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Abstracts

a·pha+si·a *n.* **1.** an acquired language disorder resulting from neurological damage

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A preliminary examination of mechanisms of therapeutic change in a novel conversation therapy for people with agrammatism and their partners

Background

Following publication of the SPPARC conversation training programme (Lock, Wilkinson, Bryan 2001), conversation-focused approaches to aphasia therapy are becoming more widely used. Traditionally SPPARC and other conversation focussed therapies have targeted partners of people with aphasia. Training mechanisms have incorporated adult learning principles with the aim of improving conversational interaction between couples (Sorin-Peters 2004). However, these principles have not been applied to working directly on conversation with people who have aphasia. Currently we know little about whether people with aphasia are able to engage in conversation focussed therapy, which requires high level problem solving and an ability to initiate strategy change. However, related research in the field of aphasic executive function (EF), has suggested that certain conversational behaviours are linked to specific EF deficits, for example a reduced ability to shift attention may account for conversational perseveration and impede a person's ability to generate new concepts, thus inhibiting the repair process (Frankel et al 2007). This suggests that people with aphasia who also have EF impairments may find it hard to take part in conversation therapy. In beginning to explore this new area, concepts from the field of clinical psychology are also useful. For example, therapeutic change process research tries to understand systemic and client change processes i.e. what is it that goes on during and outside therapy sessions that leads to the therapeutic outcomes? It provides a way of exploring the micromechanics of small therapeutic gains, and the links between them, and relating them back to overall treatment goals (Heatherington and Friedlander 2005).

This presentation reports on an ongoing therapy study, funded by the Stroke Association, which aims to design and evaluate a new therapy for agrammatism that focuses directly on grammar in conversation, with a novel focus on training the person with aphasia to use specific turn constructions in conversation, and training the conversation partner to respond to these (Beeke, Cooper et al, 2008; Beeke, Maxim et al, under review). Specifically, the presentation will report on the therapeutic process for one of the project's ten dyads; a married couple called Giles and Linda (not their real names). Giles had a stroke in February 2004 aged 50; he was working as a senior sales manager for an office furniture company. Since his stroke Giles has been unable to return to work and splits his time between home, a local day centre and watching his local football team. He has agrammatic aphasia characterised by good single word comprehension (PALPA 47 39/40), but increased difficulty with comprehension at sentence level, typically making errors with reversible sentences (VAST Sentence Comprehension score 32/40). Expressively Giles has near normal noun retrieval abilities (average score of 9/10 on items from the Object and Action Naming Battery across three test periods); poor verb retrieval (average score of 2.5/10 over three test periods) and difficulty with sentence construction (1/20 on the VAST sentence construction test), and he often uses gesture to compensate for verb retrieval difficulties, for example:

Target 1: The man is painting a woman

Giles: God alive! Erm him, er canvas er erm an a nude erm erm his no no (mimes painting) oh I don't know

Target 2: The girl is swimming

Giles: Oh a swimmer a swim is erm a swimming pool (gestures front crawl)
Giles' wife Linda works full time as an operations manager for an IT company.

Method

Giles and Linda were involved in the project for a total of 6 months broken into three phases of 8 weeks each: a) three pre-therapy assessment phases; b) therapy; and c) two post-therapy assessment phases. During each assessment phase, a battery of impairment, activity and participation tests and interviews were administered and they video recorded a weekly 20 minute conversation. All therapy sessions were video recorded and, as in the SPPARC training programme use the dyads' own conversation clips, in addition to handouts, written activities and role play, to facilitate insight into their conversational patterns and turn constructions.

Results

This presentation will use a selection of pre and post therapy conversation samples and video clips of Giles and Linda's therapy sessions to highlight: how the therapeutic aims were set; post therapy conversational behaviour changes; and possible therapeutic mechanisms underlying the change seen during the therapeutic process. Therapeutic aims included facilitating Giles and Linda to: recognise successful and troublesome aspects of their conversation; select strategies to aid conversational flow (in their case by exploring repair, and topic initiation and maintenance) and then practise incorporating strategies into their conversations.

Discussion: Preliminary thoughts about the therapeutic mechanisms that may be leading to successful and/or unsuccessful changes at a behavioural and an utterance level within Giles' talk will be discussed. Findings will be related back to his performance on an assessment of EF, and the concepts of therapeutic change research will be used as a way of reaching for a new understanding of therapeutic change.

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Structuring information on a website for people with stroke and aphasia

Background and aims

Currently, there is limited evidence on what information about stroke would people with stroke seek[1] on a relevant website; and how this information should be structured to be accessible[2,3]. This study looked at: a) what information people with stroke would like to see on a website about living with stroke; b) how they would like this information structured; and c) whether there were differences between people with and without aphasia in website information structuring preferences.

Methods

Participants were recruited from a hospital's Stroke Database. Focus groups were used to elicit what information participants wanted on a website about living with stroke. The themes raised were depicted on 133 cards. To determine the most effective way of structuring information on the website and whether there were any differences in preferences between people with and without aphasia, participants used a modified closed card-sorting technique[4] to sort the cards under website categories.

Results

We ran three focus groups – one with PWA (n=5) and two with people without aphasia (PWOA) (n=3, n=4). Participants wanted more information about stroke causes and effects (particularly emotional reactions), roles of local agencies, and returning to previous activities (driving, going out). All participants completed the card-sorting. Few cards (6%) were categorised identically by everyone. Cards relating to local agencies and groups were not consistently categorised together. Cards relating to emotions were segregated. The categorisation preferences of PWA were more fragmented, with 60% of PWA agreeing on the categorisation of 51% of the cards whereas 60% of PWOA agreed on the categorisation of 76% of the cards.

Conclusions

Information needs covered all stages of the stroke journey. The card-sorting was accessible to everyone and provided evidence of structuring preferences and of some categorisation difficulties for PWA. More research is needed on what an accessible website looks like for PWA.

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Goal setting in a group context: the experience of the NETA Aphasia Support Centre

Background

This one day a week Support Centre is staffed by a speech and language therapist (RH), an assistant, a range of volunteers, including people with aphasia, and a small amount of admin support. All the activities are group based.

The ethos of the centre is to support individuals towards greater self confidence and independence. We create opportunities to take small steps into more active roles, based on Pearl's virtuous circle approach (Pearl et al 2007). Over the last year we have introduced a more goal orientated system, making those steps more explicit and fostering a sense of achievement and success. In order to do this, we have developed a system for individual goal setting from a group activity. This poster describes the process, the goals and the outcomes for individuals.

Method

New members to the NETA Aphasia Support Centre are invited to attend an introductory group for 4 to 6 sessions. This is to

- inform them about the NETA Aphasia Support Centre
- support development of friendships between members
- develop group identity
- provide the opportunity for staff and volunteers running groups to get to know them and find out about their communication skills
- begin the group goal setting process

The group goal setting process starts with an exercise entitled 'Things I can do'. Members are asked to code each item on a list of activities that are functionally useful using a traffic light system.

- red = not possible at the moment
- green= I am already doing this
- yellow = I can partly do this or I can do this with a bit of help

Items coded as yellow then become the area to focus on for goal setting. (Half categories are permitted e.g. red+ yellow and green + yellow).

The list is extensive and is divided into functional domains. Each domain has a wide range e.g. from handing out paper to phoning for information; from pointing to a choice of words to leading a quiz. Members are asked to select 1-3 of the yellow coded items they wish to focus on. These are reformed into personalised SMART goals with subsidiary steps as required. Because many of the goals arise from tasks that contribute to the running of the Support Centre, there is a good deal of overlap between different individual's goals. This makes the task of setting SMART goals with limited resources much easier. One person's complex goal may incorporate a range of items from the list as components. Another person may be working towards a subsidiary goal initially.

