

---

# Proceedings of SRR

---

These abstracts are from the proceedings of the Society for Research in Rehabilitation meeting held at the University of East London, London on 29 January 2002.

## **The sitting tests of the Brunel Balance Assessment**

**Sarah Tyson**

The Stroke Association's Therapy Research Unit, University of Manchester and

**Lorraine DeSouza**

Department of Health Studies, Brunel University

**Background:** The Brunel Balance Assessment (BBA) is a new test of balance disability post stroke. It combines an ordinal scale of balance disability with functional performance tests. The reliability and validity of the sitting balance tests are reported here. These include tests of supported (nominal timed test), static (arm raise test) and dynamic (forward reach test) balance and an ordinal sitting scale.

**Method:** People with a post-stroke hemiplegia attending physiotherapy who had no other pathology affecting their balance took part. Thirty-seven people participated in the reliability testing. Within-session, test–retest and inter-tester reliability was tested using the kappa coefficient and intraclass correlations. The BBA was performed three times and the first and third attempts compared to test the within-session reliability. The assessment was repeated a few days later to assess test–retest reliability and was scored simultaneously by two physiotherapists to assess the inter-tester reliability. Fifty-five people took part in the validity testing. The sitting tests were compared with the sitting section of the Motor Assessment Scale, Berg Balance Test, Rivermead Mobility Index and Barthel Index using Spearman's rho.

**Results:** The ordinal scale and nominal tests showed 100% agreement in all aspects of reliability. ICCs for the performance tests were 0.93–0.99. The sitting scale, arm raise and forward reach test formed significant correlations with all comparison tests ( $r = 0.31–0.87, p < 0.05$ ).

**Conclusion:** The tests are reliable, valid measures of sitting balance disability.

## **An investigation of return to employment following lower limb amputation**

**E Murphy and DL McLellan**

University of Southampton, Rehabilitation and Research Unit

**Background:** Younger patients sustaining a unilateral lower limb amputation usually manage independent mobilization but this may not be sufficient to enable return to previous employment. Literature to date is sparse and concerns atypical populations.

**Study aims:** To determine vocational outcome of lower limb amputees in Hampshire, factors associated with return to work and the experience, attitudes and knowledge of the amputee's employers.

**Method:** A cross-sectional survey by interviewer-administered questionnaire was conducted. The OPCS Disability Scale, London Handicap Scale, Houghton Scale, Job Satisfaction Index and a structured questionnaire were used. A postal questionnaire was sent to employers.

**Results:** Fifteen of the 25 amputees interviewed

continued to be employed but only five in the same job. Returnees were significantly younger (95% CI 1.86–18.88;  $p = 0.019$ ) and demonstrated less co-morbidity (95% CI 11.1–71.8%;  $p = 0.018$ ) than nonreturnees. There was a tendency for previous physical workers, those sustaining a traumatic amputation and above-knee amputees to be less likely to return to work. Returnees tended to have achieved better prosthetic rehabilitation and to be less disabled. Seventy-five per cent of participating employers were not aware of resources available to assist them to re-employ a disabled employee. More than 50% of participants did not discuss return to work with their doctor or physiotherapist.

**Conclusions:** Lower limb amputation has major implications regarding employment. There needs to be more emphasis on vocational rehabilitation following lower limb amputation.

### **Views of health professionals about discussing sexual issues with patients**

**NHJ Haboubi**

North Staffordshire Rehabilitation Centre and

**NB Lincoln**

Department of Clinical Psychology, University of Nottingham

**Background:** This survey was carried out to study the views of multidisciplinary health professionals about discussing sexual issues with patients.

**Methods:** A questionnaire was sent to professionals (nurses, doctors, physiotherapists and occupational therapists) to return by post. A duplicate questionnaire was sent four weeks later to a random sample of respondents.

**Results:** Test–retest reliability of the questions showed moderate to very good agreement. A total of 813 replies were analysed (61% response rate). Mean age + SD of respondents was  $37 \pm 10$ . Most were female (85%).

Most respondents (90%) agreed that addressing sexual issues ought to be part of the holistic care of patients. However, staff were poorly trained (86%) and were unlikely to discuss sexual issues with their patients (94%). Gender and age of respondents had no significant relationship to their participation in such discussion.

