Better Conversations *with children*

Development and evaluation of a new intervention for children with language disorder

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Overview

- Introduction to DLD and existing interventions to support this
- Development of ‘Better Conversations with Children’
- Study design and research questions
- Two case studies and preliminary results
- Ongoing work and future plans
- Questions

Developmental Language Disorder (DLD)

Affects two children in every Year 1 class (7.58%)

Norbury et al. (2016)

Potential areas of impairment

- **Syntax**
- **Morphology**
- **Semantics**
- **Word finding**
- **Phonology**
- **Pragmatics**
- **Discourse**
- **Verbal learning/memory**

Impact on everyday conversation
(Croteau et al., 2018).

Reduced educational attainment

Difficulties forming relationships

At risk of mental health difficulties (RCSLT, 2018)

Intervention for DLD (Roulstone et al., 2012)

Pre-school children: Parent-child interaction (88% under 2s; 73% 2-3 years)

School-aged (5-7 years): Language targets (68%)

Targets	Expression, understanding, vocabulary, narrative, word-finding
Programmes	Derbyshire, Nuffield, Makaton, Colourful Semantics, Social Stories
Activities	Barrier games, auditory memory, phonological awareness, auditory discrimination, narrative therapy, minimal pairs, rhyme
Approaches	Modelling, forced alternatives, creating a language-rich environment, visual timetables, feedback, commenting, differentiating curriculum

Working with TA's: 65%

Croteau et al. (2015): Conversation situations 'are not sufficiently examined in speech and language interventions for children'

Better Conversations *with children*

The current study

- Based on principles and techniques used successfully with other clinical populations
- Dual aim: more successful everyday conversations; boost children's language

PCI + Conversation therapy + Child-language strategies = BCC

Falkus et al. (2016) Beeke et al. (2015) Radford (2017) Hughes et al. (2018)

Outline of BCC intervention

Session	Theme
1	Introduction to Language and Conversation
2	Turns, sequences and actions
3	Trouble and repair
4	Child-led topics of conversation
5	Consolidate strategies
6	Reviewing and moving forward

Outcome measures

'Conversation is a complex research object, multidimensional and sequential' (Croteau et al., 2018, p.248).

- Mixed methods
- Conversation samples analysed both quantitatively and qualitatively
- Counts of facilitator and barrier behaviours; Child MLUw; ratio of child:adult speech
- Standardised measures, e.g. CELF, ERRNI, BPVS (we did not predict change)

Research questions

1a) and 1b) Does BCC produce change in targeted conversation behaviours (communication facilitators and barriers)?

1c) Does the ratio of child-to-adult speech change after intervention?

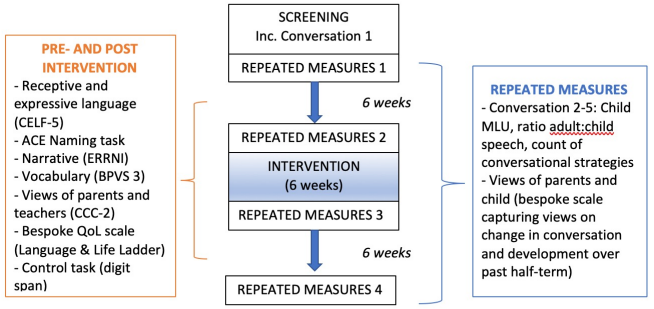
1d) Does children's mean length of utterance (MLU) increase following the intervention?

2) Do children's standardised language scores change following the intervention?

Also consider:

3) What qualitative changes may be observed in conversation?

Study design



	Screening and pre-therapy assessments						**Intervention**						**Post-therapy assessments**					
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Conversation	1		2		3		Sessions						4					5
							1	2	3	4	5	6						
Assessment	Screen	Pre-1	Pre-2	Pre-3	Pre-4	Pre-5							Post 1	Post 2	Post 3	Post 4	Post 5	Follow up

Assessment details: CELF-5 (Clinical Evaluation of Language Fundamentals; Semel et al., 2017), Pattern Construction (British Ability Scales; Elliott & Smith, 2012), BPVS-3 (British Vocabulary Picture Scale; Dunn et al., 2009), ACE naming (Assessment of Comprehension and Expression; Adams et al., 2001) ERRNI (Expression, Reception and Recall of Narrative Instrument; Bishop, 2004), CCC-2 (Children's Communication Checklist; Bishop, 2003), Bespoke assessment of children's language-related quality of life (Language and Life Ladder; Hughes & Best, 2018).

