

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

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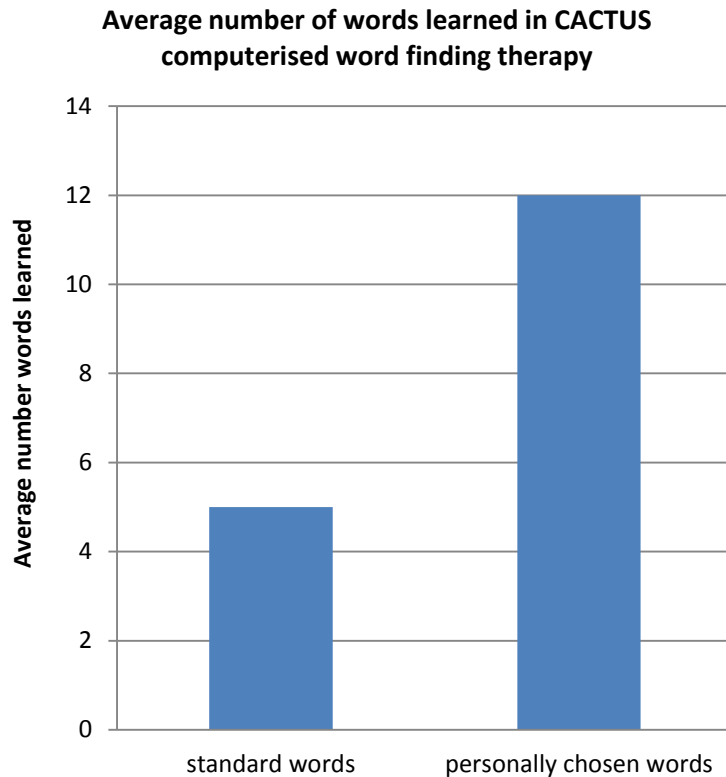
# Background

- 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?

## Saliency

## 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)

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

# 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

Volunteer to support language practice and computer use

StepByStep© software



Patients carry out regular independent self-managed practice

SLT tailors 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

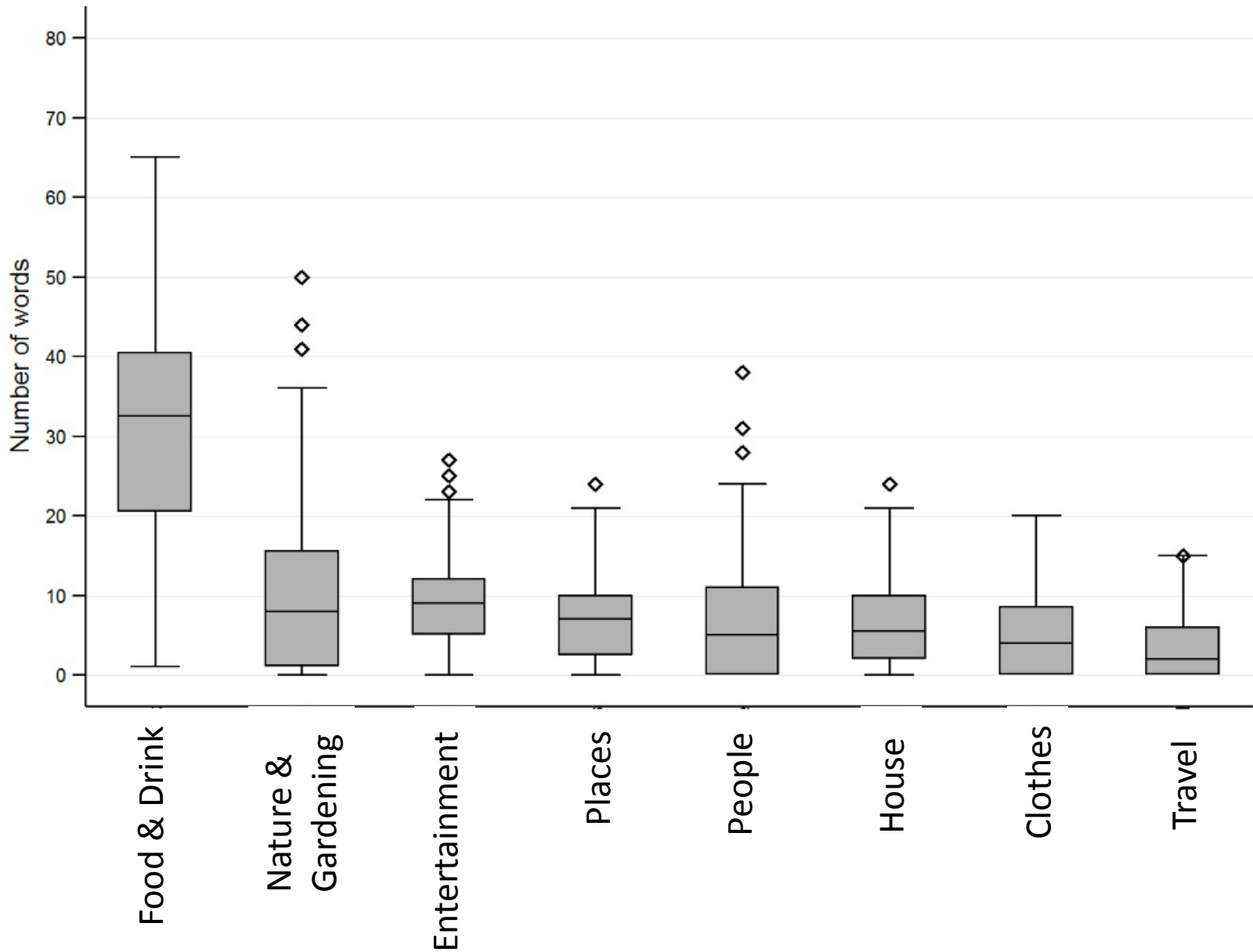
Stationery

Events

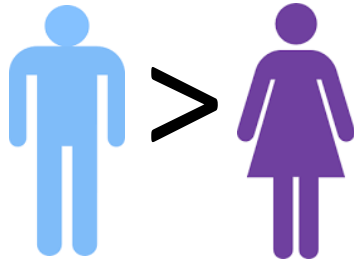
Religion



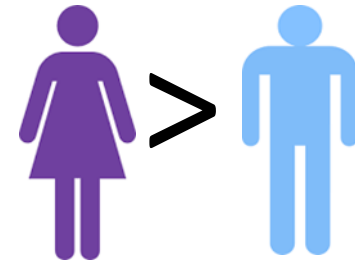
# Distribution of popular topics across participants



# 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

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- 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:

Palmer R, Hughes H, Chater T (2017)

**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>