INPLASY

Effects of progressive task oriented lower limb exercise training on motor recovery, balance & walking performance in people with stroke – a systematic review protocol

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ADMINISTRATIVE INFORMATION

INTRODUCTION

*R*eview question / Objective To find the evidence for the effect of progressive task oriented lower limb exercise training on motor recovery, balance & walking performance in people with Stroke.

Rationale Previous systematic reviews and meta-analyses have focused on the effect of task-oriented training and repetitive training which mainly focused on upper extremity motor function. One Cochrane review has focused on repetitive task training on the lower limb and concluded that there is low- to moderate-quality evidence that repetitive task oriented training improves upper and also found lower limb function improvements were sustained up to six months post-treatment. They suggested further research should focus on the type and amount of training, including ways of measuring the number of repetitions performed by participants. Most of the studies which were reviewed for finding evidence have not focused on motor recovery. Mostly, all studies focused on balance & walking which are measured for chronic stroke survivors only.

Time dosage parameters of exercise intervention used in all studies were not progressively increased. The same dosage parameters were given throughout the intervention time period in all the studies.

Condition being studied Stroke is the second leading cause of death and a major cause of disability worldwide. Its incidence is increasing because the population ages. It is the third leading cause of death and the most common cause of disability in India. In addition, more young people are affected by stroke in low- and middle-income countries. Stroke rehabilitation aids in facilitating

and enhancing the recovery of motor function through a combination of restitution-oriented and compensation-oriented treatment strategies. Restitution-oriented approaches rely on brain plasticity and aim to restore, as much as possible, the characteristics of normal voluntary movement.

METHODS

Search strategy The studies will be identified by finding the data from studies, which will find the effects of progressive lower limb task oriented training on motor recovery, balance & walking performance in patients with Stroke. Thus, the collected data will report the effect of task-oriented approaches on lower extremity recovery. The electronic databases used for this literature review were PubMed, PEDro, Cochrane, GoogleScholar & CINAHL extracted. The articles published in English between January 2016- December 2022. Using following (Mesh) key terms including stroke combined with lower limb task oriented approach, lower limb task specific training, lower limb task circuit training and task oriented training in stroke were used. A manual search will be carried out as a supplementary search technique by examining the reference lists of search articles.

Participant or population Patients with Stroke.

Intervention Lower limb task oriented training.

Comparator Does not apply.

Study designs to be included Randomized controlled trials.

Eligibility criteria Articles that meet the following inclusion criteria: 1) Stroke survivors of acute phase, sub acute phase& chronic phase 2)Stroke type was ischemic or hemorrhagic with supra tentorial involvement 3)Intervention must be task oriented training including task specific, task circuit & repetitive training of lower limb with combination treatment 4)Intervention of outcome measures used in those studies focused on motor recovery, balance &walking performance for lower limb 5)The study employed a RCT ,the study provided sufficient information to compute the effect size (ESs).

Information sources Studies will be identified from the five electronic databases PubMed, PEDro, Cochrane, GoogleScholar & CINAHL.

Main outcome(s) Motor recovery, Balance and Walking performance by using the appropriate outcome measures.

Quality assessment / Risk of bias analysis The methodological quality of the Selected articles will be assessed using the PEDro scale checklist.

Strategy of data synthesis The selected will be synthesized in a descriptive manner. The effect size will be calculated.

Subgroup analysis Does not apply.

Sensitivity analysis Does not apply.

Language restriction English.

Country(ies) involved India.

Keywords Stroke, Lower limb, Progressive Task Oriented Exercise, Motor recovery, Balance, Walking performance.

Contributions of each author
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