In this issue...

**Recent projects**

Testing a new aphasia therapy: Using familiar phrases more flexibly. Claudia Bruns p.2

Pauses in the speech of people with aphasia. Mary Moos p.4

Familiar and unfamiliar communication partners. Phoebe Bill p.5

Ambiguous words. Kate Osborne p.6

Inference-making abilities in people with aphasia. Millie Quinton Smith p.7

The effect of background noise. Kate Rykova p.8

The impact of frequency modulation systems on speech perception. Emma Browning p.10

**New projects looking for volunteers**

“Values” in speech and language therapy. Kirsty Ayers p.11

Research about communication partner training. Nivetha Koculan p.11

Research on word-finding problems. Wei Ping Sze p.12

**Getting in touch**
Testing a new aphasia therapy: Using familiar phrases more flexibly

Why is it important?

Many people with aphasia use familiar phrases in conversation, such as “it’s alright”, “I like it” and “I don’t know”.

It is unclear if these phrases are useful for aphasia therapy, to help people produce more sentences.

Aim of the project

As part of my PhD project, I developed and tested a new therapy program. The main question was:
Can people with aphasia learn to use familiar phrases in a more flexible way?

Who took part?

• 5 individuals with aphasia
• 48 to 68 years old

What they did

• Participants took part in 6 weeks of therapy, using a laptop
• The therapy used recordings of a participant’s own voice
• Participants practiced speaking with these recordings
• Phrases were variations of familiar word combinations, such as:

- **I like it**
- **they like flowers**

Before and after the therapy, participants were tested by:

• Telling a story
• Completing a story with a sentence
• Conversation videos at home with a friend or family member
• Questionnaires: Is this therapy acceptable?
Main findings

Telling a story
- Some people produced more phrases (word combinations) after the therapy (see graph below)
- Some people produced more creative word combinations

Completing a story with a sentence
- Some people produced more well-formed answers

Questionnaires
- People gave encouraging feedback

[Graph showing changes in combination ratio before, after therapy, and 6 weeks after therapy. The graph indicates that higher combination ratio correlates with more word combinations.]

What we learned

Using familiar phrases in therapy may improve communication

Using a person’s own recordings for therapy is acceptable

We need to do more work to find out who benefits most from this therapy, for example by analysing conversation videos

Based on these findings, we can refine the therapy and do more research
Pauses in the speech of people with aphasia

Why is this important?

People with aphasia often pause when they are speaking. Sometimes the pause is filled, sometimes it is silent.

Pauses could happen for different reasons: word finding is slower; the person is trying to correct an error; the person has finished their turn in a conversation.

We wanted to find out whether filled and silent pauses happen the same way in all speaking activities.

What people did

17 people with aphasia took part. They spoke in three different activities:

- Picture naming
- Story telling
- Conversation

What we found

The amount of filled pauses people made was related in all three activities.

The amount of silent pauses was related between story telling and conversations, but not picture naming.

Communication partners took over the conversation when silent pauses happened. They think the speaker has finished or needs help.

They did not do this after filled pauses. They know the speaker has more to say.
Familiar and unfamiliar communication partners

Introduction

People with aphasia often say it is harder to talk to strangers than people they know well. We wanted to find out whether there were differences in a person with aphasia’s communication with someone they knew well versus someone they didn’t know.

What participants did

One person with aphasia took part.

He watched cartoon clips and then described them using speech, drawing, writing and gesture.

He described the clips to: a familiar person (his wife) and an unfamiliar person (a stranger).

Results

There was no difference in the amount of information exchanged with the familiar versus unfamiliar communication partner.

There was no difference in the time it took to communicate the message, nor the number of turns it took.

Conclusion

The person with aphasia was as good at communicating with a stranger as with someone he knows well.

This might also be true for other people with aphasia. Yet people with aphasia feel that communicating with unfamiliar people is harder.

Therefore therapy could focus on increasing the confidence of people with aphasia in communicating with strangers.
Why is it important?

Most words in English are ambiguous – they have more than one meaning. People with aphasia find choosing the right meaning of ambiguous words difficult.

Example: Match  Match

Previous research says it is easier to choose the right meaning when given a clue. It might be helpful if more clues were included in information provided to people with aphasia.

We asked two questions:

1. Does giving a clue help people choose the correct meaning of a word faster?
2. Does it matter where the clue is? For example: Before or after the ambiguous word

What participants did

| Read a 2-sentence story | Chose between two pictures | Responses were timed |

Findings

Ambiguous words were harder for everyone to process, but especially people with aphasia.

Clues that come before an ambiguous word only help when the meaning is the more common one.
Inference-making abilities in people with aphasia

Why is it important?

Inferences are important for communication and are used every day.

Inferences are simply ‘filling in the gaps’, for example: “Adam saw the bee land on his arm. As he tried to brush the bee away, he screamed in pain.” Someone hearing this would infer that the bee stung Adam.

This research will help us understand whether people with aphasia have difficulty understanding language when inferences are used.