Therapists had less training, lower comfort level and were less willing to discuss sexual issues than doctors and nurses, while doctors discussed sexual issues significantly more than others ( $p \leq 0.001$ ).

Training was significantly associated with comfort in discussing sexuality; both were significantly related to an increased willingness and participation in discussing sexual issues ( $p \leq 0.001$ ).

**Conclusion:** Health professionals agreed that patients' sexual issues needed to be addressed and discussed in health services. However, they were poorly trained, ill prepared and rarely participated in such discussion.

### **Does increasing effort affect movement economy during cycling exercise in individuals early after acquired brain injury**

**H Dawes**

Oxford Brookes University and Rivermead Rehabilitation Centre (RRC)

**A Bateman**

University of East London

**J Culpan**

University of East London

**O Scott**

University East London

**D Wade**

Rivermead Rehabilitation Centre & University of Oxford

**NK Roach**

Manchester Metropolitan University and

**R Greenwood**

RNRU, Homerton Hospital, London

**Background:** Clinicians express concern regarding the use of exercise, which involves a high level of effort in individuals with acquired brain injury, particularly in those presenting with spasticity. This study aimed to address the issue of the effect of increasing effort on movement economy as measured by oxygen consumption ( $\dot{V}O_2$ ) during submaximal cycling exercise in individuals early after acquired brain injury (ABI).

**Method:** Thirty-eight individuals were recruited (29 male; 9 female) a mean of 18.8 (+SD 6.8

weeks), after ABI due to trauma (TBI,  $n = 18$ ), stroke ( $n = 9$ ), or other causes (OABI,  $n = 11$ ). Oxygen consumption ( $\dot{V}O_2$ ) was measured in relation to workload during a graded exercise test performed under standardized conditions.

**Results:**  $\dot{V}O_2$  ( $\text{ml O}_2 \text{ min}^{-1} \text{ kg}^{-1}$ ) increased in a linear fashion with increases in workload in 34 individuals in all three pathological groups. Baseline Ashworth Scale spasticity values for hip or elbow movements (flexion/extension) were recorded of  $\geq 1$  for nine individuals. Only one individual who presented with spasticity in the upper or lower limb demonstrated a nonlinear  $\dot{V}O_2$ /workload relationship.

**Discussion:** Three of the four individuals who showed a nonlinear increase in oxygen consumption with increases in workload presented with baseline Ashworth Scale scores of 0 in both upper and lower limbs, suggesting that spasticity was not the main factor affecting this nonlinear relationship.

**Conclusion:** Movement economy, as measured by oxygen consumption, changes in a linear fashion with cycling intensity during submaximal exercise in most individuals early after ABI.

## The met and unmet needs of young people who have had a stroke

**Paula Kersten**

Royal College of Nursing

**Joe Low**

Marie Curie Palliative Care R&D Unit

**Lindsay McLellan, Ann Ashburn and Steve George**

University of Southampton

**Background:** Stroke is a common cause of adult disability. The aim of this study was to examine the met and unmet needs of young people who have had a stroke.

**Methods:** A national postal survey of young people (18–65) with a stroke at least one year ago. The Southampton Needs Assessment Questionnaire for people with stroke was developed and validated for the study. Nine national rehabilitation services agreed to help with the identification of potential participants.

**Results:** Three hundred and fifteen (49%) ques-

tionnaires were returned. Respondents' mean age was 55 (SD 9, 189 male, 126 female). The impact of stroke was significant (36% were unable to walk unaided outside, 44% had lost their job, 47% had difficulties with their sex life). Most frequently used services were those from a GP (77%), physiotherapist (38%) and nurse (23%). The median number of unmet needs reported was 2 (IQR 0 to 6). The most frequently reported unmet needs were: provision of information (45%), financial needs (24%), assistance with noncare activities (19%) and intellectual fulfilment (17%).

People with poor mobility reported significantly more unmet needs than those with good mobility. Financial difficulties were experienced by more people who had not been able to return to work than those who had. Younger people (18–45 years) wanted more holidays, access to family support services and things to challenge them intellectually than older people (45–65).

**Discussion and conclusions:** People with stroke, in particular, those with poorer mobility and of younger age and those unable to return to work report most needs. Services need to target these groups more specifically.

