A Randomised Control Trial to test the effect of Parents' Inference-eliciting Questions during Shared Book Reading on 4-year-olds' Inferencing Ability.

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Study Rationale

- Language comprehension relies on the ability to make local and global **inferences**, such as inferring semantic relationships between words in a text, or inferring the motivations of a character based on information spread throughout the text.

- For example, if we hear that a character in a story is carrying a towel and a parasol, we infer that they are going to the beach.

- Inferencing skills develop in the preschool years and are essential for children's understanding of extended discourse and, later, written texts. When children start school, they face a sharp increase in the amount and range of decontextualized language they hear (Hindman et al., 2008; Rowe, 2013). So, practising inferential language during the preschool years is likely to benefit children at the start of formal primary education.

- However, relatively little is known about what experiences cause developmental changes in inferencing skills during the preschool years. While we hypothesise that interactions that require and support the use of inference-making at a developmentally appropriate level would lead to learning, this has not been tested.

- Such experiences may occur less frequently for children from socio-economically disadvantaged backgrounds, who tend to hear less high-quality child directed speech and can have limited language skills relative to their advantaged peers (Locke et al., 2002).

Method

In this pre-registered randomised control trial, we tested the effect of increasing exposure to inferential questions during shared book reading on 4-year-olds' inferencing abilities. We used parent-child book reading as a means of scaffolding the development of inferencing skills since some parents naturally ask their children inferential questions about shared stories. We measure whether doing so promotes children's ability to make inferences in a socioeconomically diverse group of children.
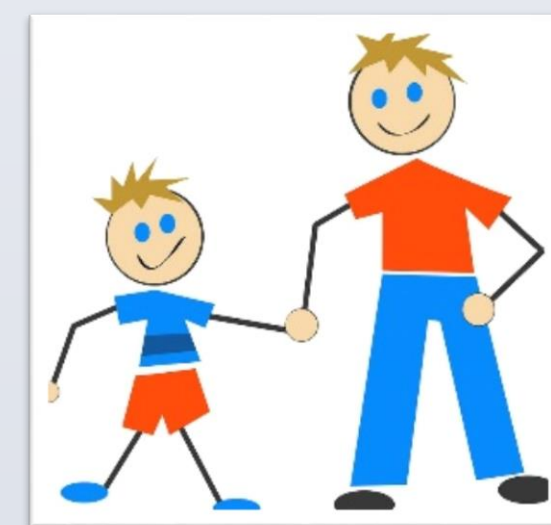
- 100 parent-child (4-year-olds) dyads were randomly allocated to an intervention or control condition according to CONSORT guidelines.
- One third of families in the sample live in the most deprived neighbourhoods nationwide (IMD deciles 1-3).
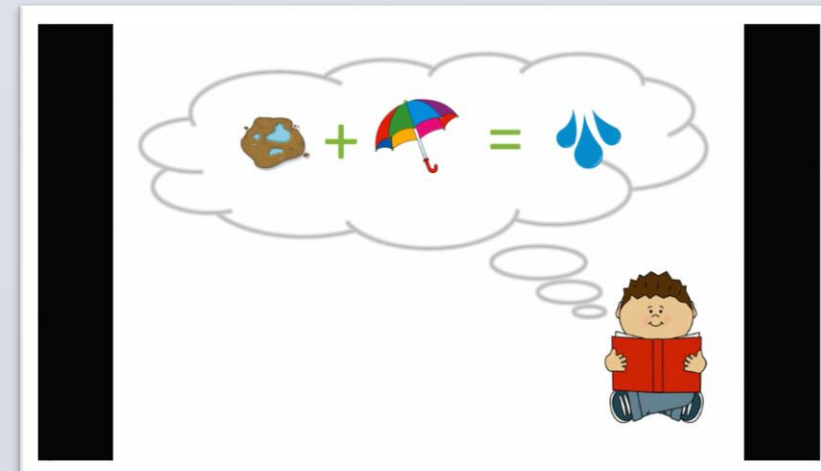
First, parents in both conditions watched a training video that provided the background to the programme and introduced the procedure.

