

## **NeuroRehab Evidence Database**

Target Area: Challenging Behaviour

Neurological Group: Traumatic Brain Injury

Lane-Brown and Tate (2010). Evaluation of an intervention for apathy after traumatic brain injury: A multiple-baseline, single-case experimental design. *J Head Trauma Rehabil*, 25(6): 459-469.

RoBiNT score - 11/30

#### Method / Results

# Design

- **Study Type:** SCD. Multiple baseline across behaviours.
- Population: n=1. Male, age 32, very severe TBI as a result of a bicycle accident 3 years and 7 months before the study enrolment.
- **Setting:** Not specified.

#### Target behaviour measures:

- Sustaining activity on the 3 target behaviours (number of minutes spent each day working toward the goal):
  - 1. Organise and maintain bedroom
  - 2. Increase fitness and maintain through exercise
  - 3. Improve social conversation.

#### Primary outcome measure/s:

- Apathy Evaluation Scale (AES)
- Frontal Systems Behaviour Scale (FrSBe) Apathy subscale.

### Secondary outcome measure/s:

- Wechsler Adult Intelligence Scale (WAIS-III)
- Self-awareness of Deficits Interview (SADI)
- Nottingham Leisure Questionnaire (NLQ)
- Mayo-Portland Participation Index (M2PI)
- Depression Anxiety Stress Scale (DASS) Depression subscale
- Barrow Neurological Institute Fatigue Scale (BNIFS).

**Results:** Statistical analysis showed treatment had a strong, specific, and significant effect on treated goal-directed activity and decreased apathy. The success of treatment was dependent on initiation as well as sustaining goal-directed activity.

#### Rehabilitation Program

**Aim:** To increase sustained activity toward cumulative goals.

**Materials:** Patient's personal digital assistant (PDA), stopwatch.

#### Treatment Plan:

- Duration: 28 weeks.
- Procedure: Weekly face-to-face sessions for 1 hour per session. Daily measurement of target behaviours occurred during all phases simultaneously, for all goals after the first 5 weeks of face-to-face sessions (163 time points).
- Content: Treatment incorporated motivational interviewing (during face-to-face sessions) and external compensation to assist in initiating and sustaining cumulative goal-directed activity.
- During sessions, the previous week's progress was reviewed, steps to undertake the goal-directed activity for the upcoming week were defined and sequenced, and methods of overcoming barriers were discussed.
- External compensation was a daily reminder alert set into the patient's PDA, a device he was experienced in using, at the time of the day the activity was to commence.
- Daily recordings of the time spent on goals were made over 7.5 months.
- Goal 3 was an untreated, control goal.