Which words are most important for people with aphasia to relearn?

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Background

- Word retrieval often targeted in speech and language therapy for aphasia

- Use picture material of words to be retrieved in therapy
Does it matter which words we use in therapy?

**Salience**

Suggests: To maximise impact of therapy, need to target words that patients identify as personally relevant

**Generalisation**

- Only 1 in 4 patients generalise word finding from treated to untreated words (Nickels et al 2002, Best 2013)

- Phonological output deficits ✓
  Semantic difficulties ✗ (Best 2013)

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Average number of words learned in CACTUS computerised word finding therapy

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<th>Standard words</th>
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Big CACTUS

• NIHR HTA & Tavistock Trust for Aphasia funded project

• Pragmatic RCT to evaluate clinical and cost effectiveness of computer word finding therapy for aphasia

• 278 participants with aphasia chose 100 words each to learn
Computer aphasia therapy: approach to word finding therapy

- Patients carry out regular independent self-managed practice
- Volunteer to support language practice and computer use
- SLT tailors software
- StepByStep© software

100 words of personal interest
Questions

1) What are the topics that people with aphasia are interested in talking about?

2) What are the most common words selected for practice by people with aphasia?
Method

• Use of data from first 100 participants randomised to Big CACTUS.

• Two SLT researchers conducted a quantitative content analysis of 9999

  – Identified word ‘types’ and number of ‘tokens’ e.g. banana, banana, banana, bananas, bananas
  – Coded word types into topics and subtopics
  – Frequency counts of topics and words
  – Subgroup analysis: age and gender
Participants

63 Male  37 Female

49 mild  27 moderate  25 severe

Age range 23-85, median 64

52 <65 years, 48 65 years or above

All >4 months post stroke
Word selection

• SLT asked participant to think of 100 words
• 18 Prompt cards – informed by pilot study and StepbyStep content (35,000 words)
What are the topics of interest?

3095 different words in 27 categories
79.4% words from 8 categories

Food & drink
Nature & gardening
Entertainment
Places
People
House
Clothes
Travel
Actions
Money & numbers
Personal care
Shopping
Time
Health
Work & education
Personal items
Maths & science
Descriptive terms
Organisations & groups
Feelings & senses
Weather
Technology & equipment
Non content words
Stationery
Events
Religion
Distribution of popular topics across participants

Number of words

Food & Drink
Nature & Gardening
Entertainment
Places
People
House
Clothes
Travel
Male/female differences

- Nature & gardening (11.7% vs 7.7%)
- Travel (4.5% vs 1.7%)

- Clothes (7.5% vs 3.8%)
- Money & Numbers (3% vs 1.5%)
- Personal care (3% vs 1.5%)
- Shopping (2.5% vs 1.7%)
Age differences

• 3 topics chosen more by those <65 years
  • Travel (4% vs 2.8%)
  • Actions (2.8% vs 1.8%)
  • Time (2.6% vs 1.1%)
100 words chosen with greatest frequency
Key learning points

• It is important that words used in word finding therapy are functionally useful for the individual with aphasia.

• Although likely to require some specific/specialist words, there is some commonality in words selected by PWA.

• Pre-prepared pictures of commonly chosen words could:
  – Reduce time taken to prepare sets of words individuals wish to work on
  – Enable therapy to focus on words likely to be useful for those unable to choose for themselves.
Impact

• Commonly chosen words identified could inform evidence based content of pre-prepared resources (apps/software/colour flash cards)

• These could facilitate use of salient practice material → increased impact of word finding therapy
Acknowledgements

• This presentation presents independent research commissioned by the National Institute for Health Research (NIHR) under its Health Technology Assessment Programme (Grant Reference Number HTA 12/21/01 ). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

• This study was part funded by the Tavistock Trust for Aphasia

• We also wish to thank:
  – The 100 participants with aphasia
  – 21 SLTs who recruited participants and collected words PWA want to be able to say
Full study details and word lists available:

What do people with aphasia want to be able to say? A content analysis of words identified as personally relevant by people with aphasia. PLoS ONE 12(3): e0174065.

https://doi.org/10.1371/journal.pone.0174065