

Language Input To Children With Language Difficulty During Shared Book Reading And Play.

Short title, Reading, Playing and Talking

Work Package 1, Study 2 of ESRC grant ref ES/M003752/1

CONTEXT

Reading, Playing and Talking is part of a larger, ESRC-funded project, *“How to promote children’s language development using family-based shared book reading”*, led from the University of Liverpool in collaboration with the Universities of Manchester, Sheffield and Leeds. The aim of the project was to determine how shared reading promotes child language development, and to use this knowledge to make it an effective language-boosting tool for children from all social and economic backgrounds. The overall project included seven studies grouped into three work packages: two studies were run from Manchester.

BACKGROUND

Sharing books with young children is an potentially an excellent opportunity for language development. The children and adults are jointly focused on the same words and pictures, and the text in children’s books tends to have a more varied vocabulary and more accurate and complex grammar than child-directed speech during play. However, in shared reading interventions, the best results have been shown for children who are already progressing well with spoken communication. Children who are at risk for language development (for example because of a slow start to talking, a family history of problems, or socio-economic disadvantage) have benefitted less. The aim of this research was to explore whether the advantages of shared book reading (the joint attention and high quality adult language input) remain true where children have language difficulties. We compared carer input to their young children with language difficulties during shared reading and play activities.

This study specifically included families whose children were already showing language difficulties in either comprehension, expression or both. Having defined a set of language-boosting features of adult input we investigated their use by carers of children with language difficulties, in reading and play. We also measured child engagement in the two activities. It may be difficult for parents of children with language difficulties, who could be less responsive in a language-based reading task, to implement the facilitative behaviours in this setting, and the linguistic advantage of reading over play may not be true for these families.

GLOSSARY OF ABBREVIATIONS

PLS-5	Preschool Language Scale: 5th Edition UK (Zimmerman et al 2014)
BAS II	British Ability Scales, 2 nd Edition (Elliott, 1996)
IMD	Index of Multiple Deprivation

STUDY DESIGN

The study was a repeated measures (or within subjects) design to compare aspects of carer language and child engagement under two different conditions; shared book reading and toy play activities. Ethical

approval was obtained via the both the NHS Research Ethics Service and the University of Manchester Research Ethics Committee.

PARTICIPANTS

24 families were recruited to the project, 20 from the NorthWest of England (Lancashire, Cheshire and Greater Manchester), four from Cambridgeshire. Some were recruited via Speech and Language Therapy Services, others via schools, nurseries, children's centres, flyers and social media. All deciles of the IMD were represented. Children were aged 29-57 (mean 42) months and all were being raised as monolingual English speakers. All children had either an expressive language or auditory comprehension score, or both, below -1SD on the PLS-5; there was no lower limit on their language development. None had any known neurological diagnosis or permanent impairment of vision or hearing.

DATA COLLECTION

Data collection took place by one of the researchers, in the family home. We video-recorded the child with either parent (21 mothers, three fathers) in two 10 minute activities, shared book reading and play. Parents read one rhyming and one non-rhyming book from a choice of four; we used books the child was not familiar with, where possible. The play activity used a farm playset (including farmhouse, animals, people, machinery and furnishings). Where recordings were longer, only the first 10 minutes were transcribed; some sessions were shorter where the child rejected the activity before 10 minutes. All other assessments and questionnaires completed are listed below.

PLS-5: A standardized measure of language development. We used both the Auditory Comprehension and Expressive Communication scales to confirm diagnosis of language delay.

BAS II subtests: block building and picture similarity subtests were used to confirm that children did not have a broad cognitive delay.

The Family Questionnaire: (see appendices) records relevant demographic information.

The Home Life Questionnaire: (see appendices) a parent report questionnaire including reading-related activities.

Children's Title and Author Checklists: These checklists indirectly measure a child's storybook exposure by assessing the parent's knowledge of children's book titles and authors.

Books used (two for each child): One Ted Falls Out Of Bed, Donaldson & Currey; Good Little Wolf, Shireen; Six Little Chicks, Alborough; Five Minutes Peace, Murphy.

