

Title:

Rehabilitation Dogs for Walking and Balance Training in Children Living with Cerebral Palsy

Authors:

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Introduction:

Cerebral Palsy (CP), is the most common neurological condition limiting gross motor function (e.g., walking, balance) in children. Assistive devices are a common means to enhance walking ability, but are not without their limitations, especially in pediatric populations. Dog-assisted interventions have been shown to increase psychosocial wellbeing, walking speed, and community participation in other populations. However, exploring the use of a rehabilitation dog as a walking support for children living with CP has yet to be explored. This study investigated changes in temporospatial walking parameters in children living with CP when walking with and without a rehabilitation dog.

Methods: A mixed-methods cross-sectional design was used to evaluate the immediate change (i.e., without training) on walking speed, step length, cadence, double:single support time, change in gait asymmetry and participant confidence walking with/without the dog. Ambulatory (GMFCS I-III) children living with CP, were recruited from a local outpatient pediatric department. Participants walked along a ten-metre pressure-sensitive walkway (GaitRite®, NJ, USA) with and without the rehabilitation dog then completed a semi-structured interview regarding their experience walking with the dog.

Results:

Twelve (n=12) ambulatory (GMFCSI n=7; GMFCSII n=4; GMFCSIII n=1) children living with CP (ages 7-16) were included in the study. Seven (n=7) participants were of female sex (gender: girl n= 6; non-binary n=1) and five (n=5) participants were of male sex (gender: boy n=5). All participants had a form of spastic CP (hemiplegic n= 5; diplegic n=6; quadriplegic n=1). Included participants identified as white (n=8) and Indigenous (Métis n=2; First Nations n=2). Data analysis is ongoing, mixed-methods results will be presented at conference.

Discussion:

This study will provide preliminary evidence of the impact of a rehabilitation dog on walking ability in children living with CP and support the development of future rehabilitation interventions integrating animal assistance.