The Effect of Hippotherapy Across the ICF in Children with Cerebral Palsy: A Systematic Review
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Background

- According to the American Hippotherapy Association, hippotherapy is defined as, "the purposeful manipulation of equine movement to engage sensory, neuromotor, and cognitive systems to achieve functional outcomes."
- Research has shown that hippotherapy is beneficial in children with cerebral palsy (CP).
- Previous systematic reviews were limited to certain outcome categories and included studies involving both hippotherapy and therapeutic horseback riding.

Purpose

- To determine the various effects of hippotherapy on specific areas of status and function across all International Classification of Function (ICF) domains in children with cerebral palsy

Methods

Databases Reviewed
- PubMed
- Embase
- MEDLINE
- Web of Science
- Scopus
- CINAHL

Inclusion Criteria
- 21 years of age or younger
- Diagnosis of cerebral palsy
- Intervention specified as hippotherapy

Risk of Bias & Quality Assessment
- Risk of Bias and Level of Evidence Tools:
  - Modified Downs and Black Checklist
  - Oxford Levels of Evidence

Data Extraction
- Outcome measure(s) used and associated results
- Categorized by ICF domain: Body Structure/Function, Activity, Participation, Personal/Environmental Factors

Results

- 256 studies were identified with 24 studies being included in the final qualitative analysis.
- Risk of bias of the studies ranged from fair to excellent, with the majority being fair.
- Level of evidence of the studies were Level 2 (n=7), Level 3 (n=13), and Level 4 (n=4).

Conclusions

- Hippotherapy is a beneficial intervention across the ICF model for children with cerebral palsy.
- Statistically significant findings were most frequently found in the areas of gross motor function, posture, and balance.
- Common outcome measures used (in ≥3 studies): MAS, COP, PBS, GMFM-66, GMFM-88, PEDI
- Previous studies demonstrated high variability in study design.

Clinical Relevance

- While hippotherapy is associated with benefits across the ICF, more research is needed to confirm this conclusion, especially on domains directly related to quality of life.
- Due to the high variability in previous study designs, there is a need for standardization of outcomes.

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References available upon request.