Participants

- 6 children with DLD and their main carers
  - Child presents with persisting language disorder (identified on CELF-5)
  - English as a main language
  - Difficulty with conversation reported by carers and captured in video assessment (e.g. WFDs, adult dominates)
  - No other significant developmental diagnosis, e.g. autism spectrum disorder.

- Summary results from 2 dyads to be presented

Case Study 1: Dyad B

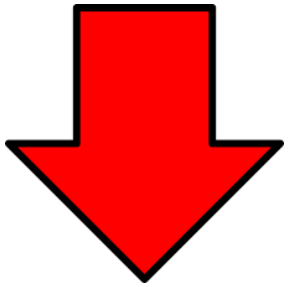
- Boy aged 6;08 years and his mother
- Child attended mainstream primary school
- ‘Significant difficulties in conversation’
- No previous SLT intervention
- Family history of language and learning needs

Dyad B: targeted strategies

Conversation Partner	Targeted Facilitators	Targeted barriers
Child B	Using word-finding strategies, e.g. acting out, facial expression or gesture.	Giving up when stuck on a word, e.g. saying ‘It doesn’t matter’, ‘I don’t know’ or ‘That’s all I got to say.’
Mother B	Use of contingent commenting, minimal turns or recasts / repeating back, e.g. rather than a question.	Using test questions and forced choice questions
	Responding to B’s non-verbal communication, e.g. by feeding back what she has understood.	

Dyad B results

- Statistically significant decrease in barrier conversation behaviours

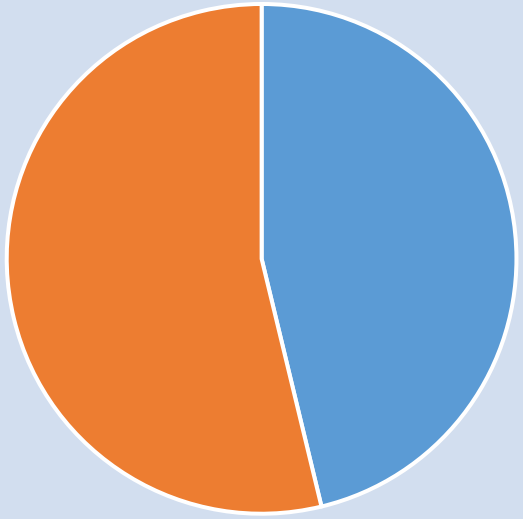
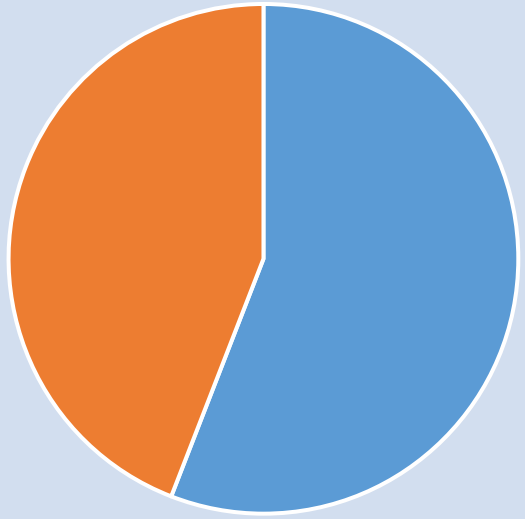


(average of 21.71 pre-therapy to 7.5 post)