More than ↑
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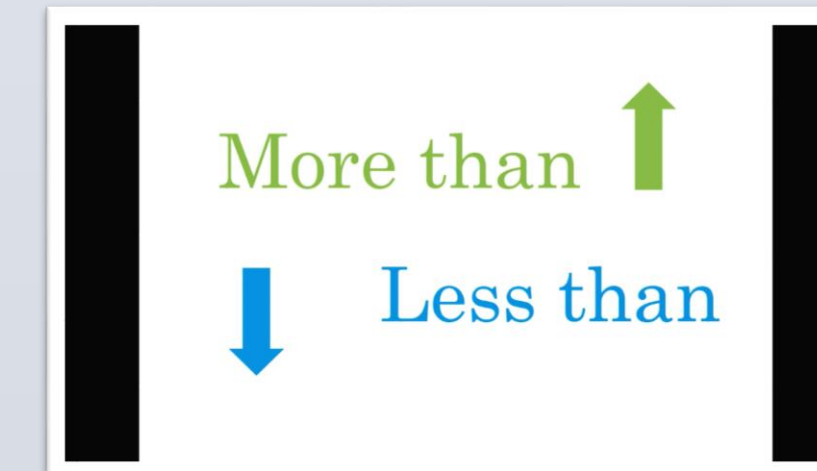
Then we introduced the intervention:
- Participants in the **training** condition were given 10 books with inference-making questions pasted into the text to support inference-eliciting dialogue during book reading.
- Participants in the **control** condition were given a maths workbook to work through together.
- Parents in both conditions were asked to use the materials with their child **daily** for a month.
- Families in both conditions were given an **intervention diary** to record each time they read a particular book or completed a page in the maths workbook.
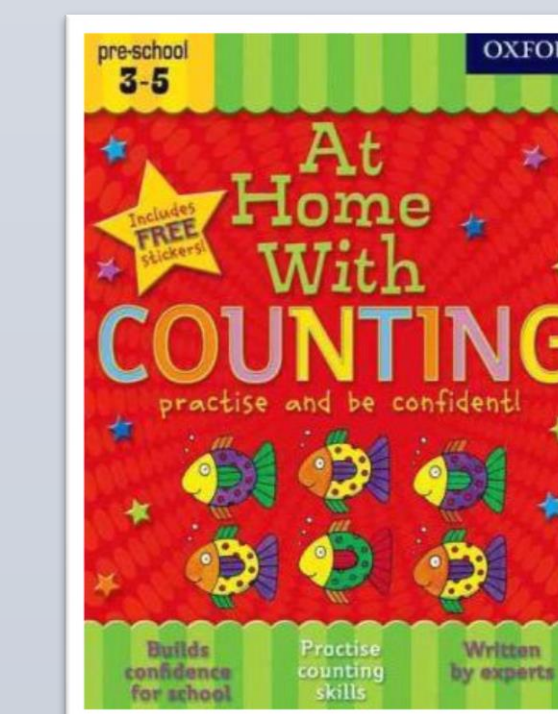
Measures:
- Age-appropriate **vignettes** were read to children before and after the 4-week intervention. Each vignette was followed by a series of **questions to assess inferencing ability.**
- NFER Baseline Reception Assessment: Communication, Language and Literacy; Maths.
- Three subscales of the CELF: Expressive Vocabulary; Concepts and Following Directions; Basic Concepts.
- Family Questionnaire (demographic information to provide SES variables).
- Home Life Questionnaire (information about family routines and activities).

Results

- The intervention did not change inferencing ability or language scores.
- SES background did not affect performance on the inferencing tasks or language tests.
- There was a moderate correlation between baseline inferencing performance and language (CELF), $r = .47$.
- There was a moderate correlation between baseline and outcome inferencing measures, $r = .49$.

Implications for Practice

- Exposure to complex language may help inferencing ability.
- Although naturalistic questioning during shared book reading highlights gaps in texts and encourages children to look for meaning, our data show that it is not sufficient for improving inferencing skills.
- Direct teaching may more effective for developing inferencing.

Acknowledgements and References

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