



ORIGINAL RESEARCH PAPER

Physiotherapy

THE SHORT TERM AND LONG TERM OUTCOMES OF MOTIVATING FACTORS FOR EXERCISE IN GERIATRIC PEOPLE - A CASE STUDY.

KEY WORDS: Balance, Exercise, Geriatrics, Motivation, Rehabilitation

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ABSTRACT

The purpose of this study is to discuss various treatment strategies used in a patient belonging to the geriatric population, to keep them motivated and engaged in exercises, thereby helping them to improve their performance in activities of daily living and their social participation. This is a case report of 85year old female with several medical problems. Apart from using traditional methods commonly used in the geriatric population, motivating treatment strategies like Task oriented Activities, treadmill training, recreational activities, reformer pilates training and effective communication skills were used. These factors have shown superior results as compared to traditional exercises in long term rehabilitation. After 6 weeks of therapy, there was improvement in One Leg Stance Time, Modified Clinical Test of Sensory Interaction in Balance (CTSIB) and walking speed. Her balance improved and her fear of falling decreased. Thus we conclude that if we use effective treatment strategies targeting the functional activities, which keeps the patient engaged and motivated, then a long term effective exercise program can be designed for an elderly patient.

INTRODUCTION.

Most studies based on elderly people thus far have classified elderly adults into one group. Although there are different ways to classify this population, some studies have classified elderly adults between the ages of 65 and 74 years as youngest-old, those between ages 75 and 84 years as middle-old, and those aged over 85 years as oldest-old.^[1]

There are many reasons of reduced mobility and increased sedentary lifestyle with increasing age like health problems, weight or pain issues, or fear of falling. But as people grow older, an active lifestyle becomes more important than ever to your health.

A recent Swedish study found that physical activity was the number one of the main contributor to longevity, adding extra years to life—even if you don't start exercising until your senior years. But getting active is not just about adding years to life, it's about adding life to years that is improving the quality of life. Locomotion can help boost your energy, maintain your independence, protect your heart, and manage symptoms of illness or pain as well as weight. Regular exercise is also good for mind, mood, and memory.

The WHO guidelines "Global Recommendation On Physical Activity For Health " included recommendations for Physical Activity in Older Patients. A key message is that atleast 150 minutes per week of moderate intensity physical activity is required for health benefit in older adults.^[2]

The traditional approach like strengthening, stretching, balance and gait training and recent techniques have shown improvement in rehabilitation. But what is lacking is motivation for maintaining physical activity and regular exercising especially in Geriatric population in the long term. Through this case study our aim is to project the various superior treatment strategies used in rehabilitation which has shown to be more effective than traditional rehabilitation methods in our patient belonging to the older strata of the geriatric population along with highlighting the importance of positive motivation in maintenance of long term benefits of exercising

PATIENT INFORMATION:

An 85 years old female came to physiotherapy department of

tertiary care hospital five years ago, with complains of imbalance while walking, difficulty in using upper limbs for fine motor activities, left more than right, and a feeling of tiredness in doing daily activities.

She was diagnosed of having Cerebral Vascular Accident (CVA), MRI in 2016 suggestive of left parietal and occipital cortical and subcortical infarct managed conservatively and bilateral S1 Neuropathies.

MEDICAL INFORMATION :

She gives past history of bilateral Total Knee Replacement (TKR) 15 years ago, Left Radius neck fracture for which plating was done in March 2018.

She also has previous history of Stroke (MRI Angio- flattening of bulb of Right Internal Carotid and poor flow signal in right vertebral artery) in November 2018, with residual mild left sided weakness managed conservatively with medicines and exercises, and Vertigo in June 2019 managed with medicines and Vestibular Rehabilitation.

CLINICAL ASSESSMENT :

On observation, waddling gait present, no arm swings, Tendlenburg test positive on both sides .

Patient was having weakness on both sides of lower limbs, left more than right, Brunnstorm Grade 4/6 for left lower limb. The upper limb on right side 6/6, left was grade 3/6 on voluntary control scale. The superficial sensations were normal, however proprioception was affected in left lower limb as compared to right lower limb.

THERAPEUTIC INTERVENTION :

Patient was educated regarding the importance of physiotherapy.

Along with traditional exercises like mat exercises, balance & gait training following treatment strategies were used.

Patient was asked about her goals in various areas --- activities of daily living, instrumental activities of daily living and social goals.

Accordingly her treatment was modified and **Task Oriented**

Activities^[6] which were functional based helped to improve her functional and social activities.

Initially patient had the fear of walking on the **Treadmill**. As her confidence improved, she now walks forwards, sideways & backwards on the treadmill.

To motivate her for exercises following **Recreational activities** were given –

Football, Basket ball, Throw ball and more play activities. Patient was progressed from mat pilates to **Reformer Pilates** to improve posture, core muscles & balance. Also reformer helped to improve overall aerobic endurance.

Patients' self confidence in balance^[6] improved after 5 sessions of reformer and her fear of falling decreased.

Patient was motivated in every exercise by using feedbacks and positive reinforcements.

Effective **Communication Strategies** were used like maintaining eye contact, good listening, giving patient an opportunity to ask questions and express herself and using short, simple words and sentences.^[7]



OUTCOME MEASURES :

1)Brunnstrom Voluntary Control Scale:

patient improved on Brunnstrom grading from 4/6 in left lower limb to 5/6 and Upper left side progressed to grade 4/6 in six weeks.

2)One leg Stance time (OLST) [3]with eyes open	First session -In seconds	After six week-- In seconds
Right leg	2	6
Left leg	Unable to do	4
3)Modified Clinical Test of Sensory Interaction in Balance[4] (CTSIB)		
Eyes open –Firm surface	20	25
Eyes closed –Firm surface	5	15
Eyes Open – Foam surface	15	20
Eyes closed – Foam surface	2	10

4)WALKING ONTREADMILL :

Speed has improved from 0.2 km/hr to 0.6 km/hr in 6 weeks.

DISCUSSION :

The health benefits of regular physical activity are clear and very much relevant at any age.

However declining physical activities in old age coupled with physiological aging and disease make exercise much more important in older population.

Regular physical activity can help older people reduce their risk of chronic disease, manage illnesses they already have or may have, function better physically & mentally, avoid injuries such as falls and be independent in their ADL & IADL.^[8]

Dr. Katherine in Journal of American Geriatrics Society have shown geriatric patients often appear unmotivated for rehabilitation, and “poor motivation” is frequently the reason given for excluding them from rehabilitation programs. However, these patients may actually be impeded by specific obstacles to the development of motivation. Appropriate intervention may enable them to make better use of rehabilitation opportunities.

Motivation of the patient is the most important, yet the most difficult part of the work of the therapeutic professions.[10]

Rehabilitation professionals have long suspected that a patient's motivation plays an important role in determining the outcome of therapy. The prevalence of this belief has been noted in a number of qualitative studies of the attitudes of rehabilitation professionals. These studies suggest that estimates of 'motivation' are used alongside more traditionally 'objective' indicators in arriving at clinical predictions of outcome.[11]

The 85 year old patient in the said study has followed with us for the last five years. The treatment strategies used motivated her to keep engaging and maintaining physical exercises for long term.

CONCLUSION :

Thus we conclude that if we use effective treatment strategies which keeps the patient engaging and motivating than even an elderly patient can be sustained for exercise program for a long time.

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