DOCUMENTATION

Three main sections of information have been uploaded in addition to this user guide:

- a data file containing the measurement variables: WP1_Study2_reading_and_play.xlsx ;
- Supporting information (consent form, information sheet and blank questionnaires);
- transcripts of all reading and play sessions in CHAT format (see <http://chilides.talkbank.org/> for

information and manuals).

NOTES ON DATAFILE VARIABLES

All variables are described in the data dictionary worksheet. The following adds more detail to variables not fully explained in the datafile. Variables V16-V31 are all derived from analysis of the transcriptions of video recordings. Transcriptions were made in CHAT, and basic analyses were run using CLAN, tools included in the Child Language Data Exchange System (CHILDES, MacWhinney, 2000). CHAT is a standardised transcription format for conversational interactions, and CLAN is a set of programmes designed for the linguistic analysis of data in the CHAT format.

V3 IMDD: The English Indices of Multiple Deprivation (IMD 2015) ranks neighbourhood according to its level of deprivation relative to that of other areas in England. We used this tool <http://imd-by-postcode.opendatacommunities.org/> to find the related IMD decile for our participants.

V11 PLS5AudComp, V12 PLS5ExpComm, V13 PLS5TotalLangScore: Scores achieved on the Preschool Language Scales UK, (5th Edition, Zimmerman et al, 2014). The Preschool Language Scales were developed in the US for use with children from birth to 7;11 years to identify children who have a language delay or disorder. The PLS-5^{UK} has a UK standardisation sample. Results for Auditory Comprehension, Expressive Language and a composite Total Language Score are reported as standard scores with a mean of 100.

V14BASBlockBuilding, V15BAS Picture Similarities: We used two subtests from the British Ability Scales (2nd Edition, Elliott, 1996) as a measure of children's non-verbal cognitive abilities. Block building measures a child's ability to copy a design with wooden blocks and may reflect spatial problem solving and visual-perceptual matching as well as eye-hand coordination. Picture similarities measures children's non-verbal reasoning ability and may reflect non-verbal problem-solving, visual perception and analysis, and the ability to attach meaning to pictures. The BASII uses T scores, with a mean of 50 and a standard deviation of 10.

V16 Parent utterances Reading, V17 Parent utterances Play: The number of parent utterances in each activity. We excluded utterances which were addressed to the researcher or to other people in the room who were not involved in the activity; also the many single word exclamations (e.g. 'oh!'). Where a sibling was involved in the activity we included utterances which were directed to either child in that activity.

V18 Child utterances Reading, V19 Child utterances Play: The number of child utterances in each activity. We included in the count unintelligible utterances, and also non-verbal communication where the child was using it as their turn in the interaction.

V20 PropChildUtterances Reading, V21 PropChildUtterances Play: the proportion of child utterances in each activity, derived from the previous variables so that $V20 = V18 / (V16 + V18)$. Used as a measure indicating child engagement in the activity and interaction.

V26 ParentFreqSubord Reading, V27 ParentFreqSubord Play: Subordinate clauses in carer utterances were counted. In the reading activity all 'included' utterances were scanned for subordination, both the book text itself and additional utterances. Used as a measure of quality of language input to the child.

V28 ParentLanguageBoosting Reading, V29 ParentLanguageBoosting Play: Parent turns which contained expansion and/or correction of the child's utterances were counted, as well as vocabulary explanations. In the reading activity all 'included' utterances were scanned for language teaching, both the book text itself and additional utterances. Used as a measure of quality of language input to the child.

V30 ParentBehaviour Control Reading, V31 ParentBehaviour Control Play: Parent utterances such as ‘come back’, ‘sit down and listen’ etc were counted as behaviour control utterances. Used as a measure indicating child engagement in the activity and interaction.

REFERENCES

Elliott, C. D. (1996). *British Ability Scales II*. Windsor, Berkshire: nferNelson.

MacWhinney, B. (2000). *The CHILDES Project: Tools for Analyzing Talk*. 3rd Edition. Mahwah, NJ: Lawrence Erlbaum Associates. <http://childes.talkbank.org/>

Zimmerman, I. L., Steiner, V. G., & Pond R. E. (2014) *Preschool Language Scales-5^{UK}*. London: Pearson Assessment.