The Treatment Impact of Partial Body Weight Supported Treadmill (PBWST) on Cerebral Palsy Kid Using Physio-Treadmill (PhyMill): A Case Study

Rabiatul Aisyah Ariffin ^a, **Mohd Azrul Hisham Mohd Adib** ^{a*},Nurul Shahida Mohd Shalahim ^b, Narimah Daud ^c, and Nur Hazreen Mohd Husni ^d

- ^a Medical Engineering and Health Intervention Team (MedEHiT), Department of Mechanical Engineering, College of Engineering, Universiti Malaysia Pahang
- Department of Industrial Engineering, College of Engineering, Universiti Malaysia Pahang,
 Kuantan Physical Therapy, Physiotherapy Center
 Family Health Unit, Pahang State Health Department

ABSTRACT

Cerebral Palsy (CP) prevalence has remained stable in the global population over the last few years. This case study aims to examine the impact of the Partial Body Weight Supported Treadmill (PBWST) on gait control in kids with cerebral palsy. Kids with CP completed a gait training protocol two-session between two weeks' intervals. Outcome measures included a Berg balancing scale, Dynamic gait index, Katz index of independence in activities of daily living, and several steps. The individual results indicated there were improvements in balance, dynamic gait, and step count. After the second session, the number of steps improved. The step length of the second session is better. There were more active movements during the second session. Additional research is needed to determine the treatment parameters and the long-term effects of PBWST on gait performance in CP children.

KEYWORDS:

Cerebral palsy; Treadmill training; Rehabilitation; Gait; PhyMill

ACKNOWLEDGEMENT

A big thank you dedicated to MOHE under grant FRGS/1/2021/TK0/UMP/02/25. Also to University Malaysia Pahang (UMP) under grant RDU210332 and PGRS2003199 and Medical Engineering and Health Intervention Team 276 R. A. Ariffin et al. (MedEHiT) are gratefully acknowledged for providing us with a good environment and facilities to complete these research activities.