Background: Community dwelling individuals with chronic hemiparesis following stroke are often not eligible for receiving routine physical therapy treatments by public services despite their impaired gait, low falls related self efficacy and high risk of falling. Support groups in community centers often provide maintenance programs for preventing deterioration in the physical status of these individuals. However, the motor imagery practice of gait has not yet been applied in such groups.

Aims: To examine whether members of community support groups that meet regularly can benefit from structured group therapy focusing on the motor imagery practice of gait tasks.

Methods: Using a crossover design, the study was conducted in two community centers. Half of the participants received five weeks of group based motor imagery exercises composed of gait tasks followed by five weeks of control treatment composed of group imagery exercises for the affected upper extremity. The other half of the participants received the same treatments in reverse order.

Results: Comparisons within (pre- vs. post intervention) and between groups (experimental vs. control) indicated no significant change in the temporal, biomechanical or clinical gait variables. Thus, group based motor imagery practice was not found to be beneficial for the improvement of gait performance in the target population. Nevertheless, the subjective reports of most participants alluded to satisfaction with the intervention and to increase in self confidence during walking.

Discussion: The results are based on a small sample size with large variability among subjects. Group exercises could not be equally tailored to the aims, needs and abilities of each individual in the group. Moreover, the fact that the study was conducted in two centers with four treating and two assessing therapists might have further increased the variability of the outcomes. Despite the negative findings that were indicated by our measurements, the participants’ personal feedback points to positive contribution of the program, as reflected in their subjective improvement in self confidence and in their attitude toward performing gait activities during their everyday life.

Conclusions: The disagreement between the negative objective and positive subjective outcomes alludes to a possible positive psychological influence of motor imagery group exercises which merits further inquiry.

Key words: Stroke, rehabilitation, mental practice, motor imagery, gait

Publications associated with the project: Submitted, a revision was requested.