Outcome
Some 20 people now have active SMART goals which are woven into the fabric of the Support Centre activities. Because the goal has arisen from the practical needs of NETA, there are frequent opportunities to create the next small step. Goals can also be linked to organizational constraints e.g. encouraging members to become deliverers of a service as supported helpers when popular activities are overfull.

New members often need encouragement to set even the smallest degree of autonomy as a goal, and may achieve their chosen goal within a session. It appears that this is a necessary impetus to start the virtuous circle and enable them to stretch for bigger targets. Group interaction during goal setting creates a positive 'can do' atmosphere. This is greatly enhanced by having people with aphasia helping to run groups acting as a convincing role model. Despite the SLT's carefully constructed steps towards a complex goal, it happens that helpers with aphasia have colluded with members to take a considerably larger step than planned, and then both have the satisfaction of having surpassed each of their targets.

Discussion
Our group goal setting process gives everyone a chance to take that first step away from the patient role. It challenges negative and self-deprecating attitudes. It offers relevant functional goals that contribute to the running of the Support Centre. The goals can be designed even for those with very low self esteem or very limited physical or communication ability. Recently, we have extended the list of 'Things I can do' to participation in the wider world e.g. travelling independently to NETA. We have used the goal setting process to encourage relatives to facilitate greater independence.

The goal setting process has provided us with greater insights into the importance of confidence in living with aphasia. We hope to help people with aphasia move back on the road to self confidence, sometimes starting by achievement of apparently trivial goals unrelated to communication.

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Cognitive Neuropsychological Model Poster: bridging the gap between theory and practice

Background

The Cognitive Neuropsychological (CNP) approach can be an extremely useful tool as part of the holistic assessment and management of people with aphasia. Therapists and students may under-use the model because of: a lack of experience and confidence in bridging the gap between CNP theory and its application in everyday practice; a perception it is too complex and unrelated to functional communication to warrant investing study time, given limited resources.

Its advantages, however, far outweigh its limitations with some individuals with aphasia who have significant difficulties at single word level. It provides us with insights into a patient's strengths, as well as difficulties, at an impairment level, which may immediately enable the use of compensatory strategies. It can assist in demonstrating less tangible communication impairments to patients and carers. Through rationalised hypothesis testing, relatively few subtests and time can lead to the identification of the main areas of language breakdown to guide therapy and maximise the functional outcomes for a patient's communication.

We asked if there was a way to summarise and represent CNP theory and practice, already described in textbook format (e.g. 1), in order to facilitate its use.

Aims

- To maximise the potential application of the CNP model in assessment and therapy planning in the clinical setting, by producing an annotated summary of the model in a visual (poster) format, an easily accessible reference tool.
- Pilot its use with client with aphasia (I).

Methods

- The poster is based on the Patterson and Shewell's (1987) logogen model for normal language processing for single words. Colour coded annotations of all levels of the input and output routes of the model were selected to facilitate the rationalised hypothesis-testing process following informal assessment. Some examples are provided from the auditory input route:
    - In orange – different levels of the model are labelled as pre-lexical (heard word to auditory phonological analysis) or lexical (auditory phonological analysis, phonological input lexicon, semantic system);
    - In green – the name and a description of the impairment indicated- if there is breakdown at a particular level, e.g. at the auditory phonological analysis (APA), 'word sound deafness', a speech sound perception problem, e.g. client I was unable to distinguish /m/ from /n/ and /t/ from /d/;
    - In yellow – the assessments are listed which could be used to test whether an area of processing is relatively intact or damaged, e.g. to test I's APA: Palpa 1 (minimal pairs non-words), Palpa 2 (minimal pairs words);
    - In pink – signs or characteristics of an impairment to look for which indicate damage at a particular level, e.g. there may be length effects at the APA level.

Results and Outcomes

- SLTs and SLT students have reported the CNP poster has been useful to identify with greater ease the subtests required to test their hypotheses; as an 'at a glance' reminder of less frequently used sections of the model and theory and to relate theory to practice, to inform clinical judgement on intact and impaired processes and the implications for treatment.
- E.g. the poster was used working with client I, to identify moderate auditory comprehension difficulties with breakdown at the auditory phonological analysis and phonological input lexicon with relatively intact semantics;
    - to illustrate I's specific language processing deficits and cause of communication difficulties to her main carer. He had previously misunderstood her difficulties and used shouting and repetition of his utterances, leading to frustration between the couple;
    - to identify and demonstrate why compensatory strategies would help, e.g. being face-to-face to allow lip-reading, I's carer using written words to support his speech;
    - to know at which levels to target impairment-based work, e.g. minimal pair discrimination work and spoken word to picture matching using vocabulary related to topics of interest.

Conclusion

The CNP poster has the potential to enable clinicians with limited time to maximise the use of the CNP model when its use is appropriate and beneficial to a client.

We hope to take this project forwards by disseminating the CNP poster to the wider Oxfordshire team and auditing its use amongst therapists and SLT students. We will also seek feedback on its usefulness as a tool to assist explanation to some higher level clients and their carers.

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What Changes: Measuring speech and language therapy outcomes for individuals with communication disability in neurorehabilitation

Background

The role of a speech and language therapist working in neurorehabilitation has broadened to encompass areas such as psychosocial adjustment, education and insight raising, confidence and accessing the community. Evidence shows that this broadened role leads to beneficial change and positive outcome for individuals with communication disorders (e.g. Kagan et al, 2008) but it remains a challenge to represent this change in clinical outcome measures.

Aims

- To describe a set of clinically applicable outcome measures that demonstrate the broad-based, multifaceted change that occurs for patients with communication disorders during neurorehabilitation.
- To describe the results found by using these measures for a year at the Wolfson Neurorehabilitation Centre and subsequent modifications to the measures.
- To illustrate the use of a set of modified outcome measures through case study examples.

Method

Using a combination of formal assessments, self-report, family questionnaire and video, a consistent profile of information was built up for each individual receiving speech and language therapy at a neurorehabilitation centre. The speech and language therapist used this information to fill out pre and post therapy ratings for each individual receiving speech and language therapy as an inpatient March 2007 and Oct 2008.

Results and modifications to the measures

Therapists rated individuals with communication disorders more highly at discharge in areas such as ‘non-verbal communication’, ‘awareness of communication disability’, ‘psychosocial adjustment’ and ‘social interaction.’ Self-reports and family questionnaires highlighted the benefit of education around brain injury and an increased tendency of individuals to reflect on both their strengths and weaknesses at discharge. A modified outcome measurement system was set up to include: 1) self-report – the therapist and individual work together to produce a visual profile exploring areas such as knowledge about brain injury, perception of role, communication goals both pre and post therapy; 2) a comparable family self-report; 3) a video observation checklist; and 4) formal assessment as before. This measurement system is currently used and worked examples will be shown.

Conclusions / points for discussion

In a neurorehabilitation setting clinicians need outcome measures which can be used consistently and meaningfully and demonstrate change in terms of impairment but also at the level of activity and participation (WHO, 2001). The resources described and demonstrated on the poster will have the potential to be easily used in the clinical setting and allow clinicians to more flexibly record and acknowledge changes reflecting all the strands of

therapy used by speech and language therapists in neurorehabilitation (James et al, in press).

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Intervention for higher level reading difficulties: a case study

Background

Acquired reading impairments can be hugely disruptive as, for many people, reading is a central life skill and essential for work, leisure or routine activities. Research exploring acquired reading difficulties has focused on assessment and remediation at the single word level (see Beeson and Henry, 2008, for review). However, reading comprehension typically occurs over longer texts (e.g. books) and involves additional processes such as syntactic comprehension and inference-making (Snow, 2002). It is therefore possible for single word reading skills to be relatively intact in the presence of higher level reading difficulties.

