A LITERATURE REVIEW.

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ABSTRACT

BACKGROUND:

Falls are a leading cause of morbidity, mortality, loss of independence, and significant functional decline in aging populations. Effective interventions aimed at reducing the risk of falls, and preventing associated disability and functional decline, are needed to promote the health and wellness of older adults. Otago-based exercise programme (OBEP) incorporates strengthening, balance and walking which may not only decrease falls and fall risk among community-dwelling but may also be effective among older adults residing in assisted living facilities (ALFs).

OBJECTIVE

To review published literature on Efficacy of Otago-based exercise in fall prevention for assisted living facilities (ALFs)-Residing older adults.

METHODOLOGY:

Pubmed, Google scholar and science direct was searched using keywords from 2015-2022.

RESULT:

2 systematic reviews, 1 experimental, 1 cohort study and 4 RCT were considered for the review. The findings indicate that there is significant improvement in balance, strength of lower limb, gait and functional abilities in the groups which underwent Otago-based exercise programme (OBEP).

**FACTORS IMPACTING EARLY MOBILIZATION FOLLOWING HIP
FRACTURE: A LITERATURE REVIEW**

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ABSTRACT

BACKGROUND:

Hip fracture is common, costly and potentially devastating event that is a major concern. Physical therapist have a key role in helping patients to start the mobilization after the day of surgery. Patients who mobilize within the first 48 hours post-surgery for hip fracture have functional outcome than patients who mobilize after this period. As early mobilization and re-gaining the pre-fracture level of function in the shortest possible time are of critical importance in the treatment of hip fractures.

OBJECTIVE:

To review the recent literatures on factors impacting early mobilization following hip fracture.

METHODOLOGY:

Google scholar, PubMed were searched using the keywords from the year 2013-2022 , total of 9 articles were viewed and 7 articles fulfilled the inclusion criteria. Outcome measures used were Visual analogue scale (VAS); American Society Of Anaesthesiologists (ASA) score; pre-fracture Barthel Index[BI];Geriatric depression scale, Mini mental state examination [MMSE]; Confusion Assessment Method (CAM)

RESULT:

The study included 3 randomized controlled trial, 1 systematic study, 1 case study, 2 retrospective study. The factors that impact on mobilization are age, weight bearing status, time to surgery, dementia and post-operative complication. All these study shows that early mobilization helps in improving the ambulation and quality of life of the patient with hip fracture.

CONCLUSION:

The results provided that early mobilization helps to decreased likelihood of falls, second fracture and decreased loss of independence. These studies also indicate that patients with

premorbid mobility limitations and postoperative are at risk of delayed mobilization following hip fracture.

KEYWORDS: Hip fracture, physical rehabilitation, early mobilization.

EFFECTS OF TAI CHI EXERCISE ON GERIATRIC POPULATION WITH TYPE 2 DIABETES MELLITUS

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ABSTRACT

BACKGROUND

- Diabetes Mellitus is a metabolic disorder, if left untreated it can cause complications include diabetic ketoacidosis, death, and serious long-term complications include CVD, stroke, chronic kidney disease, foot ulcers, and damage to the eyes.
- Regular Tai Chi Exercise (TCE) for a few months can decrease the levels of fasting plasma glucose (FPG), glycated haemoglobin (HbA1C), insulin resistance. Improves balance and tactile sense.
- The American Diabetes Association (ADA) report states that using large muscle groups and low loading on the Joints is beneficial for Geriatric patients with TYPE 2 DM.

OBJECTIVE

Summarizing the review of literature for effects of tai chi exercise in geriatric population with type 2 diabetes mellitus.

METHODS

Databases search included PubMed; Google Scholar studies published as of June 2022. In total 13 articles were retrieved out of which 8 articles found that TCE improves health of geriatric patients with TYPE 2 DM.

RESULTS

The results showed that Tai chi had better performance in evaluation of glucose and life

quality including balance and independence in elder patients with TYPE 2 DM.

CONCLUSION

Effects of Tai Chi exercises (TCE) helps to maintain the blood glucose levels and improves the health of an elderly with type 2 diabetes mellitus. It helps to prevent the falls and improves the balance in the geriatric population. Further studies are required to test the claim using larger group and longer period of intervention.

KEYWORDS

Tai chi exercise, Type 2 diabetes mellitus, Geriatric population, hyperglycemia.

EFFECTS OF SINGLE TASK VS DUAL TASK TRAINING ON BALANCE PERFORMANCE IN GERIATRIC POPULATION : A LITERATURE REVIEW

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ABSTRACT

Background:

Dual task is the main approach which is used to investigate the relation between the motor performance and cognitive processing. Single task exercise includes only including balance task dual task includes posture modification to slowly reduce the base of support and dynamic movements to disturb the centre of gravity along with single task cognitive task training has also been conducted.

Objective:

The aim of this study is to compare the effect of single task and dual task on balance performance in elderly population.

Method:

Search engine: pub med, google scholar, sci hub.

Inclusion criteria: age group 55 to 85 years having balance issues as well normal elderly.

Male and female elderly. In total 6 articles were relevant to the topic. Articles published between 2010 to 2022.

Exclusion criteria: studies published in languages other than English

Studies with inaccessible full text

Studies with inaccessible abstract

Studies related to young population

Results:

Studies suggest that the effect of single task and dual task has a positive outcome in balance performance. Statistically the results showed significant differences with combination of dual task training along with cognitive training. Dual task activities showed significant differences for balance performance, walking speed and advanced lower extremity physical function.

