



# Shared book reading intervention for preschoolers on the autism spectrum

## EXECUTIVE SUMMARY

Dr Marleen Westerveld  
Dr Jessica Paynter  
Dr David Trembath  
Mrs Yolanda Borucki  
Miss Kathryn O'Leary

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### **Dr Marleen Westerveld**

Senior Lecturer  
School of Allied Health Sciences/ Griffith Institute for Educational Research  
Menzies Health Institute Queensland  
Griffith University

### **Dr Jessica Paynter**

Lecturer  
School of Applied Psychology  
Menzies Health Institute Queensland  
Griffith University

### **Dr David Trembath**

NHMRC ECR Fellow, Senior Lecturer  
Menzies Health Institute Queensland  
Griffith University

### **Yolanda Borucki**

Operations Manager  
AEIOU Foundation

### **Kathryn O'Leary**

Certified Practicing Speech Pathologist/Research Assistant  
Griffith University

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## The Cooperative Research Centre for Living with Autism (Autism CRC)

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# Shared book reading intervention for preschoolers on the autism spectrum

## PURPOSE OF THIS STUDY

It is estimated that between 30-60% of school-age children on the autism spectrum struggle with reading. Results from our recently published study (Westerveld et. al., 2017) revealed significant difficulties in emergent literacy in preschoolers on the autism spectrum, particularly in skills related to future reading comprehension, such as vocabulary and story comprehension. The current study aimed to investigate whether a shared book reading intervention would help facilitate early functional spoken language and emergent literacy skills in preschoolers on the autism spectrum in a context that is part of most family routines.

## STUDY DESCRIPTION

This research involved a pre-test post-test randomized control group design to investigate the effects of an intensive, parent-child shared book reading intervention for children on the autism spectrum. A total of 24 parents expressed an interest in the study and started the assessment process, all of whom met the inclusion criteria: a) children had received a written clinical diagnosis of autism spectrum disorder in the community, sighted by the research team; b) children were less than 6 years of age and had not yet started formal schooling; c) children were able to attend to a book for approximately 5 minutes; d) children regularly engaged in shared book reading with their parents; e) children were not currently attending any other book reading programs.

All children were seen for an initial assessment prior to random allocation into either the intervention or waitlist groups. Parents of children allocated to the waitlist group were asked to continue reading to their child as they typically would over an eight week period and document instances of shared book reading on the log books provided. During this time no formal training was provided.

One child did not complete the initial assessment phase and withdrew before random allocation took place. Of the remaining 23 children, 12 were randomly selected to start the intervention, with 10 completing it in its entirety. Of the 11 children allocated to the waitlist group, 7 completed the second assessment and 4 withdrew. Reasons for withdrawal were mostly timing issues related to current commitments and parent workload.

A total of three assessment sessions were conducted with children of both groups; 1) prior to the intervention/waiting period; 2) immediately following the intervention/waiting period; 3) after a final period of eight weeks – during which time the participants in the waitlist group were offered the intervention. Initial assessment sessions lasted approximately one hour and comprised a set number of tasks assessing oral language ability and emergent literacy skills. Follow up assessments lasted approximately 30 minutes and included a set number of tasks from the initial

assessment battery to determine whether the intervention resulted in an improvement in the children's receptive vocabulary skills. Parents were also asked to complete a video recording of a shared reading session with their child, reading a prescribed story at every assessment time point.

Intervention was provided over an eight week period and consisted of one 45 minute training session and four fortnightly follow-up visits, with phone calls completed on alternative weeks. Parents were asked to record videos of shared reading sessions with their child each week with individualised feedback provided in follow-up visits with the research assistant.

## DATA ANALYSIS

Data were screened for meeting assumptions of parametric testing and no violations were detected. Consistent with the aims of the study, a two-way mixed ANOVA was used, with Group (intervention vs control) as the between subjects variable, and Time (pre- and post- intervention) as the within subjects variable.

## SUMMARY OF FINDINGS

The eight week intervention resulted in significant changes in parent-child book reading behaviours. Our most prominent finding was that parents and children engaged significantly longer with the books following intervention. Moreover, parents increased their use of book specific language and showed more explicit use of meaning-related language, such as discussing the characters of the story. In turn, the children became more talkative and used a wider variety of words. All improvements were maintained eight weeks following the intervention, and in fact children showed continued improvements in their word variety and vocabulary.

## IMPLICATIONS/RECOMMENDATIONS

Future research needs to explore how best to integrate this type of intensive intervention program into existing intervention models, for example speech pathology intervention or early childhood curricula for children with autism or other developmental disorders. One promising avenue is dissemination via community libraries that provide accessible, affordable (free) services to the community and share a common focus on emergent literacy. In future research we hope to harness this avenue and work with libraries to provide greater opportunities for training in an ecologically valid setting that may be accessible to a wider proportion of the community. Greater focus on emergent literacy in children with autism will address a key area for learning for and has the potential for early intervention to support academic success for this population into the future.

## REFERENCE

Westerveld, M. F., Paynter, J., Trembath, D., Webster, A. A., Hodge, A. M., & Roberts, J. (2017). The emergent literacy skills of preschool children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 47(2), 424-438. doi: 10.1007/s10803-016-2964-5.