This presentation will describe a single case therapy study. DV, a 40 year old man with acquired aphasia and dyspraxia, reported significant concern over his reading abilities. He read less frequently than he wanted to, found large quantities of text "quite daunting" and became frustrated when he had to frequently re-read a text to clarify its meaning. DV felt his reading abilities were a significant barrier to him returning to work as a graphic designer, since he would need to read software manuals. Formal assessments showed that DV's single word reading was intact (PALPA; Kay, Lesser & Coltheart, 2001). His good reading comprehension for sentences and short paragraphs (RCBA-2; LaPointe & Horner, 1998) failed to provide any insight into his reported reading difficulties.

The study had two phases. Phase 1 aimed to undertake a more comprehensive assessment of DV's higher level reading. Phase 2 aimed to evaluate the effectiveness of a therapy programme targeting his higher level reading skills

Phase 1: Assessment of higher level reading

Methods and procedures

A range of reading and cognitive tasks were used, including assessments of working memory (WMTB-C, Pickering & Gathercole, 2001) and reading speed, sentence verification and detecting anomalies in texts (Royer et al, 1979; Oakhill, Hartt & Samols, 2005). Normative data was obtained from eight age and education matched control participants. A structured interview provided qualitative information about DV's perceptions of his reading skills.

Results and outcomes

DV's reading comprehension appeared to be within normal limits for most tasks, but his reading times were significantly longer than the control participants. He got the gist of material he was reading, but details, anomalies and inferences were sometimes missed in longer texts. DV's word-by-word approach made reading very slow and reduced his ability to use syntactic and contextual information to support his understanding of the text. A key factor was DV's reduced confidence in his reading ability. This appeared to compound his reading difficulties, causing him to re-read exhaustively. He also assumed that any comprehension difficulties resulted from his lack of ability rather than errors in the text. It was

hypothesized that DV might benefit from therapy focusing on the use of metacognitive strategies to aid reading comprehension.

Phase 2: Remediation using meta-cognitive strategies

Method and procedures

Baseline and outcome measures were taken at the beginning and end of the intervention period. Measures of reading speed for different lengths of texts were collected, as were self-ratings of confidence and ease of reading ratings of frequency of reading and a control measure (working memory: digit span).

Intervention consisted of 8 sessions spread over 6 months. DV was taught explicit strategies (e.g. scanning, summarizing with key-words, using signposts like titles,) and phrase-marking (breaking text into syntactic phrases, Rasinski, 1994). Phrase marking was repeatedly practiced in sessions and in homework tasks. He was given functional homework that focused on his ability to quickly read and integrate text information (e.g. extracting information from a T.V. guide using scanning). Consistent positive feedback about and reflection on DV's considerable residual skills was key in supporting his confidence.

Results and outcomes

(1) DV's reading speed increased from an average of ~54 words per minute (wpm) to ~130 wpm ($t(7) = 12.58$, $p<0.0001$), with no change in comprehension (high scoring both pre and post intervention, $t(7) = <0.5$, $p=1$).
(2) DV's self-ratings indicated that he felt his reading was easier and better and that he felt more confident when reading. He also reported an increased frequency of reading all text types (e.g. books, newspapers, web).
(3) DV's digit span did not improve (staying constant at 4 digits), nor did his reports of the frequency of writing.

Conclusions and implications

Thorough assessment demonstrated the complex nature of DV's higher level reading difficulties. He benefited from the use of metacognitive strategies to improve his speed and confidence when reading. This study is one of the first to explore higher level reading difficulties in depth, and offer suggestions for their remediation

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Mortley, J., Pearl, G, SB – the person with aphasia and LB – SB's wife

"Would you like coffee?": Treatment of functionally relevant everyday sentences.

SB is a 52 year old gentleman who suffered a severe stroke 8 years ago when only 44 years old. The stroke has left him with agrammatism and severe word finding difficulties. Basic communication remains a real struggle and challenge to SB on a daily basis. He communicates through speech, gesture, indicating the initial letter of the word and a "Say it Sam" communication aid.

Aims

This presentation will focus on 6 months self-help therapy aimed to elicit functionally relevant sentences around a specific vocabulary. Due to limited resources this therapy was carried out with minimal face to face therapy from the therapist using a range of other resources including a computer to deliver therapy, video conferencing to monitor and modify therapy and SB's wife to facilitate use of sentences in everyday speech. It specifically focuses on generalisation of computer therapy to everyday speech using the "pairs" game inspired by the work of Pullvermuller (2001, 2008).

Background

Prior to this particular intervention an approach had been identified which had lead to improvement in specific sentences being used by SB in everyday context. Specifically the approach involved:-

a. Practising computer exercises aimed at improving lexical retrieval at a single word level.
b. Practising computer exercises to target words within a meaningful sentence context.
c. Non-computer therapy tasks between SB and his wife to promote generalisation to everyday speech based on a "pairs" game.
d. LB creating scenarios in everyday life to give SB the opportunity to use this language functionally.

This therapy had lead to positive use of sentences functionally, for example, when asked by a waiter what he would like to drink, SB was able to respond "I would like wine please". SB was beginning to speak in sentences for the first time in 8 years. Therapy was item specific however, and restricted to the sentence structure being targeted. It was crucial therefore that we established the most effective treatment for SB, so he could target a wide range of vocabulary and increase his repertoire of functionally useful sentences. What was important to establish was whether all 3 stages of the approach were necessary to achieve the desired outcome. Whilst it is acknowledged that a different approach targeting the underlying processes, such as mapping therapy, might have lead to generalisation to wider sentence structures being used, it was not possible given the resources available to offer this type of therapy.

Methodology

A vocabulary set of 60 objects were chosen by SB and LB, that would form the basis of functionally relevant sentences being targeted. A naming assessment based on these words was administered as a pre-therapy baseline. The objects were then randomly assigned to 5 sets each of 12 pictures and therapy was delivered under the following conditions:-

Therapy Condition	Set A	Set B	Set C	Set D	Set E
a. Computer therapy at single word level	√	√			
b. Computer therapy at sentence level	√		√		
c. Pairs game	√	√	√	√	
d. Using scenarios in everyday speech	√	√	√	√	√

Therapy was delivered in 2 phases over 6 months. In phase 1, set A (which received all the therapy conditions) and set D (which only had the pairs game and no computer therapy) were delivered. The interim assessment was administered after 3 months to investigate the impact of the 2 therapy conditions and also investigated for any generalisation to untreated sets (B,C,E). A video of SB and his wife playing the pairs game was also taken to monitor for sentences being elicited. Treatment phase 2 explored the role of the computer in the outcome by investigating whether both computer conditions (single word and sentence based tasks) were necessary to achieve a positive outcome. Set B targeted computer therapy at the single word level only before playing the pairs game; whilst set C targeted sentence based computer therapy tasks only before playing the pairs game. Set E acted as a control since no specific therapy was delivered except for LB creating scenarios for SB to use these words in everyday speech.

Results

The results of therapy are summarised below:-

	Pre therapy assessment		Treatment phase 1	Interim assessment		Treatment phase 2	Post therapy assessment	
	No.	%	treat	No.	%			
Set A	6	50	√	10	83		10	83
Set B	7	58		6	50	√	12	100
Set C	6	50		7	58	√	12	100
Set D	6	50	√	10	83		9	75
Total	**25**	**52**		**33**	**69**		**43**	**90**

The results indicate that during phase 1 both treatment conditions improved whilst the untreated items did not. SB reported however, that he found the pairs game really hard and frustrating to do with set D and was not very motivated by this therapy alone. He preferred playing the pairs game when he had practised the words on the computer first (set A).

