Intensive communication therapy following traumatic brain injury: report of a single case experimental design

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Background and objectives

ICAP (Rose et al., 2013)
Intensive Comprehensive Aphasia Programme

- ≥ 3 hours speech and language therapy per day
- ≥ 2 weeks
- Multiple approaches to treatment
- Range of goals

vs.

ICT
Intensive Communication Therapy

- 2 hours speech and language therapy per day
- 2 week blocks x 2 hours/day (with 2 week break)
- Multiple approaches to treatment
- Two specific goals

Hypothesis: intensive intervention results in improved outcomes compared to standard therapy (Leff et al., 2021)

Method

A1, A2, A3: Baseline / return to baseline. Videos recorded once per week for two weeks.

B1, B2: Intensive Communication Therapy. Dose: Two hours of speech and language therapy (SLT) per day (not always delivered by an SLT), five times per week for two weeks. Focus on reducing impairment.

Outcome measures

- Rehabilitation support workers ratings on fluency ('*How easy it was for VT to speak with you today?*')
- Number of syllables, breakdowns, turns and topics on speech samples
- Ratings from three SLTs on the Pragmatic Rating Scale (PRS, Iwashita & Sohlberg, 2019).

Results

Noticeable change

Increase in the median number of • Syllables • Turns • Topics • PRS interactional score

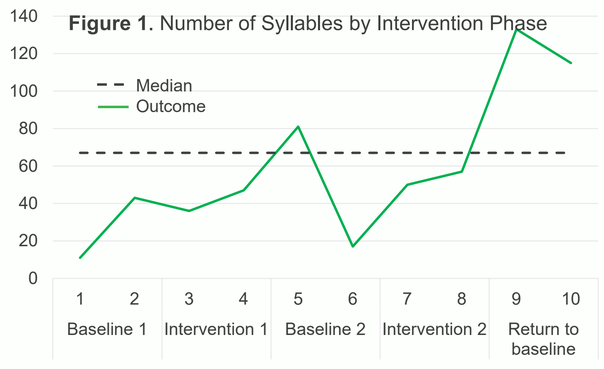

Figure 1. Number of Syllables by Intervention Phase

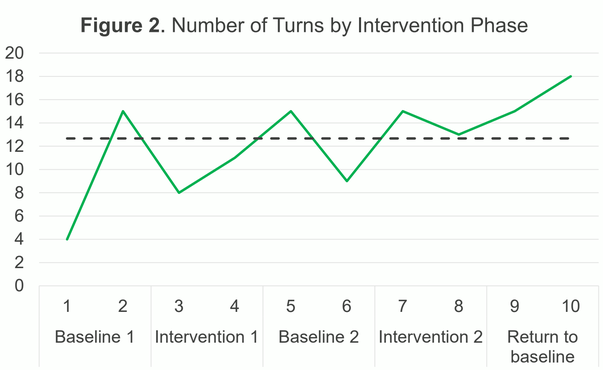

Figure 2. Number of Turns by Intervention Phase

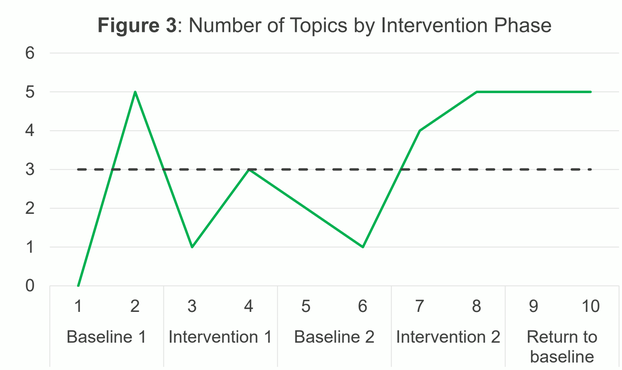

Figure 3: Number of Topics by Intervention Phase

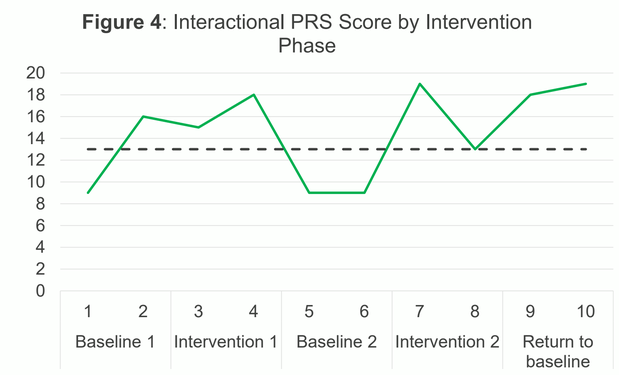

Figure 4: Interactional PRS Score by Intervention Phase

No noticeable change

- On median number of • Breakdowns • PRS nonverbal score • PRS propositional score • PRS total score