What participants did

Participants read 24 short stories on a computer.

Story coherence could only be achieved by making an inference based on information in the story.

Participants were given a correct and incorrect description of story events and could only select one answer. This shows whether they made the inference.

Findings

People with aphasia have more difficulty making inferences compared to people without aphasia. They were less accurate and took longer.

The left hemisphere plays a role in inference-making.

Therapies should take this into consideration in order to support effective and functional communication in people with aphasia.
The effect of background noise

Why is this important?

Sometimes people with aphasia can have normal hearing, but have trouble hearing in noise. I looked at:

- different types of background noise (RANDOM noise or a PERSON SPEAKING in the background)
- if something else affects hearing in noise, such as age, occupation, type of aphasia, how severe the aphasia is, how well people can remember a sequence of numbers (a measure of working memory)

What participants did

Participants sat at a computer. They saw this:

They heard a sentence with background noise. The noise was sometimes loud and quiet at other times. The noise was also either random or a person speaking in the background.

After hearing the sentence, participants had to click on a number of a certain colour (for example, BLUE FIVE). This determined how accurately they could hear in noise.
What I found

Working memory, age, occupation, first language had NO EFFECT on hearing in noise. Also as long as people had normal hearing, how well they could hear also had NO EFFECT on hearing in noise.

People with anomia found RANDOM noise more difficult than a background SPEAKER. People without aphasia perform in the same manner. This might be because the people with anomia in this study had less severe forms of aphasia.

People with non-fluent aphasia found RANDOM noise easier than a background SPEAKER. This might be because the area in the brain responsible for motor control is affected due to the nature of stroke. People might otherwise activate this area in the brain to go through the SPEECH GESTURES in their head to help them understand what someone is saying, especially when it is noisy.

People with fluent aphasia also found RANDOM noise easier than a background SPEAKER. This may be because such individuals find it hard to use the GAPS that happen when background noise is SPEECH and not random noise. People usually tend to use those gaps in the speech of others to help them but after stroke, this may be more difficult to do.

Conclusion

Maybe type of aphasia affects hearing in noise differently but...
- Would need to test more people to know for sure.
- People of different ages, with different types of aphasia, and varying amounts of time after their stroke
The impact of frequency modulation systems (FMs) on speech perception

Why is it important?

People with aphasia often struggle to understand speech in noisy environments.

Frequency modulation systems (FMs) can help to reduce the effect of noise by making speech louder.

FMs may help people with aphasia better understand speech in noise.

What participants did

- Listened to sentences in different types of noise and repeated what was said.
- Listened to instructions (e.g. ‘point to the duck’) and picked the correct picture.
- Carried out each task twice: once with FM, once without.

Findings

- FM use improved listening to speech in noise, especially in the picture task.
- There was a small (but non-significant) improvement in the repetition task.
- There was no link with severity of aphasia, but people with poorer unaided performance did benefit most from FM use.

Conclusions

- Evidence that FM use can be beneficial to aid listening to speech in noise.
- Further research needs to investigate FMs in different contexts (e.g. at home) and with different noise types.
- Further research needs to investigate FM use for longer periods of time.
New project looking for volunteers

“Values” in speech and language therapy

Kirsty Ayers

Why is it important?

Healthcare organisations have important values that must be delivered in their work. This research will help us learn about what matters to you. The research may help therapists in the future to plan better therapy.

What will it involve?

You will attend 1 group session at Chandler House UCL. There will be four people with aphasia in the group. You will talk about your experience of therapy. There will be a researcher and an assistant to help you answer the questions and get your message across.

Interested in taking part?

Contact us for more information: 020 7679 4239 communicationclinic@ucl.ac.uk

New project looking for volunteers

Research about communication partner training

Nivetha Koculan

Why is it important?

When people find it hard to talk, they can use other ways to communicate, like writing, gesture or drawing.

We are interested in the strategies people use to get messages across and the effects of communication partner training.

This will help us deliver training to professionals working with people who have aphasia.

What will it involve?

The researcher will meet you 3 or 4 times at Chandler House or your home. You will complete several tasks: language assessments, watch videos and convey messages to a communication partner before and after their training.

Interested in taking part?

Contact us for more information: 020 7679 4239 communicationclinic@ucl.ac.uk
New project looking for volunteers

Research on word-finding problems

Wei Ping Sze

Do you know anyone who had a stroke?
Do you know anyone who has problems finding or saying the right word?

If you answered YES to the two questions:

We would like to invite you OR someone you know to take part in a research project

In this research we will find out more about naming

We will research the type of cues that can help people find words

To find out more, please contact Wei Ping directly at:

w.sze.17@ucl.ac.uk  07562 204 301
Or via the clinic address below

Getting in touch...

If you would like to take part in any of our research projects, please get in touch

Our contact details are:

Phone: 020 7679 4239
Email: communicationclinic@ucl.ac.uk
Post: UCL Communication Clinic, Chandler House, 2 Wakefield Street, London, WC1N 1PF