

## VALIDITY AND INTER-RATER RELIABILITY OF THE LINDOP PARKINSON'S DISEASE ASSESSMENT

Pearson, M.J.T.<sup>1</sup>, Lindop, F.A.<sup>2</sup>, Mockett, S.P.<sup>1</sup>, Saunders, L.<sup>3</sup>

<sup>1</sup> Division of Physiotherapy Education, University of Nottingham

<sup>2</sup> Department of Physiotherapy, Derbyshire Royal Infirmary

<sup>3</sup> Department of Physiotherapy, Derby City General Hospital

**Introduction:** Evidence based outcome measures for Parkinson's Disease (PD) vary widely in their complexity and subjectivity and may not specifically focus on areas appropriate to physiotherapy interventions. The Lindop Parkinson's Disease Assessment (LPA) is a 10-item scale devised for use with patients attending an elderly Parkinson's Disease clinic to assess functional gait and bed mobility in relation to treatment by medication and physiotherapy.

**Aim:** The aims of this study were to assess the validity of the LPA in comparison to the Unified Parkinson's Disease Rating Scale (UPDRS) motor examination section and to assess its inter-rater reliability.

**Method:** Ethical approval was granted (Ref: 0304/635) in June 2003. 49 subjects with PD were recruited (33 male, 16 female) aged 47-92 years (mean  $75.84 \pm 7.16$ ). Subjects completed tasks from both the LPA and the UPDRS whilst being scored by two raters (A & B) who marked independently of each other. Data were analysed for correlation and agreement.

**Results:** Correlations were significant between the LPA and UPDRS data for both raters (Spearman's  $\rho$  = Rater A: -0.674; Rater B: -0.629;  $p \leq 0.001$ ). Coefficients are negative because high UPDRS scores equate to a low LPA scores. Significant inter-rater correlations were observed for the LPA and UPDRS (Spearman's: LPA: 0.981, UPDRS: 0.916,  $p \leq 0.001$ ). Percentage agreements between raters ranged from 81.6% to 100% for the LPA. Bland and Altman plots confirm this high level of agreement. The LPA also took significantly less time to complete (mean  $7.71 \pm 2.90$ mins) compared to the UPDRS motor examination (mean  $10.53 \pm 2.15$ mins) (Mann Whitney U = 468.5  $p \leq 0.001$ ).

**Conclusion:** The LPA shows high validity and inter-rater reliability, is quick and easy to administer and provides objective information about the gait and bed mobility in elderly PD patients.