



What rehabilitation interventions improve social participation after stroke?

Purpose

To review the existing evidence of randomized controlled trials (RCTs) to determine whether rehabilitation interventions have a beneficial effect on social participation after stroke

Summary

- Initially eight electronic databases were searched following the PRISMA guidelines. RCTs were included if the participants were adult stroke survivors who lived in the community and received at least four weeks of intervention with social participation as one of the outcome measures.
- The reference lists of included studies were hand searched to identify additional relevant articles. The quality of evidence of all included studies was assessed according to the Physiotherapy Evidence Database scale.
- Interventions such as support services and exercise programs were analyzed using a standardized mean difference (SMD) for all outcomes.
- Findings showed that exercise programs were effective in improving social participation immediately after the intervention. This might be due to improved mobility, balance, and fatigue, as well as possible prevention or reduction of depression after stroke.
- Interventions using support services showed no significant beneficial effect on social participation for stroke survivors.

Possible Applications

- Since the benefits of exercise did not last after the program ended, continuous exercise is recommended to retain the positive effects for stroke survivors on social participation.
- Future research focusing on longer time periods after the intervention as well as investigating specific types of exercise and their effects on social participation will further the understanding of rehabilitation after stroke.

Research Abstract

Rehabilitation Interventions for Improving Social Participation After Stroke: A Systematic Review and Meta-analysis

Background: Despite the fact that social participation is considered a pivotal outcome of a successful recovery after stroke, there has been little attention on the impact of activities and

services on this important domain.

Purpose: To present a systematic review and meta-analysis from randomized controlled trials (RCTs) on the effects of rehabilitation interventions on social participation after stroke.

Methods: A total of 8 electronic databases were searched for relevant RCTs that evaluated the effects of an intervention on the outcome of social participation after stroke. Reference lists of selected articles were hand searched to identify further relevant studies. The methodological quality of the studies was assessed using the Physiotherapy Evidence Database Scale. Standardized mean differences (SMDs) and confidence intervals (CIs) were estimated using fixed- and random-effect models.

Results: In all, 24 RCTs involving 2042 stroke survivors were identified and reviewed, and 21 were included in the meta-analysis. There was a small beneficial effect of interventions that utilized exercise on social participation (10 studies; SMD = 0.43; 95% CI = 0.09, 0.78; $P = .01$) immediately after the program ended. Exercise in combination with other interventions (13 studies, SMD = 0.34; 95% CI = 0.10, 0.58; $P = .006$) also resulted in beneficial effects. No significant effect was observed for interventions that involved support services over 9 studies (SMD = 0.09 [95% CI = -0.04, 0.21]; $I^2 = 0\%$; $P = .16$).

Conclusion: The included studies provide evidence that rehabilitation interventions may be effective in improving social participation after stroke, especially if exercise is one of the components.

Obembe, A.O., Eng, J.J. (2015). Rehabilitation interventions for improving social participation after stroke: a systematic review and meta-analysis. *Neurorehabilitation & Neural Repair*, July 29, epub head of print.