

Response to article “Effect of the Dynamic Orthotic Garment on Postural Control, and Endurance in Children with Spastic Diplegic Cerebral Palsy: A Randomized Controlled Trial” [Letter]

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Dear editor

We have recently read the research paper by Emara et al, “Effect of the Dynamic Orthotic Garment on Postural Control, and Endurance in Children with Spastic Diplegic Cerebral Palsy- A Randomized Controlled Trial”,¹ which was just released in the prestigious “Journal of Multidisciplinary Healthcare”. We would like to commend the authors on their accepted paper.

The authors’ concept to treat both groups is laudable because it follows basic ethical standards and preserves patients’ standard therapy. The authors’ choice to add markings to the TheraTogs to aid in appropriate patient fitting at home is highly commendable, which was quite beneficial for the parents also because most of them were novices. Lastly, the research also thoroughly evaluates variables including balance, plantar pressure distribution, and gait characteristics. It is crucial to understand the advantageous effects of TheraTogs on CP patients. Nevertheless, we have noted a few shortcomings that need to be taken into consideration for the upcoming studies.

First off from the literal point of view, although it is not mentioned in the title, the “foot pressure distribution” has been identified as the study’s key outcome measure. It should have been specified in the title because this outcome measure is also used to compute the sample size. Secondly, the TheraTogs’ introduction regarding its utility and the method of use is inadequate and unclear for a first-time reader.² There should be more elaboration about the feasibility to use this garment so that this can be adapted to the clinical practice.

Considering the adapted methodology, the sample size estimation was not fully discussed; just the power was mentioned, leaving out the outcome measures’ mean and standard deviation as well as whether one- or two-tailed analysis was taken into account.³ Moreover, a pressure platform (FDM-S, Zebris Medical GmbH, Germany) was used to measure the distribution of foot pressure; however, neither the validity nor the reliability of this equipment have been reviewed. On the other hand, using a Harris Mat with Podiascan software would have been a trustworthy alternative source.⁴ Furthermore, the dominant foot was taken into consideration while excluding the non-dominant foot when analyzing how TheraTogs impact the distribution of plantar pressure. However, the authors did not explain their reasons for doing this. A clearer specification of the outcome measures and the rational behind their consideration would have clarified TheraTogs’ overall benefits.

Taking statistics into account, with time and interventions serving as the dependent variables, a between-group analysis of the six-minute walking test (6 MWT) was conducted using MANOVA. However, as other outcome measures can also be impacted by the dependent variables of time and intervention, multivariate analysis of this kind was not taken

into consideration. For other outcome measures, the Multivariate Kruskal–Wallis test, a non-parametric equivalent of the MANOVA, may have been given thought too. Lastly, just as it was made evident for other parameters, the effect size need to have been specified for peak foot pressures and 6 MWT as well.

Disclosure

The authors report no conflicts of interest in this communication.

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