

Evaluating the effectiveness of therapeutic horse riding for children and young people experiencing disability: a single-case experimental design study

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Purpose: Therapeutic horse riding aims to improve the health of children and young people experiencing disability; however, its benefits across a range of health domains, particularly the impact on participation outcomes, are not well known. This research evaluated to what extent there was a change in riders balance, functional performance, social responsiveness, quality of life and participation outcomes as a result of therapeutic horse riding.

Methods: A multiple-baseline across participants ($n = 12$) single-case experimental design, with randomly allocated baseline phase lengths, quantitatively evaluated how riders responded to a 20-week intervention.

Results: Social participation outcomes measured using the Canadian Occupational Performance Measure demonstrated the most consistent positive between-phase differences (performance ES = 1.20, 95% CI [0.82, 1.63]; satisfaction ES = 1.11, 95% CI [0.73, 1.55]). A causal relationship was seen in three riders, but improvements only reached clinical significance for two riders when accounting for phase data trends. No significant outcome patterns were found comparing riders with principally physical impairments to those with principally psychosocial impairments.

Conclusions: Being involved in therapeutic horse riding may improve rider's social participation in home, school and community settings. We postulate that rider self-concept development may be a mechanism of treatment effect leading to participation-level changes.

- Implications for rehabilitation
- Social participation was the health outcome demonstrating the most consistent change following therapeutic horse riding, regardless of rider impairment.
- Therapeutic horse riding can improve social participation in settings beyond the riding arena.
- Greater intervention tailoring based on rider responses may enhance therapeutic horse riding intervention effects.