Conclusion:

Single task and Dual task training both are effective on balance performance in elderly population. Other studies suggest that dual task is more significantly affecting the dual task on balance performance in geriatrics.

Key words: single task, dual task, balance performance, geriatric.

IMPROVED FUNCTIONAL PERFORMANCE, COGNITION AND QUALITY OF LIFE OF PEOPLE WITH DEMENTIA FOLLOWING LOW TO MODERATE-INTENSITY EXERCISES

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TYPE OF STUDY: literature review

BACKGROUND:

Dementia is a syndrome usually of a chronic or progressive nature that leads to deterioration in cognitive function beyond the expected from the usual consequences of biological ageing. Individuals with dementia experience difficulties across cognitive and functional domains. Exercise therapy is a promising intervention and effective in improving the functional performance, cognitive status and quality of their life.

AIM:

The aim of this review was to find the effectiveness of low to moderate intensity exercise on individuals with dementia (IWD) in their functional performance, cognition and quality of life.

METHOD:

Databases searched were google scholar, PUBMED, EMBASE, DOAJ, Science direct Using keywords from 2017 – 2022. Total around 20 articles were found. In those 13 articles were selected according to selection criteria for final review.

RESULT ANALYSIS:

Three article (RCT) study showed impact of exercise on cognition three article (SR) study role of exercise on functional status of IWD. One article (RCT) and two article (SR) studied about functionality and cognition. One article (SR) studied about quality of life of IWD following low intensity exercises. One article (SR) studies about exercise programme in IWD. One article (cohort study) was done on impact of exercise in IWD. One article (RCT) was done effect of multimodal exercise on IWD.

CONCLUSION:

Low to moderate intensity exercises can be used to prevent and halt the progression of dementia in IWD and there is a need of further study to establish a proper impact of exercise on cognition in IWD.

KEY WORDS: Dementia, exercise, functional performance, cognition, geriatric.

EFFECTS OF RHYTHMIC AUDITORY CUES IN IMPROVING GAIT IN PARKINSONISM (PD): LITERATURE REVIEW

Smita Prabhu 1, Jayganesh Vellaisamy 2, Anupama Pathak 3

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3 Anupama Pathak; Assistant Professor , Institute of Physiotherapy , Srinivas University

ABSTRACT

BACKGROUND:

Parkinsonism is a chronic progressive degenerative disease of CNS caused by imbalance of dopaminergic & cholinergic activity in the brain leading to motor function disorder and various extrapyramidal symptoms. Gait abnormalities in Parkinsonism are gait hesitation, shuffling, freezing and other symptoms like involuntary movement, difficulty in coordination, poor balance. The physiological evidence shows that auditory rhythm has profound effect on motor system. Auditory and motor system have a rich connectivity across a variety of cortical, subcortical and spinal level. The auditory system is fast and precise processor of temporal information and projects into motor structures in the brain, creating entrainment between rhythmic signal and motor response. Evidence shows gait dysfunction in parkinsonism is partially relieved by rhythmic auditory cueing.

OBJECTIVE:

To review the available scientific evidence on effectiveness of rhythmic auditory cues for gait mobility in individual with PD.

METHODOLOGY:

The relevant papers from 2010 to 2022 were searched from PubMed, Google Scholar and Cochrane. The search was limited to searches published in English.

RESULT:

Improvement is seen in spatiotemporal and kinematic parameters and increased gait speed, velocity, cadence and stride length seen in parkinsonism. People who have poor rhythmic abilities do not respond to the cues, develop worse gait while walking in the cues.

CONCLUSION:

Studies involved wide improvement in parkinsonism who have good auditory abilities. Need more studies for better methodological quality and consider most effective type and frequency of auditory cues.

KEYWORDS: Parkinsonism, gait, auditory cues, rhythm

MUSIC INTERVENTION WITH REMINISCENCE THERAPY AND REALITY ORIENTATION FOR ELDERLY PEOPLE WITH ALZHEIMER DISEASE: A LITERATURE REVIEW

1Jarvis Lobo, 2 Radhika G, 3 Premkumar M

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Abstract

Background:

The increase in life expectancy has led to an increase in the aging population worldwide. This has led to a rise in the age-related diseases one of them being Alzheimer's. There is a need for alternative ways to improve the cognitive competency and neuropsychiatric disorders in such patients. One of the alternative approaches to this disease is music therapy along with reminiscence therapy and reality orientation.

Objective:

The aim of this study was to discuss the benefits of music therapy along with reminiscence therapy and reality orientation in the management of Alzheimer's.

Method:

This was done by conducting a literature review of sources available on search engines like Google Scholar, PubMed and Sci-Hub. The search strategy focused on studies published between 2017 to date.

Results:

Significant improvement was observed in memory, orientation, depression and anxiety (HAD scale) in both mild and moderate cases; in anxiety (NPI scale) in mild cases; and in delirium, hallucinations, agitation, irritability, and language disorders in the group with moderate AD. The effect on cognitive measures was appreciable after only 4 music therapy sessions.

Conclusion:

The findings show that the efficacy of music therapy along with reminiscence therapy and reality orientation increased in those experiencing dementia in Alzheimer's, especially in the psychological and behavioural symptoms of dementia. Further research is needed to check this claim with a larger sample and a longer period of intervention.

Keywords: Alzheimer's, music therapy, reminiscence therapy, reality orientation, dementia.