The results from phase 2 indicated that both computer conditions were effective with SB achieving 100% in the naming assessment for both these conditions. In terms of feedback from SB following phase 2, he indicated that he liked being able to practise the lexical retrieval as in the single word naming tasks a few times before moving onto the sentence based tasks (Set A) scenario. Control set E did not change throughout the intervention indicating a clear treatment effect, and reinforces that the therapy was (unfortunately) item specific.

Video footage of SB and his wife playing the pairs game will be shown as evidence that SB was able to generate sentences using the specific vocabulary being targeted. LB will report on how she created scenarios for SB's to use these sentences in everyday speech.

Discussion

The results indicate that the three different therapy conditions were all effective when reviewing post therapy assessment scores of both single word retrieval and eliciting sentences in the "pairs" game. However SB reported that working directly on the pairs game was too hard and therefore frustrating, leading to lack of motivation. Although no difference was shown in the results between targeting only single words or only sentences, SB reported a preference to practise single words first before moving onto the sentences (which is in fact therapy delivered in set A). As the objective was to develop the most effective approach to therapy, the original approach has been modified by (i) moving onto sentences much more rapidly than before and (ii) introducing the pairs game at the earliest possible time taking into consideration SB's confidence eliciting the words. The impact for SB is a reduction in the time taken to practise and use new vocabulary.

A limitation of these results is that they have addressed the effectiveness of each condition but we do not know how quickly each set was progressed and could be elicited in connected speech. It is possible that one set of conditions was more efficient than another. The ultimate criteria for a successful outcome are the frequency of sentences elicited in spontaneous speech. However this is difficult to measure when the sentences are so specific. This was captured through qualitative interview with LB giving specific examples.

SB and LB will be co-presenters in this presentation. SB will talk about his aphasia and his views about rehabilitation with particular reference to self-help computer therapy. LB will discuss her role in tailoring computer therapy to give SB the opportunity to widen his vocabulary and use of functional sentences. The role of voluntary sector organisations, such as Speakeasy, to enable people to have access to therapy in the long term will be discussed. Also the partnerships between clinician and trained volunteers will be discussed in terms of service delivery of this approach when resources are limited.

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CHANT (Communication Hub for Aphasia in North Tyneside): Helping people with long term aphasia after stroke to 'get their life back'

Introduction

Despite the large numbers of people living with aphasia after stroke there are few studies on interventions that support recovery in the long term (Van der Gaag, Smith, Davis et al. 2005; Hilari, Byng, Lamping and Smith, 2003). Those who live with long term aphasia have to come to terms with communication impairment that has an impact on every aspect of their lives. Long term recovery is not only about reducing or compensating for impairment but adjusting and engaging with meaningful life activities in terms of vocation, work and leisure. These are the *consequences for activity,* and *participation in life* referred to in the *WHO International Classification of Functioning, Disability and Health* (ICF). The National Stroke Strategy (2007) recognised the need for long term stroke support and suggested quality markers for services but did not make explicit how these should be measured objectively. A lack of existing evaluations of long term stroke care was identified in National Audit Office's report 'Progress in improving stroke care' (2010) (p34). The CHANT pilot project is a step in the direction of delivering and evaluating community based support for long term aphasia post stroke.

Background

CHANT (Communication Hub for Aphasia in North Tyneside) is a two year project funded from stroke grant monies by North Tyneside Council. It is a partnership between the NHS and the Stroke Association developing a volunteer workforce crucial for the delivery of the service. The work builds on existing expertise and skills within the speech and language therapy service and stroke information service in North Tyneside, with support from Northumbria Healthcare NHS Foundation Trust.

CHANT has a remit to increase 'participation in life' in people who are living with the chronic aphasia associated with stroke. The service offers support from a qualified SLT, Stroke Association Co-ordinator and a team of specially recruited volunteers at a stage in the patient pathway where usually on-going support is not possible from NHS provision. CHANT brings together multiple partners: service users including people with aphasia and their carers, Stroke Association staff and volunteers and other charitable organisations, Local Authority and other public sector services such as Job CentrePlus, Health Authority resources and staff, outside partners such as Connect (specialist consultancy and training), and Newcastle University (both in Speech and Language Sciences and Fine Art).

Scoping

From the outset people with aphasia were consulted individually and through focus groups and they have continued to shape developments. CHANT called on the skills of Connect in a separate scoping project called 'Back to work' to ascertain the needs of people with aphasia via focus groups and interviews, and the status of existing services supporting return to work. As part of the consultation, the Communication Toolkit Training package developed by Connect was modified in collaboration with CHANT for use in North Tyneside to raise awareness of aphasia and improve communication access in local services.

Project design

Building on a program developed in North Tyneside using 'expert patient' trainers with aphasia, people with aphasia have spearheaded the project. They have raised awareness of aphasia and have trained conversation partners including input into the training of volunteers (Stroke Association) using individual and group work. The volunteers have been equipped to support further group work with others with aphasia, including 'What Next' groups for real life goal-setting, and a range of courses. The courses have been developed in partnership with Leisure Choices, a council funded scheme originally set up for those with physical or learning disability. Courses have included key skills for people with aphasia (e.g. IT basics) or have focused on shared interests (e.g. Art and Aphasia, with additional support from students in Fine Art and in collaboration with partners in the North East Trust for Aphasia at Newcastle University). For those unable to attend groups, one-to-one support has also been an option, using volunteer contracts. CHANT has also sought to strengthen links with existing local groups (e.g. generic stroke groups) and signpost or bridge to appropriate services in the public and voluntary sectors (e.g. for benefits advice and support). Several one day networking events have been held in conjunction with local NHS and council services as a further support to people with aphasia and their carers. Collaborative work with existing speech and language therapy services has made it possible to offer help to those in care homes and conversation partner support to carers. After an initial pilot of training with Connect to public sector staff and including representatives of local transport and JobCentre Plus, communication access training has been rolled out to include staff in other agencies (e.g. Carers Centre, Housing options support, Voluntary Organisations Development Agency) whilst supporting people with aphasia in realising their life goals such as returning to everyday activities and meaningful employment.

Research evaluation

The aim of evaluation was to explore how participation has an impact on quality of life in people who have had a stroke and aphasia.

A service evaluation has been carried out as part of the project delivery, using predominantly quantitative methods. Quality of life measures from the SAQOL-39 have been used as the primary standardised assessment. In addition, a method of measuring real-life goal setting using the A-FROM (Aphasia Institute, 2006, Kagan et al. 2008) has been developed within the project and used in both group and individual settings.

Funding from the North of Tyne Research Collaboration allowed us to conduct an in-depth qualitative evaluation to explore the impact of participation on perceived health and wellbeing status of people engaging with the CHANT service. The evaluation was based on narratives derived from a total of 30 interviews involving 3 people with aphasia, 1 partner, 1 voluntary worker, 1 public sector worker. Each person took part in five successive interviews to capture the process of empowerment as it unfolded through engagement with the CHANT intervention. The interview data have been subjected to thematic analysis based on principles from grounded theory (Attride-Stirling, 2001). This qualitative data analysis compliments the service evaluation undertaken within the project.

Findings and next steps

Quantitative data are presented from the SAQOL-39 for a cohort 40 people with aphasia after stroke (discharged from traditional speech and language therapy), including pre and post assessments where appropriate. Measurements of goal setting and attainment using the A-FROM framework are presented for a subgroup of the cohort. Additional measures

specific to the delivery of training within the project and qualitative information from invited feedback are also available. Initial findings from the narratives are presented with directions for further work.

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Communication for people with severe aphasia in acute stroke wards: What factors affect the use of communication charts?

Introduction

Communication charts are often provided in acute stroke wards to assist patients with severe aphasia communicate, but they are frequently unhelpful.

