

Volitional Change in Children with Autism: a Single-Case Design Study of the Impact of Hippotherapy on Motivation.

Source: Taylor, R. R., Kielhofner, G., Smith, C., Butler, S., Cahill, S. M., Ciukah, M. D., & Gehman, M. (2009). Volitional change in children with autism: a single-case design study of the impact of hippotherapy on motivation. *Occupational Therapy in Mental Health, 25*, 192-200.

Purpose:

The purpose of this study was to investigate the effectiveness of a 16-week individual hippotherapy program on the motivation of three children with autism, between the ages of 4-6 years old.

Design/Methods:

The study design for this investigation was a single-subject A-B-B design. There were three participants, all children between the age of 4-6 years old, whom have been diagnosed with autism and no other medical diagnoses. Each subject received hippotherapy sessions 1x/week for the duration of 16 weeks. Sessions lasted for 45 minutes each, including time for preparation, mounting and dismounting the horse. A physical therapist trained in hippotherapy was in charge of all therapeutic activities for each session. The same treatment team, including sidewalkers and the horse leader remained consistent throughout all sessions. The primary construct looked at throughout this study was the volition of each participant as effected by hippotherapy. Volition refers to a person's motivation or inner drive to action. In order to measure this, the Pediatric Volitional Questionnaire (PVQ) was utilized. This tool measures a child's motivation through observation of interactions within his/her environment. During therapy sessions, the participant was led on the horse around the arena clockwise and counterclockwise at a walk and trot through poles and cones. Various posters were placed around the arena to encourage visual scanning and language opportunities. Structured play activities were also incorporated in session including play with wind-up toys, blowing up balloons, popping bubbles, playing peek-a-boo, playing with dolls, stacking rings and cups and looking through books, along with exploring other toys.

Results:

All three participants increased in PVQ scores from pre-intervention to post the 16 weeks of intervention. All but one participant saw improvements after 8 weeks of intervention and the one whom did not see improvements stayed relatively stable from baseline, but did experience improvements after 16 weeks. Upon visual analysis of the data measured by PVQ scores, it is indicated that all three children experienced improvements in motivation to engage in everyday activities after completion of 16-week intervention.

Conclusion:

Following 16 weeks of hippotherapy intervention with the direction of a physical therapist, all three children improved in motivation levels.

Strengths:

The treatment team remained the same throughout study, increasing consistency and reliability. Additionally, a physical therapist was leading therapy, so the focus was on activities centered around client's motivation and participation, opposed to solely on riding.

Limitations:

There were only three participants in this study, so in the future it would be beneficial to see if results prevailed with a larger sample size.

Practical Application:

Hippotherapy may be an effective intervention for children with autism in regards to levels of motivation. Increased levels of motivation may additionally translate to other areas of client's life, potentially increasing participation and quality of life.