- Facilitators unchanged

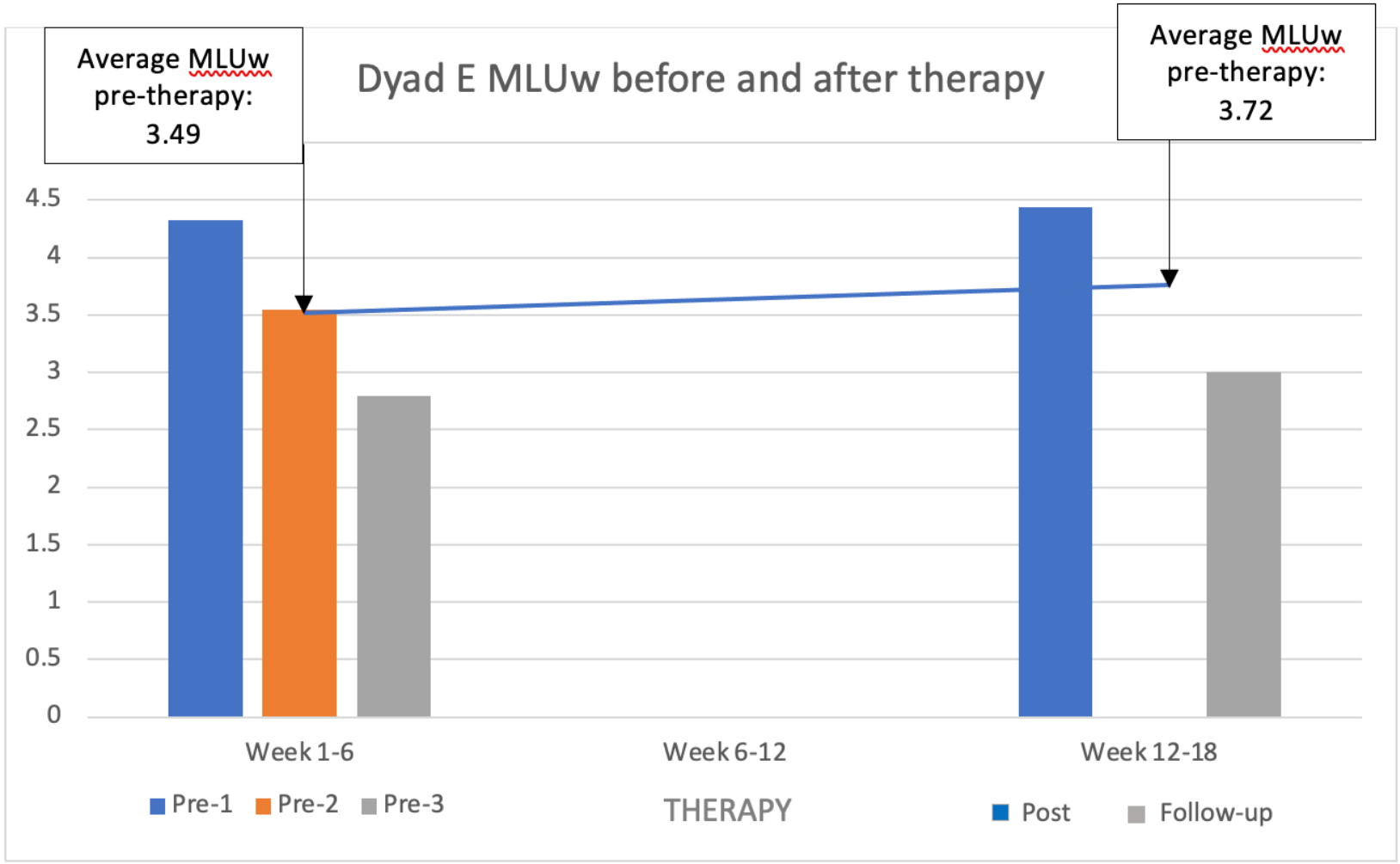
(average of 23.69 pre-therapy versus 23.5 post)

Dyad B: ratio of child-to-adult speech

Pre-therapy average	Post-therapy average
	

Proportion of time Mother spoke (measured in seconds)
Proportion of time child spoke

Dyad B: mean length of utterance in words



Dyad B: standardised scores

	Child B	
RQ2: Change in standardised scores?	**Pre**	**Post**
CELF-5 Sentence comprehension (SCS*)	9	13
Word structure (SCS)	8	8
Formulated sentences (SCS)	5	5
Recalling Sentences (SCS)	7	7
Core Language Standard Score	***84***	***89***