Executive functioning skills and communication partners' attitudes have been shown to be important in using alternative communication strategies, but specific information about these factors in acute stroke and aphasia is lacking. This small-scale pilot study considered the impact of language and executive functioning ability as well as staff attitudes on patients' ability to use a communication chart effectively.

Method

During a seven-month recruitment period in an acute stroke unit, eight patients with severe aphasia were eligible for this study and five took part. They completed a detailed language assessment (n=5) and a battery of executive functioning tests (n=4) and were provided with a communication chart. Structured observations of the patient communicating with a member of ward staff were completed. Staff (n=10) completed questionnaires on their attitudes about alternative communication strategies.

Results

No significant correlations were found between any factor and effective communication, but executive functioning (ρ=.632) seemed more important than patient language ability (ρ=.316) and staff attitudes (ρ=.211).

Conclusion

Executive functioning skills appear important in the effective use of communication charts by patients with acute stroke and aphasia. Results were limited by the low number of patients and a great deal of missing data, due to the difficulties patients experienced in completing assessments. Further research is needed into assessment of executive functioning skills in severe aphasia and into which skills are more crucial for effective communication

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Measuring improvement and generalisation following Semantic Feature Analysis therapy for nouns and verbs in aphasia.

Background

The aims of semantic therapies for people with acquired aphasia are usually to improve representational information within semantic memory or to improve access to and from these representations. In recent years, there has been increased attention to comparing semantic therapy approaches which target improvement in noun and verb production at single word level (e.g. Raymer et al 2007, Conroy, Sage & Lambon Ralph 2009). In general, these studies have found that therapy is able to facilitate more or less comparable improvement in naming of treated nouns and treated verbs. However, there has been little evidence in such studies of generalisation to untreated nouns or untreated verbs. Generalisation to untreated items is notoriously difficult to achieve although there have been some therapy studies which report such findings in relation to noun therapies (e.g. Boyle & Coelho 1995, Lowell, Beeson & Holland 1995, Kiran & Thompson 2003). Differing findings with respect to generalisation may be attributable to numerous factors including individual participant differences, therapy approach, and the nature of the outcome measures employed. While these factors are occasionally considered individually, it may be a combination of these factors which is key to finding consistent generalisation (if this is even achievable).

Aims

This study aimed to:

1) Compare patterns of improvement and generalisation to nouns and verbs following Semantic Feature Analysis therapy in clients with aphasia.
2) Address the issue of item selection in semantic therapies for clients with word-finding difficulties.

Participants

Three clients with aphasia took part in this study. All three were native English speakers and had suffered a left hemisphere CVA at least 6 months prior to taking part. SH, presented with a profile of fluent aphasia characterised by a mild-to-moderate phonological level impairment at single word level. GF, presented with a profile of non-fluent aphasia characterised by phonological and semantic level impairments at single word level. AB, presented with a profile of non-fluent aphasia characterised by semantic level impairments at single word level.

Method

Semantic Feature Analysis (SFA) therapy (e.g. Boyle & Coelho 1995, Wambaugh & Ferguson 2007) was applied with nouns and verbs within a cross-over design. Treatment items were selected following two administrations of baseline noun and verb picture naming assessments. For each client, 60 verbs and 60 nouns were selected as treatment items and were allocated to a treated set (n=20), an untreated set semantically related to the treated set (n=20), and an untreated set unrelated to the treated set (n=20). Semantic relatedness of treatment items was established according to control data placing nouns and verbs within semantic categories (e.g. *animals*, *fruit*, *tools*, etc, and *breaking*, *cleaning*, *cooking*, etc.).

Therapy consisted of two blocks of therapy (i.e. noun SFA and verb SFA within a cross-over design between participants). Each therapy block consisted of 10 sessions with 10 nouns/verbs treated in each session. Assessment was conducted pre-therapy, following both therapy phases and also after a 4-5 week break following the end of therapy.

Outcome measures included re-assessment of verb and noun picture naming of treatment items. An independent measure of noun and verb picture naming was also employed (the Object and Action Naming Battery, Druks & Masterson 2000) in addition to measures of sentence comprehension and production (e.g. Sentence Comprehension and Production in Aphasia, SCAPA, Webster & Whitworth, in preparation).

Results & Discussion

The results from the three participating clients will be discussed in relation to their differing patterns of improvement on various levels:

1) Naming of treated nouns and verbs
2) Naming of untreated nouns and verbs (semantically related)
3) Naming of untreated nouns and verbs (semantically unrelated)
4) Sentence Processing (comprehension and production)

The results and methodology of the study will be discussed in terms of how they have the potential to allow for a greater understanding of theoretical models of semantic processing; and how this in turn allows us to better understand the mechanisms underlying semantic therapies.

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Reading for Meaning: Attentive Reading and Constrained Summarisation as a therapy approach

Background

A common feature in aphasia is the presence of reading comprehension difficulties. People with aphasia describe the difficulties experienced with reading for meaning (Parr, 1995). Despite this, there is a limited evidence base for therapy in this area in the literature. One possible approach is 'Attentive Reading and Constrained Summarisation' (ARCS) described by Rogalski and Edmonds (2008), which was used with a patient with primary progressive aphasia. The technique requires the participant to read passages and provide summaries, a process which requires attention and involves constraints to improve coherence.

Aims

The study to be reported aimed to examine the effectiveness of ARCS treatment, adapted for use with aphasia, on the reading comprehension and reading speed of AC, a woman with mild aphasia.

Methodology

AC, a woman with aphasia and reading comprehension difficulties, received ARCS treatment for 12 sessions, twice weekly. The approach involved attentive reading of current news articles with intent to summarise, followed by constrained summarisation. Pre and post therapy measures of reading comprehension were carried out to examine effectiveness of the treatment. Repeated measures pre-therapy examined underlying variability. A control task (word fluency) was also completed.

Results

Improvements in reading comprehension were seen as measured by recall of main ideas on the Discourse Comprehension Test (Brookshire & Nicholas, 1993). Reading rate decreased post therapy and AC was able to recall more main ideas as therapy progressed. The results suggest that ARCS is a potential effective treatment for reading comprehension difficulties in aphasia. We would advocate further research in this area to provide a more robust evidence base.

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How Neuroscience Translates Into Neurorehabilitation: The Case Of Language Action Therapy

Advances in theoretical and experimental neuroscience have important implications for clinical practice. Brain research documented that the cortical mechanisms for language and action are tightly interwoven and, concurrently, new approaches to language therapy in neurological patients are developed that implement language training in the context of relevant linguistic and non-linguistic actions, therefore taking advantage of the mutual connections of language and action systems in the brain. A further well-known neuroscience principle is that learning at the neuronal level is driven by correlation; consequently, new approaches to language therapy emphasize massed practice in a short time, thus maximizing therapy quantity and frequency and, therefore, correlation at the behavioral and neuronal levels. Learned nonuse of unsuccessful actions plays a major role in the chronification of neurological deficits and behavioral approaches to therapy have therefore employed shaping and other learning techniques to counteract such nonuse. These insights from neuroscience combine to yield a new kind of therapy approach to post-stroke aphasia, language-action therapy, or ILAT. This approach and technique will be illustrated and explained in detail.

Whereas classical wisdom had been that aphasia cannot be significantly improved at a chronic stage, a specific type of ILAT, constraint-induced aphasia therapy, led to significant improvement of language performance in patients with chronic aphasia. This approach has recently been improved further by applying drug treatment in conjunction with the behavioral technique of language-action therapy. ILAT therefore appears as an efficient tool for improving language functions, even at chronic stages of aphasia. Furthermore, intensive and rapid therapy studies in chronic aphasia are a unique tool for exploring the cortical reorganization of language. Therefore, therapy studies using this technique can open new perspectives for research into the plasticity of human language circuits.

