

6<sup>th</sup> World Congress on

## PHYSIOTHERAPY AND REHABILITATION

November 12-13, 2018 Dubai, UAE

**Effect of whole body vibration on functional performance of lower extremity in elderly****Manisha Rathi**

Dr. D.Y. Patil college of Physiotherapy, India

**Background:** Aging leads to many health-related disorders which hampers the functional performance of the elderly individuals like mobility, balance, gait speed and strength. If proper exercises are done then we can regain the functional performance of the elderly, hence this study investigated the effects of vibration on functional performance in the elderly.

**Aim:** To compare the effects squat training on whole body vibrator and squat training on plain surface on functional performance of lower extremity in the elderly using short physical performance battery and timed up and go test.

**Methods:** In this experimental study, 30 healthy elderly participants with age group between 60 to 70 years and of both the genders were taken according to geriatric falls efficacy scoring of 16 to 19. Study was conducted at Dr. D. Y. Patil College of Physiotherapy, Pune, Maharashtra, India, after the approval from institutional ethical committee. Participants having any neurological, musculoskeletal or other chronic disease affecting ADL and IADL, any recent upper limb or lower limb fracture which hampers squat training with or without support, any acute inflammatory conditions like bursitis, synovitis, tendinitis, rheumatoid arthritis conditions involving balance deficits having any lower limb prosthesis fitted like a transfemoral or transtibial prosthesis were excluded. Written informed consent was taken from all the participants. The participants were first evaluated where chief complaints, history of present illness, and drug history was noted. Then the geriatric falls efficacy score was documented. These participants were then allocated to either group A or group B of 15 each through simple random sampling using computer generated allotment. Group A were given squat training on a vibratory surface using whole body vibration and group B was given squat training on a plain surface for 4 weeks, 3 sessions/week for both the group. Pre and post values of short physical performance battery and timed up and go test were documented and data analysis was done.

**Result:** The group A showed statistically significant improvement in repeated chair stand (M D=3.6), balance (MD=3.4), gait speed (MD=1.867) which are the components of short physical performance battery and TUG Score (MD=12.53) with p value  $\leq 0.005$  as compared to the group B, repeated chair stand (MD=2.533), balance (MD=2.667), gait speed (MD=0.133) and TUG score (MD=13.93).

**Conclusion:** The significant effects of whole body vibration with squat training on physical function in the elderly individuals using timed short physical performance battery and up and go test.

**Biography**

Manisha Rathi with her doctoral qualification is expert in evaluation and management of geriatric people and immensely involved in improving the independency and quality of life of the elderly. Her skill in the assessment of geriatrics individuals and treating them to fulfill their functional demand is unique. Squat training to older people on Whole body vibrator is a challenging task but she worked dedicatedly to bring excellent results in enhancing the lower extremity functions and in turn perk up functional independence. Whole body vibration helps in recruiting lower body muscles and thus increases strength and endurance. Her research work mainly focuses on balance, fall efficacy, Gait parameters and functional performance in Elderly. She is also working on assessing reaction time in elderly with a uniquely designed machine by her. Her focused approach and patience towards elderly is remarkable and should be taken in cognizance.

manisha.rathi@dpu.edu.in

**Notes:**