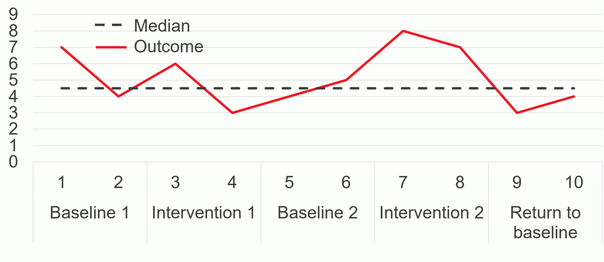

Figure 5. Number of Breakdowns by Intervention Phase

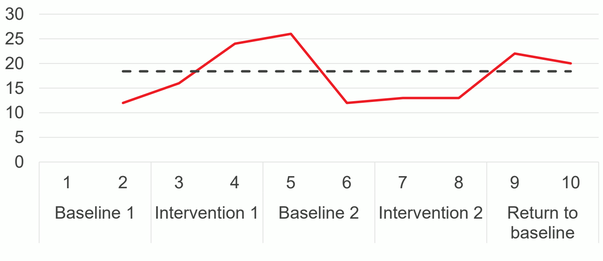

Figure 6: Nonverbal PRS Score by Intervention Phase

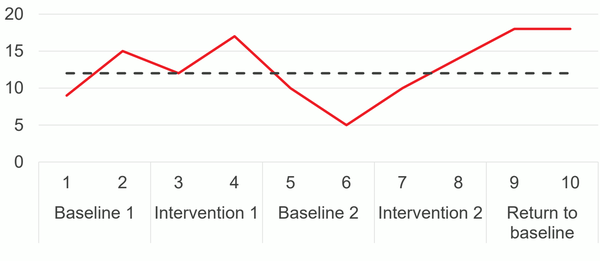

Figure 7. Propositional PRS Score by Intervention Phase

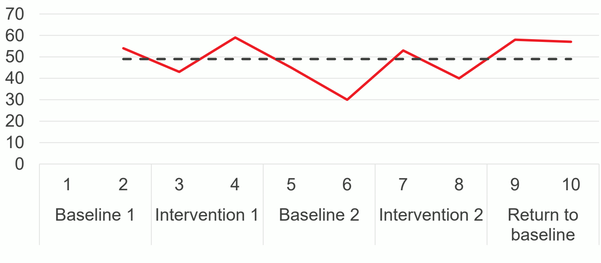

Figure 8. Total PRS Score by Intervention Phase

Conclusions

- Change could not be directly attributable to ICT.
  - Short video speech samples (two minutes)
  - Small number of videos recorded (two per phase)
- Overall pattern indicates cumulative effect of therapy potentially boosted by ICT
- Spontaneous recovery unlikely, as over three years post most recent injury.

Limitations and future directions

- Is an ABABA design the most appropriate for interventions aimed at achieving durable change?
- Is the PRS the most appropriate measure for an impairment focused intervention?
- Were the selected measures of outcome adequately matched to the aims of the intervention?

References

- Iwashita, H., & Sohlberg, M. M. (2019). Measuring conversations after acquired brain injury in 30 minutes or less: A comparison of two pragmatic rating scales. *Brain Injury*, *33*(*9*), 1219-1233.
- Leff, A. P., Nightingale, S., Gooding, B., Rutter, J., Craven, N., Peart, M., ... & Crinion, J. T. (2021). Clinical effectiveness of the Queen square intensive comprehensive aphasia service for patients with poststroke aphasia. *Stroke*, *152*(*10*).
- Rose, M. L., Cherney, L. R., & Worrall, L. E. (2013). Intensive comprehensive aphasia programs: an international survey of practice. *Topics in Stroke Rehabilitation*, *20*(*5*), 379–387.

Acknowledgements

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