



Design and Build of Rehabilitation Wheelchair Compatible for Children

Mohammad Hashem Faghihi ^a, Maryam Hoviattalab ^a, Javad Akbari ^b

^a Sharif University of Technology, Iran; ^b University of Malaya, Malaysia

One of the most common affections of children sitting prolong on wheelchairs is muscle retardation, bed sores, and non-effective rehabilitation and occupational therapy conditions. Lack of appropriate table boards on the wheelchair causes educational diminution. Additional therapy drawbacks occur when children cannot reach the standing posture or relaxing positions during rehabilitation. In this paper, based on the profile of anthropometric standards for children between ages 8 to 10 years, weight 20 to 46, stages of the design and construction of a wheelchair with the ability to switch from standard position to standing posture and also tilting is introduced. Ultimately, tests for validation on output results of the analysis of the mechanism are also implied. Results on this basis were taken and the product was well adapted to the actual condition of the system and shown acceptable performance and ease of use.