Relearning in Semantic Dementia: Word retraining programs to help rebuild vocabulary

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Background & Aims

- Semantic dementia (SD) significantly impacts word knowledge, resulting in marked deficits in both spoken and written word retrieval.1
- Word retraining has been shown to improve spoken word retrieval in patients with mild through to severe impairments.2,4
- Remediation of written retrieval has not been studied. This study aims to:
  i) investigate the effectiveness of word retraining for both spoken and written word retrieval.
  ii) explore the impact of disease severity on treatment success.

Results – Spoken retrieval

- All participants significantly improved on naming trained words:
  o Learning: accuracy of naming increased for people with mild, moderate & severe impairments.
  o Maintenance: improvements were maintained at the 2-month follow-up compared to baseline.

Results – Error type

- Rate of “don’t know” and semantic errors reduced while spelling errors increased for trained words: error rates remained unchanged for untrained words.
- Although mild-moderately impaired patients made fewer errors than the severe patients, error patterns were similar across all participants.

Materials & Methods

- 8 SD patients completed word retraining.

Results – Written retrieval

- Significant improvements were also seen when writing trained words:
  o Learning: written accuracy increased for people with mild, moderate & severe impairments. Improvements in writing were similar in magnitude to those achieved for spoken retrieval, with the exception of two cases (Mild and Moderate), where the change in written accuracy was smaller.
  o Maintenance: improvements were again well maintained at the 2-month follow-up.

Results – Untrained words

- No change in performance was observed for untrained words at either the immediate post or the 2-month follow-up assessment.

Discussion / Conclusions

- Significant improvements in both spoken and written retrieval can be achieved in SD following an 8-week retraining program.
- These improvements are specific to words that are actively trained; word retraining does not affect untrained words (either positively or negatively).
- Performance is largely retained over the short-term (2-months), although patients with severe semantic deficits are likely to require ongoing revision.
- After training, “don’t know” and semantic errors are less common, but spelling errors may occur, particularly for patients with severe impairments.
- A simple home-practice program can benefit people with SD, even in cases of severe semantic impairment.

References