Suggested Readings

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Stroke Volunteer Outreach Service – an Evaluation

Background

With increasing emphasis on delivering services in the community and in an effort to provide a seamless transition for individuals through all stages of the stroke pathway, Chest, Heart and Stroke, Scotland (CHSS) and Greater Glasgow and Clyde NHS Trust (GG&C) SLT department have been collaborating to develop volunteer services for people with aphasia in Glasgow. Since January 2009, the agencies have jointly funded a post for coordinating communication support services for people with aphasia in hospital (inreach) and for those at home/in the community (outreach). The coordinator is responsible for recruiting, training and supporting volunteers in conjunction with the local SLT department and CHSS. Volunteers are then matched with individuals (clients), who they support on a one-to-one basis, in whichever environment is most appropriate. Sometimes clients will transfer from inreach to outreach service as individuals are discharged from inpatient care. In order to establish this as a purposeful service, the SLT, CHSS coordinator, volunteer and client devise specific goals to work towards within a set time frame. Ongoing support for the pair is provided by the coordinator and the SLT as required. The long-term aim of the service is to enhance clients' independence and confidence in communicating within their own environment. We evaluated the volunteer **outreach** service in April 2010, 15 months after its inception.

Aims of evaluation

To evaluate whether the original aims of the outreach service are being met
To explore the effectiveness of the outreach service from clients' and volunteers' perspectives
To identify ongoing development needs

Methodology

A semi structured interview was devised by the authors (both SLTs) and delivered by the CHSS outreach coordinator as part of her exit strategy for clients. Useful information was obtained from seven individuals with aphasia.
The authors elicited feedback from 6 volunteers in a group setting around 4 main areas: 1. Training/Induction

2. Meeting Clients
3. Paperwork
4. Discharging Clients

The interview and group feedback was analysed, collated and disseminated to local staff.

Main Results

Client feedback: Although clients still felt that communication was a 'major obstacle' in their lives, they felt that their confidence in daily life was either 'a lot better' or 'a little better' as a result of volunteer support. Clients also enjoyed the range of activities offered and felt there had been some improvement in their communication skills. All clients were positive about the support they received, enjoying '***laughing and talking without time pressures***'. They unanimously recommended the service. However not all clients were aware that they were

working towards goals and many still made negative comments about their communication skills.
Volunteer feedback: While volunteers had different levels of experience, all reported feeling adequately trained and supported by the CHSS coordinator. They had various ideas for supporting clients and were very aware of different communication strategies to facilitate their clients' skills. Volunteers highlighted a desire for more information on the SLT role and for contact details of SLTs of clients that receive ongoing therapy.

Discussion
The authors recognise that this evaluation was small in scale and therefore the findings cannot be widely generalised. Some specific areas for improving support for volunteers have been identified, however both clients and volunteers reported positive outcomes and experiences of the outreach service.

Clinical Implications
In conjunction with CHSS, the speech and language therapy department will endeavour to meet the needs identified within this evaluation. For example, the department is now establishing a formal programme for volunteers to observe SLTs and provide more background information on clients prior to volunteer visits. Indications for future development include recruiting volunteers who have aphasia themselves.

Conclusion
This evaluation has re-affirmed the need to continue supporting clients with aphasia in their individual contexts, on a long-term basis. As such it is pertinent that this kind of service is appropriately developed and extended beyond Greater Glasgow.

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Communication Inclusion Pilot Project

Introduction

The Communication Inclusion Pilot Project was undertaken on behalf of the Dorset Cardiac and Stroke Network in response to feedback from local people and in accordance with the National Stroke Strategy Quality Marker 4 to meaningfully involve people who have had a stroke and their carers in the planning, development, delivery and monitoring of services. It recognised that people with communication disability might be disadvantaged in this. The decision was taken to facilitate inclusion by developing the communication support skills of all staff working in stroke care.

Method

Staff were trained using The Communication Access Toolkit, designed and developed by Connect, The National Communication Disability Network.
11 members of NHS staff were designated as Communication Champions and trained to deliver the Toolkit. Each returned to their workplace to cascade the training.

9 Champions from Social Care, 3 from each of the Councils in Dorset were also trained in order that the staff working with people who were receiving social care following a stroke would also be able to follow the same principles.

All staff working in acute and rehabilitation stroke units and community stroke teams in the 5 Trusts across Dorset were offered the training. 600 in total.

Delegates attending the training were asked to assess their communication confidence before and after the training session.

In addition to attending the training, the NHS staff were asked to undertake one change to their workplace or work practice to improve communication in line with the best practice in the Toolkit.
This change was then brought to a meeting where it was presented and discussed with a team of volunteers with communication disability. Any comments made by the volunteers were then incorporated in the change.

Results

240 NHS staff trained across Dorset have been trained during the life of the project. 20 staff groups were represented. 104 changes to workplace and work practice were identified and undertaken. There was a 78.9% increase in self assessed communication confidence.

In Social care, to date, only Dorset County Council have begun to deliver the training and 60 members of their staff have attended.

Conclusion

The project demonstrated that communication confidence is improved by the training Toolkit. It has shown that staff are willing and able to embrace the philosophy of inclusion for people with communication disability. It has also shown that small local changes to interactions,

documents and environments can make a huge difference to the accessibility of services for people with communication disability.

This quotation is from one of the Volunteers who took part in the project.

"The communication project has been a great success. People given the training are so passionate about making one small change to help people with aphasia. These small changes may seem insignificant, but believe me, if you have communication difficulties, they are massive."
Faye Wright. Stroke survivor

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How intensive does anomia therapy need to be?

Background and Purpose
The intensity of aphasia therapy has been a key clinical question which has not yet been systematically investigated. The aim of this case-series study was to compare the outcome of intensive and non-intensive therapy in the relearning of words for people with aphasia.

Methods
Eight participants with aphasia following a left-sided cerebrovascular accident took part in a study comparing the intensity of delivery of the therapy. Participants received two courses of the same therapy (each course lasting 10 sessions) delivered either intensively (every day for two weeks) or non-intensively (twice a week for five weeks). Therapy consisted of confrontation naming with progressive phonemic and orthographic cues. Post therapy assessments were carried out immediately after the study and five weeks later. Performance was also monitored during each therapy session.

Results
Immediately post therapy, both types of therapy had improved naming accuracy considerably and there was no significant difference between the two interventions. Five weeks later, 7 out of 8 participants showed a small yet significant difference in naming accuracy, favouring non-intensive over intense therapy. One participant's results differed from this pattern in that his naming accuracy improved most after intensive therapy whether assessed immediately or at follow-up testing. There were no differences in the learning patterns during the therapy sessions between the intensive and non-intensive therapies.

Conclusions
For the majority of people with aphasia after stroke, both intense and non-intense therapy for anomia leads to improved naming performance. There may be reason to think that the intensity of learning alters how well the learning is retained in the longer term.

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Training The Multi-disciplinary Team to Become Effective Conversation Partners: A Novel Use of The SPPARC Programme.

Introduction

The effect of aphasia on conversation has been well documented. The importance of conversation in developing and maintaining relationships is similarly well researched and the impact of compromised conversation on social and emotional well-being recognised and described. The development of the Supporting Partners of People With Aphasia in Relationships and Conversation(SPPARC) has provided clinicians with a versatile and easy tool-kit for enabling aphasic people and their partners to work together towards more effective conversations in everyday life.

Recent drivers in the national health agenda have highlighted a need to improve the “patient experience” and to consult patients on service provision and development in their localities through robust Patient and Public Involvement Strategies. The National Stroke Strategy emphasizes the need to consult all people affected by stroke, including those with aphasia, in matters relating to how services are delivered locally. In order to ensure a positive patient experience in the journey through their stroke care and to have meaningful consultations about service development with aphasic people it is important that those who will be working with the aphasic person are efficient conversation partners with aphasic people.

