The Effects of the Odstock Drop Foot Stimulator on Perceived Quality of Life for People With Stroke and Multiple Sclerosis

Catherine Barrett, MSc, BSc, MCSP* · Paul Taylor, PhD, MSc, BSc, CEng†
*School of Health and Social Care, University of Bournemouth, Talbot Campus, Poole, Dorset, UK; and †School of Design, Engineering and Computing, University of Bournemouth, Talbot Campus, Poole, Dorset, UK

ABSTRACT

Introduction. Gait speed is often used as a proxy for gait quality. However, some users of FES devices for correction of dropped foot choose to continue to use the device despite no significant change in speed. The Psychosocial Impact of Assistive Devices Scale (PIADS) was used to evaluate the effects of the Odstock Dropped Foot Stimulator (ODFS) on perceived quality of life (QOL) for people with stroke and multiple sclerosis (MS) and was compared with change in walking speed.

Method. A total of 21 people with stroke and 20 with MS completed the PIADS questionnaire after 18 weeks of using the ODFS. Walking speed was recorded more than 10 m with and without stimulation.

Results. Both groups recorded positive median scores for all three sections of the PIADS questionnaire: Competence (1.25 stroke, 0.91 MS), Adaptability (1.25 stroke, 0.50 MS), and Self-esteem (0.88 stroke, 0.75 MS). These were significantly greater for the stroke than the MS group for Competence, \( p = 0.04 \) and Adaptability, \( p = 0.006 \). There was no significant correlation between changes in PIADS and changes in walking speed.

Conclusions. FES for correction of dropped foot has a beneficial effect on perceived QOL for people with stroke and MS but this is not correlated with an objective measures of gait.

KEY WORDS: FES, gait, MS, quality of life, stroke.

doi: 10.1111/j.1525-1403.2009.00250.x

NEUROMODULATION: TECHNOLOGY AT THE NEURAL INTERFACE
Volume 13 • Number 1 • 2010
http://www.blackwell-synergy.com/loi/ner