**Scaled score, where 10 is the average and ≤7 indicates below average performance*

Case Study 2: Dyad E

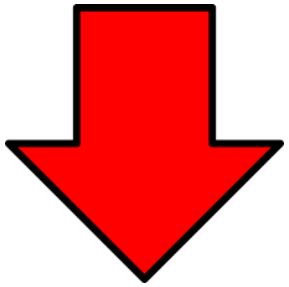
- Boy aged 6;10 years and his mother
- Child attended mainstream primary school
- Seen as a toddler for SLT assessment; discharged.
- Attention difficulties
- Family history of ASD

Dyad E: targeted strategies

Conversation Partner	Targeted Facilitators	Targeted barriers
Child E	Using gesture or acting out to help communicate meaning	Using minimal, or single word turns
Mother E	Use of repeating back / recasting	Using test questions
	Using minimal turns	

Dyad E results

- Statistically significant decrease in barrier conversation behaviours



(average of 22.33 pre-therapy to 13.5 post)

- Facilitators unchanged

(average of 12 pre-therapy versus 11 post)

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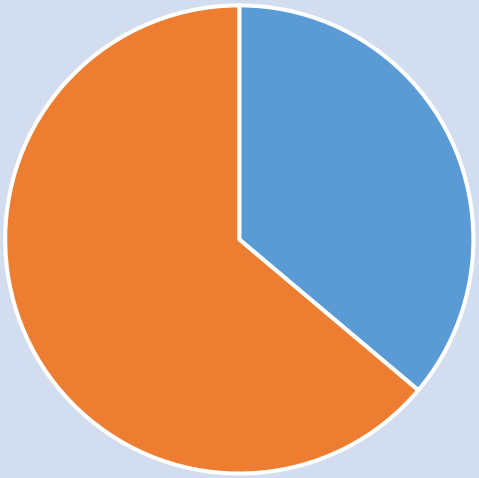
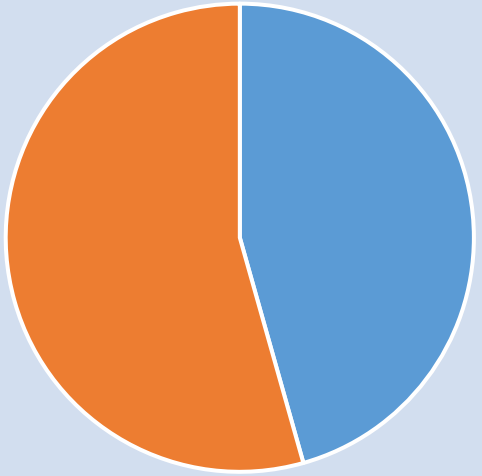
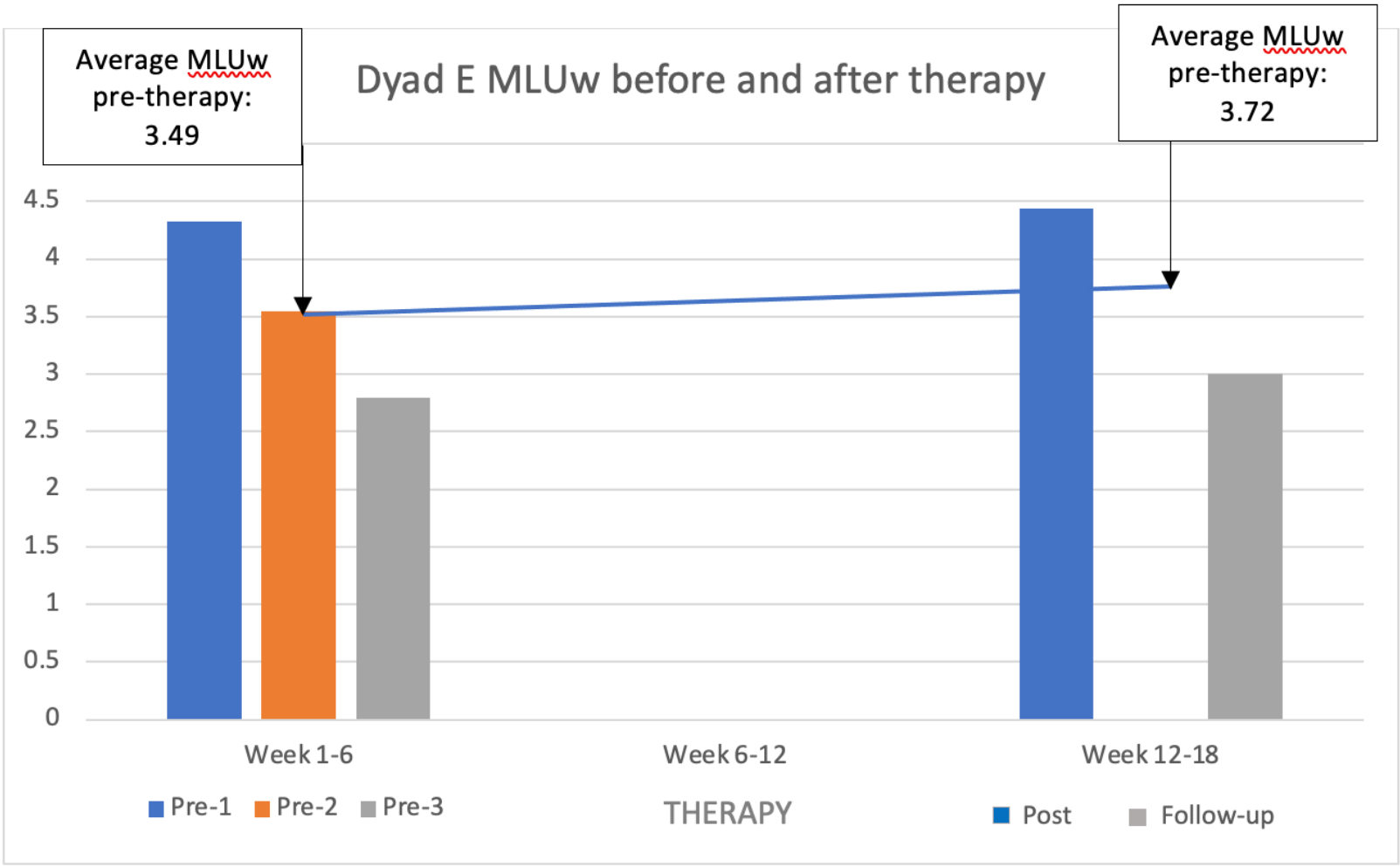
Dyad E: ratio of child-to-adult speech

