

Strengths of the study

The following were considered to be the strengths of the present study:

Post stroke rehabilitation should emphasis on a holistic approach to regain their pre stroke functional capacity with the intended goal to improve overall health status. The novelty of this study is to combine the two different therapeutic methods at the motor level (lower extremity task specific training involving four major functional tasks) as well as cognitive level (motor imagery) to improve postural balance and mobility functions in ambulant stroke survivors.

This study might pave the way to developing task specific training addressed with major key elements of balance control, motor learning principles and integrating functional tasks that are meaningful to daily life. This study also provided an insight into mental practice with lower extremity motor imagery that can be feasible for clinical practice in stroke rehabilitation.

Task specific training combined with mental practice of lower extremity motor imagery can produce additional positive effect in all the domains of ICF in post stroke subjects with good imagery abilities. Task specific regimen augmented by mental practice found to render a greater functional impact and can be considered as a therapeutic adjunct after stroke.

Limitations of the study

The finding of this study should be interpreted with caution due to following reasons:

Majority of the participants were men with mild to moderate stroke subjects who were relatively young and can ambulate without human assistance with preserved motor imagery abilities.

The reported unsupervised practice sessions for both the groups were reliable on subject's information and specific measures to quantify the adherence rate were not addressed.

Balance and Fall Self efficacy an important psychological factor to predict fall risk and also mediate a greater recovery in physical functions in ambulant stroke subjects were not addressed in the present study.

Muscle Strength measurement findings were limited to isometric contractions and other key muscles such as hip abductors, trunk muscles could have influenced the study findings. Strength comparison with age matched healthy individuals could have provided us more understanding the extent of loss of muscle strength in people post stroke.

Follow up measurements were done with the short term interval due to feasibility issues.

Future scope of the study

To examine the effectiveness of MIT trials across different levels of motor recovery and further stratification of participants in balance and walking abilities.

To explore the efficacy of lower extremity task specific MI training (embedded framework with PETTLEP model) using objective method of clinical measures related to biomechanical components of balance and mobility functions such as Kinematic and Kinetics analysis, Force platform methods.

To identify the therapeutic benefits of combined embedded and added Motor Imagery training with brain imaging or neurophysiological measures in lower extremity functional recovery among post stroke subjects.

To implement therapy program of longer duration to enhance the durability of its long term therapeutic benefits.