Aims

To provide Conversation Training to a variety of health professionals who regularly work with aphasic people.

To measure the effectiveness of using an adapted SPPARC Programme to train the MDT in better conversation skills with aphasic people.

Method

This piece of work has been supported by The Dorset Stroke Network who have provided funding for the Dorset Speech and language Therapy Service to develop and deliver Conversation Training to a selection of professionals who work with aphasic people. The” Better Conversation “Training consists of 2 ½ days of training using an adapted SPPARC Programme. The training sessions involve aphasic people as trainers and assessors. There is also use of role play and participants own video examples of themselves in conversation with people with aphasia.

Day 1(1/2 day)

Stroke and Aphasia: The Facts

Psycho-social Effects of Aphasia

Day2
What is Conversation?
What Happens in Aphasic Conversation?
What are my Patterns of Conversation?
“Good Habits” in Conversation
Day3
Current Trends in Speech and Language Therapy
How Have I Implemented the “Good Habits”?/ Have my Patterns of Conversation Changed?
Assessed Conversations with Aphasic People
Summary

Outcome Measures

The effectiveness of the training will be evaluated by 3 outcome measures:

1. Quiz: What Do I Know Already? On Day 1 followed by the same quiz What Do I know Now? On Day3.
2. General Evaluation of the training sessions.
3. The assessed conversation with an aphasic person on the final day involves each participant being rated on a visual analogue scale by the aphasic person as to how effective they were in maintaining a conversation and finding out new information.

Results

Two cohorts of health professionals have completed the first 2 days of the training. The follow-up days when the outcomes will be completed in late April. Results will be presented.

Conclusion

It is anticipated that this training will have a significant effect on the conversation skills of the participants who complete it. Raising the awareness of the difficulties aphasic people have in communicating their needs and preferences should contribute towards improving the patient experience of stroke care and ensure that aphasic people are able to make a contribution towards guiding local health and social care providers in service delivery.
The SPPARC Programme was originally designed to be versatile in its approach. This piece of work will hopefully demonstrate an additional use of the programme as a tool for improving the conversation skills of the MDT involved in stroke management.

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Delivering intensive noun syntax therapy for anomia via computer: a case-series

Introduction

Large amounts of therapy can be delivered intensively via computer, thereby complying with the 'massed practice principle' of aphasia rehabilitation (Pulvermüller & Berthier, 2008). Existing therapies for anomia focus on nouns in isolation. However, everyday production usually involves nouns within determiner phrases. Accordingly we targeted noun production within a syntactic frame. We predicted generalisation of therapy effects to untreated items and carryover to connected speech. The noun syntax therapy was delivered via computer software.

Methods

Ten people with aphasia participated. Severity of aphasia differed across participants and all were at least one year post stroke. Assessment involved a comprehensive background language assessment in addition to repeated baselines of naming and noun-syntax processing (Herbert & Best, 2010). The therapy involved pictures presented for naming within a sentence frame. Participants were required to complete three therapy stages, all targeting naming under the following conditions: delayed repetition of the noun phrase, judgement of the syntactic properties of the noun phrase, and production of the noun phrase. The software gave feedback on their attempt at naming, and provided further access to the spoken form as requested. Outcome measures included picture naming and noun phrase production in isolation and in connected speech tasks including conversation. Measures of well-being and impact of therapy on communication were undertaken. In addition, we explored participant acceptability of computer-based therapy for anomia.

Results

We are currently analysing our results. So far, all participants analysed have demonstrated improvement in naming the treated set. Some have showed generalisation to the untreated set and an increase in lexical retrieval in conversation. Increased success and confidence in everyday conversation has also been reported. Further analysis of the data for all participants is ongoing.

Discussion

The therapy targeted noun phrase syntax. This led to improved naming for treated items, some generalisation to untreated items, and evidence of carryover of therapy effects to connected speech. The therapy was intensive and thus complied with the 'massed practice principle' (Pulvermüller & Berthier, 2008), and nouns were treated in sentence contexts, complying with the 'behavioural relevance principle', identified by these authors as crucial factors in aphasia rehabilitation.

Conclusion

Treatment of nouns in larger syntactic structures can lead to gains in treated and untreated nouns, and changes to lexical retrieval in conversation. These improvements have been effective for individuals with different types of anomia and varied and ranging anomia severity. Delivery via computer is an effective, acceptable form of therapy. It is a cost-effective method of delivering intensive impairment-based therapy and can form part of a creative solution to meeting the needs of individuals with long term aphasia.

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Is narrative production really the bridge to real-life communication?

Evidence from a single case study

Background

Intervention approaches in aphasia have always been interested in how to move beyond the improvements seen in single word and sentence production in constrained settings (e.g. Marshall, Pring & Chiat, 1998; Webster, Morris & Franklin, 2005) to the particularly challenging context of connected discourse and everyday communication. One approach that has recently focused specifically on a structured approach to connected speech in aphasia, drawing on what is already known to us from single word and sentence level therapies, is that of narrative based therapy (Whitworth, 2010). Drawn from the paediatric frameworks for narrative production used in the development of written language (Westby, 1999; Norbury & Bishop, 2003), this approach was used successfully with two people with aphasia, each of whom had different patterns of language impairment and each achieving gains in sentence and narrative production and reporting considerable impact in real life communication (Whitworth, 2010). Measurement of impact in connected speech was limited, however, in this study to analysis of performance on the Cinderella narrative, highlighting the limitations of exiting assessment protocols for truly detecting change in communication. The reported use of this approach with a wider range of people with sentence level difficulties also remains limited.

Aims of the study

This study involved a single case intervention study with a woman with severe impairment in creating predicate argument structure. The study aimed to:

1. evaluate the effectiveness of narrative therapy as a means of increasing predicate argument structure (PAS) in communication contexts beyond the sentence level
2. explore whether the structural framework applied to narratives can be applied to other real-life communication situations and used to measure efficacy of intervention.

Participant

YR, a 63 year old woman, presented with a severe impairment of sentence production. In the presence of good semantic and phonological representations for verbs, YR's difficulties were hypothesised to be due to impaired ability to construct the predicate argument structure (PAS) of the sentence. Previous therapy had successfully targeted PAS where YR had made significant gains in sentence production following therapy, and this generalised to other sentence level tasks involving sentence production. Real-life gains in confidence, engagement and communication ability were also both evident and reported. Improving PAS beyond the sentence level was the next challenge.

Method

Therapy was offered twice per week over a 14 week period. Therapy goals were jointly negotiated between the therapist and YR, which were then incorporated into overarching real-life goals constructed using the A-FROM framework (Kagan *et al* 2006). This formed the structure for the post-therapy where self report of therapy impact was collected.

The narrative therapy set out in Whitworth (2010) was used. The approach draws on theories of how information is organised in order to explain, describe, recount, plan, and tell stories (Westby, 1999). Specifically, the therapy aimed to increase the organised structure of connected discourse through focusing on sentence and narrative frameworks in describing, recalling and planning verbal information. Integration of the word (verb), sentence (PAS) and discourse (narrative framework) levels was a key feature, and the centrality of the main event to all levels was reinforced. A range of other discourse genre (e.g. event recall, event planning, conversation) were included in the programme to facilitate generalisation, with the narrative framework aiming to provide a structure at a level higher than the sentence that would encourage information retrieval more generally.

Performance was monitored across a range of tasks and maintenance of therapy effects explored at 4 weeks post intervention. In addition to the assessments used in the previous study, samples of real-life sentence production, e.g. giving opinions, recalling events, were taken before and after therapy to evaluate whether any change had taken place in her ability to carry out these tasks. A narrative-type template was used and adapted for each type of event to explore whether such speaking situations could be evaluated in this way.