## Therapy for unilateral spatial neglect

**R Wenman, A Bowen**

Human Communication and Deafness, University of Manchester

**E Gardener**

Research and Development Department, Salford Royal Hospitals NHS Trust

**A Cross**

Stroke Unit, Salford Royal Hospitals NHS Trust

**D Niven**

Directorate of Occupational Therapy, University of Salford and

**R Tallis**

SATRU, University of Manchester

**Background:** Unilateral spatial neglect is a disabling disorder which commonly occurs after a stroke. This study evaluated the effectiveness of a novel therapy approach which combined stimulation of the affected hand and the behavioural technique of self-instructional training.

**Method:** This randomized single-case experimental design consisted of 12 phases, each lasting one week. Six of the phases were 'treatment,' and six were 'no treatment.' The 12 phases were administered in random order. Two research participants (TK and HF) were assessed three times per phase. Outcome was assessed using measures of impairment and activity. Analyses were by visual inspection, fitting linear regression lines to each phase and *t*-test comparisons of these slopes in the 'treatment' and 'no treatment' phases.

**Results:** Visual inspection showed: 1) marked variability within a phase, 2) positive slopes were not more likely for 'treatment' than 'no treatment' for both TK and HF.

The *t*-tests showed no significant difference between mean 'treatment' and 'no treatment' slopes on impairment (TK  $-2$ , 95% CI  $-6.6$ – $2.5$ ,  $p = 0.3$ ; HF  $0.5$ , 95% CI  $-1.8$ – $2.8$ ,  $p = 0.6$ ) or activity (TK  $-0.8$ , 95% CI  $-2.4$ – $0.8$ ,  $p = 0.3$ ; HF  $0.5$ , 95% CI  $-0.4$ – $1.4$ ,  $p = 0.3$ ) level measures.

**Conclusion:** This study failed to demonstrate evidence of effectiveness of the new therapy. Two methodological issues were highlighted: variability of test performance, and the high number of measures required for analysis. This randomized single-case design did not appear acceptable to the participants or feasible for this neglect therapy research.

### **Evaluation of a community stroke rehabilitation team – the patient perspective**

#### **H Buri**

School of Health and Social Care, Sheffield Hallam University

#### **P Dawson**

School of Health and Professional Practice Studies, University of Northumbria at Newcastle

#### **B Tait**

Newcastle City Health Trust and

#### **R Plant**

Institute of Rehabilitation, University of Northumbria at Newcastle

**Aim:** As part of a service evaluation of a new interdisciplinary community stroke rehabilitation

team we explored patients' views on the service they received. Our aim was to include the user perspective in future service development plans.

**Data collection:** Six patients were purposively selected for in-depth individual interviews about the rehabilitation they received. Interviews were conducted in the home situation by an outsider-researcher.

**Data analysis:** Interviews were audio-taped and transcribed. Content analysis revealed the following three themes:

- *Location of treatment* Physiotherapy was offered at home or in an outpatient gym. Patients valued choice in the location of therapy. They viewed attending hospital as a social outing and as more appropriate and safer than home-based therapy.
- *Features of therapy* Patients valued a client-centred approach in which they shared decision-making with therapists. They had difficulty with finishing the therapy relationship and needed time to prepare for discharge.
- *Satisfaction with therapy* Overall patients were satisfied with the service, although they would have liked longer or more frequent therapy.

Our findings mirror those by Thomas and Parry<sup>1</sup> and McKeivitt and Wolfe,<sup>2</sup> in which patients and carers were satisfied with stroke services but desired more intensive therapy for longer.

**Conclusion:** A bid for permanent funding has been successful. Patients' expectation for duration and intensity of therapy is negotiated at the outset of intervention, and the practice of enabling patients to choose where to undergo physiotherapy and to negotiate joint goals is continuing.

### **References**

- 1 Thomas C, Parry A. Research on users' views about stroke services: Towards an empowerment research paradigm or more of the same? *Physiotherapy* 1996; **82**: 6–12.
- 2 McKeivitt C, Wolfe C. Community support after stroke: patient and carer views. *Br J Ther Rehabil* 2000; **7**: 6–10.