What are the factors influencing the implementation of self-managed computerised therapy for people with long term aphasia following stroke? A qualitative study

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Background

• Speech and language therapy services for people with aphasia are often restricted to the first few months following a stroke due to limited NHS resources and the costs of face-to-face therapy provision (Code & Petheram 2011)

• To maximise recovery, a high dose of regular therapy practice over a long period is required (Brady et al 2016)

• Tailoring therapy to patient needs and interests is recommended for optimum effectiveness

• Need to find ways to enable more practice

• Using computers to carry out independent practice has been explored as one possible solution (Zheng et al 2016)
Computer aphasia therapy: approach to word finding therapy (Palmer et al 2015)

Volunteer to support language practice and computer use

Patients carry out regular independent self-managed practice

StepByStep© software

SLT tailors software

100 words of personal interest
Aim

To explore Speech and Language Therapists’ experiences of carrying out a self-managed computerised intervention for aphasia, to identify and understand the key factors influencing implementation across NHS trusts.
Methods

• Qualitative semi-structured interviews

• 11 SLTs from across the UK, experienced in implementing technology as part of the Big CACTUS study

• Determinant framework informed the topic guide
  • Consolidated Framework for Implementation Research (Damschroder et al 2009)
  • Has been used by other studies into implementation in SLT
  • Topic guide questions related to each domain of framework

• Inductive Thematic Analysis
## Domains and Constructs of the Consolidated Framework for Implementation Research (Damschroder et al 2009)

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Results

Seven themes emerged from the data

1. advantages of the approach to self-managed computer therapy (therapist tailoring and assessment; independent practice and volunteer support)
2. considerations in setting up computer therapy for independent practice
3. volunteer/assistant considerations
4. local IT departments: processes and delays
5. disadvantages of personalising therapy software
6. therapist perceptions of factors influencing who can benefit from self-managed computer therapy
7. into the future: how the approach fits with local services and how would it need to be adapted for ongoing clinical practice
Advantages of the approach to self-managed computer therapy

- people ask to use it for therapy
- personalized therapy material
- intensive practice
- feedback
- efficient use of SLT time
- people like using it
- motivation to practice

we don’t have the staffing any more to provide the kind of 1:1 therapy that we used to (...) and being independent and people working by themselves is very much part of the push at the moment (R5)

I do think those assistant visits are important just to keep on top of things and make sure that the person is doing it how you intended that they should do it, to be of the most benefit to them (R2)

people more and more are using computers aren’t they, and people ask (…) is there anything I can be doing on my computer at home. (R10)
Considerations in setting up computer therapy for independent practice

- Set up is time consuming
- Worth investing the time
- Set up time decreases with experience
- Training needed
- Level of therapist IT skill
- Time needed to familiarise self with software
- Ongoing support needed

It takes you a long while to get your head around it, I think it’s very easy to underestimate the time that you need for that (R8)

Getting familiar with it initially was a challenge (...) because technology for me isn’t something that comes easily (R2)

It’s worth investing the time really if you can, and once you get going, it can be very valuable (R10)
Volunteer/assistant considerations

- Volunteer/assistant support useful
- Experience of working with client group useful
- Need to be skilled with software
- Advantages of paid assistants vs volunteers
- Use of student SLTs
- Overseeing volunteers/assistants requires therapist time

- Volunteers come and go; they are quite hard to hang onto (R1)
- I think student [volunteers] are a really good source (...) they were incredibly professional and flexible, and I really enjoyed working with them (R9)

You’ve got to be really confident that they understand the software and how to tweak it (R6)
Local IT departments: processes and delays

- Passwords for security are difficult for PWA
- Difficulty getting computer equipment
- IT devices not always most suitable for PWA
- Difficulties communicating with IT
- Concerns regarding loaning equipment
- Equipment 'lock down' preventing software or internet use
- Facilitators

(...) they had to be made so they couldn’t be connected to the internet at all (R7)

They wouldn’t let them have them password free, so they had a (...) simple password but still a stumbling block for someone who’s aphasic (R7)

Frustrating (...) time consuming (...) a long process (R2)
Disadvantages of personalising therapy software

- takes a long time to set up
- may not be an efficient use of resources
- software not always available on all platforms
- not always intuitive to use
- software doesn't always meet all of a patient's needs
- software doesn't always work as you would expect it to
- it took me hours to personalise it for them (R2)
- it’s costly as an investment (...) for a small department like us (R7)
Therapist perceptions of factors influencing who can benefit

- Useful to have a carer
- Motivation
- Frequent support visits
- Volunteer/assistant support useful
- Cognitive ability
- Timing in post-stroke recovery
- Avoid assuming IT potential
- General health

I think carers are very instrumental (...) in reminding people and supporting people (R9)

I did have a couple of patients (...) who didn’t really have family to support them (...) but they managed with it, surprisingly well, with a good volunteer doing it (R1)

It can be surprising how many people who you wouldn’t have thought would manage it, can (R6)
I think that there are things that therapists can do and can offer that even a really experienced assistant would need to come back and check with you (R6).

I would feel my way with it, check that they are practising [and] able to manage the software and the computer before I set up a lot of exercises or put a lot of personalised vocabulary into it (R7).

Into the future

- useful role for existing assistants
- SLT introduces over a longer period of time
- training to local SLT team
- where the approach fits in the stroke pathway
- making a range of software / hardware available
- increase SLT input alongside volunteer visits
- cost / funding solutions
- patients could be doing that whilst they’re on the waiting list to be seen by community (R7)
- use with patients on the wards and in the community (R6)

I would feel my way with it, check that they are practising [and] able to manage the software and the computer before I set up a lot of exercises or put a lot of personalised vocabulary into it (R7).
Key Learning Points from this research

• Supported self-managed computer therapy could help to increase intensity where staffing is limited, bridge a gap between services, and provide longer term management

• Tailoring software helps to meet different patient/service needs but requires SLT time up front

• SLT familiarisation with new software is required

• Select software that meets needs of patient and is intuitive

• Patients’ previous experience with computers need not influence the decision to offer computer therapy

• Assistants/volunteers are key for supporting & facilitating self management with computer therapy

• Having a named contact in IT helps

• Funding options
Impact

Implementation of computer software to support self-managed practice of language exercises has the potential to impact:

• individuals with aphasia, by enabling them to have increased amounts of language therapy

• service delivery, by ensuring greater amounts of therapy provision within existing resources

This research suggests factors that therapists need to consider when implementing technology to increase the amount of therapy available
References


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