Results and Discussion

While YR reported gains in her real-life communication during this period of therapy, it is the results of thematic analysis (including PAS), verb analysis and comparison of the “story grammars” of both narrative and situational tasks that will be the focus of this paper. The effectiveness of this therapy in changing sentence production and providing greater organisational frameworks for YR’s production during events that are more akin to real-life situations will be explored, along with a discussion as to how YR’s performance compared to the participants reported previously who had undergone narrative therapy. Further, implications for analysing other speaking situations using this approach will be discussed and ideas for where we might take this next presented.

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How Service User Involvement Is Helping Shape Services For People With Aphasia

Background

Aphasia is an acquired language disorder affecting speaking, understanding, reading and writing. It is a complex disorder that can have a huge impact on a person's everyday life. People with aphasia have spoken of experiencing acute social isolation, a lack of services available to support them living with communication disability and difficulty accessing services because they don't understand the information explaining what services can offer.

In 2005 Speech and Language Therapy Stroke Services in Glasgow held a service user consultation event supported by the DARE foundation, Scotland. A recurrent theme reported by service users was a lack of accessible and timely information for people with aphasia. In response to this a partnership group of service users (people with aphasia and their spouses/ carers) and speech and language therapists (SLTs) was set up to highlight and address these issues.

Over the past 5 years, the "Aphasia Action Group" has worked on a number of projects, including accessible information. Each year a work plan of topics/projects is compiled and agreed by all group members. Topics may be driven partly by current SLT service objectives. (For example the group may be asked for feedback on aphasia friendly menus currently being looked at within Greater Glasgow and Clyde). Project ideas also come from group members and are discussed and prioritised. The group currently consists of 3 SLTs, 6 people with aphasia and 5 carers. We meet every 6 weeks in a central Glasgow hospital. Our projects have included:

Accessible Information

All members of the group received training on what makes information easy to understand/ access and ways to improve this. We assessed the quality of the information already used in SLT using quality checklists and following this, developed an aphasia friendly appointment letter and "What is Speech and Language Therapy?" leaflet. A number of other information leaflets have also been worked on.

The group has been asked by our local Managed Clinical Network for Stroke to comment on accessibility of information in Greater Glasgow's Stroke Book and Stroke Website and give ideas as to how these could be made more aphasia friendly.

Information evenings

The group felt strongly that there was a lack of opportunity for people with aphasia and their carers to meet others living with aphasia and discuss issues related to their disability. In response to this the group have so far planned and hosted 3 aphasia information evenings. These have been well attended (on average 40 attendees) and have involved a key speaker followed by plenty time to discuss and socialise. Feedback questionnaires are completed at each meeting to help plan and deliver the next information evening. We hope to continue to run these every 6 months.

Aphasia Awareness

Another priority identified by the group is raising awareness of aphasia within the health service and the general public. Recent work has included:

- Arranging for a copy of the Aphasia handbook (Connect) to be available in all Glasgow libraries.
- Aphasia Awareness month in June 2009. Members of the group appeared on a local Celtic radio station to discuss issues around living with aphasia. Information stands were organised in all Glasgow hospitals during this week. Posters were displayed telling group members "stories" of their experiences of aphasia.
- Workshop training provided to health care workers on aphasia and how to support conversation. Training was led by SLTs and people with aphasia

Conclusion

The Aphasia Action Group is a dynamic and active group. The membership has changed over the years, with new members bringing their own experiences and ideas to benefit the work of the group. Members report satisfaction gained in working together to improve services and raise the profile of aphasia in their local area.

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The Talking Hands: A Study on Gesture + Language Treatment in Aphasic Patients – Preliminary Results

Background

Word-finding difficulty is a common symptom found in aphasic population. Failure to retrieve a word in speech production may arise from two very different types of impairment: deficit at the conceptual level (Con-D) and deficit at the lexical level (Lex-D). Patients who are damaged at the conceptual level have difficulty in distinguishing among concepts and consequently cannot find the specific word to be retrieved. Patients who are impaired at the lexical level are intact with comprehension, but are unable to retrieve the phonological information and therefore fail to come up with the word. Patients as such receive either logopedic treatment to restore the lost language function (Antonucci, 2009; Leonard et al., 2008) and/or are trained to use the intact function - such as gesture - as a facilitator during their communication (Morgenstern et al., 2009; Rodriguez et al., 2006). Improvement given by treatments has been reported, however, very few studies investigated treatment effects on both types of patients with well controlled experimental design on both verbs and nouns.

Aims

This study aims to investigate the effect of a treatment which combines language-based and gesture-based training. We are interested in the respective treatment effect of the language-based and gesture-based training which are very different in terms of communication modality. Eventually, we would like to know the overall effect of the integrated treatment and to target the suitable population for a treatment of this type.

Methodology

PARTICIPANTS. Chronic aphasic patients who have word-finding difficulty especially in their spoken language production were recruited. Depending on the underlying impairment that leads to word-finding difficulty, patients were further divided into two groups: deficit at the conceptual level (Con-D) and deficit at the lexical level (Lex-D). So far, four patients have been recruited. This paper reports the preliminary results from the first participant in the study.

SYH, 57-year-old female, is a native Hungarian with German and Italian as her second and third languages. SYH sustained two cerebral vascular accidents in May and July 2008, respectively. This resulted in serious impairment in phonological access and encoding. Given that, notable morphological errors and long anomic pauses are frequently observed in her word production. SYH's spontaneous speech is also characterized by presence of neologism and intrusion of German words. However, her comprehension ability is rather intact and the praxic ability is preserved. According to the type of her word-finding difficulty, she was assigned to the Lex-D group.

PROCEDURE. The procedure is composed of four stages: (1) pre-treatment neuropsychological evaluation; (2) baseline data collection; (3) treatment; (4) post-treatment evaluation.

TREATMENTS. The Con-D group receives Semantic Feature Analysis (SFA) and Salient Gesture Training (SGT), whereas the Lex-D group receives Phonological Component

Analysis (PCA) and Abstract Salient Gesture Training (SGT). The entire project contains 28 sessions (three baseline sessions + eight treatment sessions + three maintenance sessions for action and three baseline sessions + eight treatment sessions + three maintenance sessions for object). Each session lasts approximately 60 minutes. Treatment sessions are conducted at the Neurocognitive Rehabilitation Center, Rovereto, Italy.

MATERIALS. Based on SYH's naming performance before treatment, sixty manipulable objects and sixty hand/arm actions were chosen from a databank according to SYH naming performance before the treatment. Sixty objects were divided into three sets: 20 for gesture-based training; 20 for language-based training; 20 for combined training. In each set, ten items underwent training and the other ten remained untrained. The word sets were balanced according to SYH's pretreatment naming error rates. The psycholinguistic variables that may influence naming (e.g.,frequency, word length, syllables etc.) were also considered. An identical selection criterion was applied to the action part.

Results

The primary treatment effect was evaluated in every session on the basis of SYH's naming performance. Results were graphed and calculated by effect sizes (*d*). Notable treatment effects associated with large effect sizes were observed in both action and object word sets, especially in the treatment condition that combines language-based and gesture-based training. There was minimal generalization in all three action word sets whereas some generalization to the object word sets was observed. Moreover, the video recording of daily treatment sessions show that for certain action items, SYH learned to use gestures as a cue to facilitate naming. In conclusion, gesture-based, language-based, and combined treatments all led to significant improvement on action and object naming; nevertheless, no apparent difference was observed among the training effects elicited by different kinds of treatment. The significant treatment effect and the observation that SYH learned to use gestures to cue words suggest that the proposed treatment has a potential role in improving naming skills and daily communication. The data collected from the other three participants (two Lex-D and one Con-D) recruited so far will contribute further evidence to the preliminary results.

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