Pre-therapy average	Post-therapy average
	

Proportion of time Mother spoke (measured in seconds)
Proportion of time child spoke

Dyad E: mean length of utterance in words

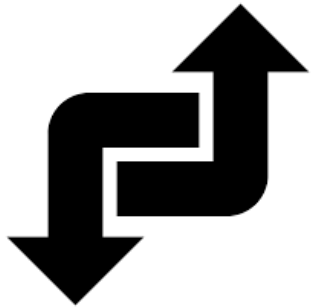


Dyad E: standardised scores

	Child B	
RQ2: Change in standardised scores?	Pre	Post
CELF-5 Sentence comprehension (SCS*)	5	11
Word structure (SCS)	6	8
Formulated sentences (SCS)	7	7
Recalling Sentences (SCS)	7	7
Core Language Standard Score	***82***	***88***

**Scaled score, where 10 is the average and ≤7 indicates below average performance*

Qualitative analysis



- Adults able to redesign their conversational turns to support child language development

- Children may require more support to change their own conversation behaviours

- Individual factors affect choice and usefulness of conversation strategies

Take home messages

- Primary-aged children with DLD can benefit from conversation-based intervention.
- Change in achieved within a clinically realistic time frame
- Mixed methods provide a detailed view of how BCC impacts on participants' everyday interactions.

Ongoing work and future plans

TD comparison group: data has been collected and analysed from 22 typically-developing children and their main carers.

Two conversations, six weeks apart – to mirror intervention period.

Coded for same conversation measures as DLD group.

Prediction: there will be between-group differences in the type and frequency of conversation behaviours (facilitators and barriers).

Children with DLD will have:

- a shorter MLU
- a lower ratio of child-adult speech, compared to the TD group.

Planned funding proposal: larger scale evaluation of BCC within a 'real world' setting.

- Training NHS and schools-based therapists to use the programme within their own clinical practice.

Any questions?