

INTRODUCTION

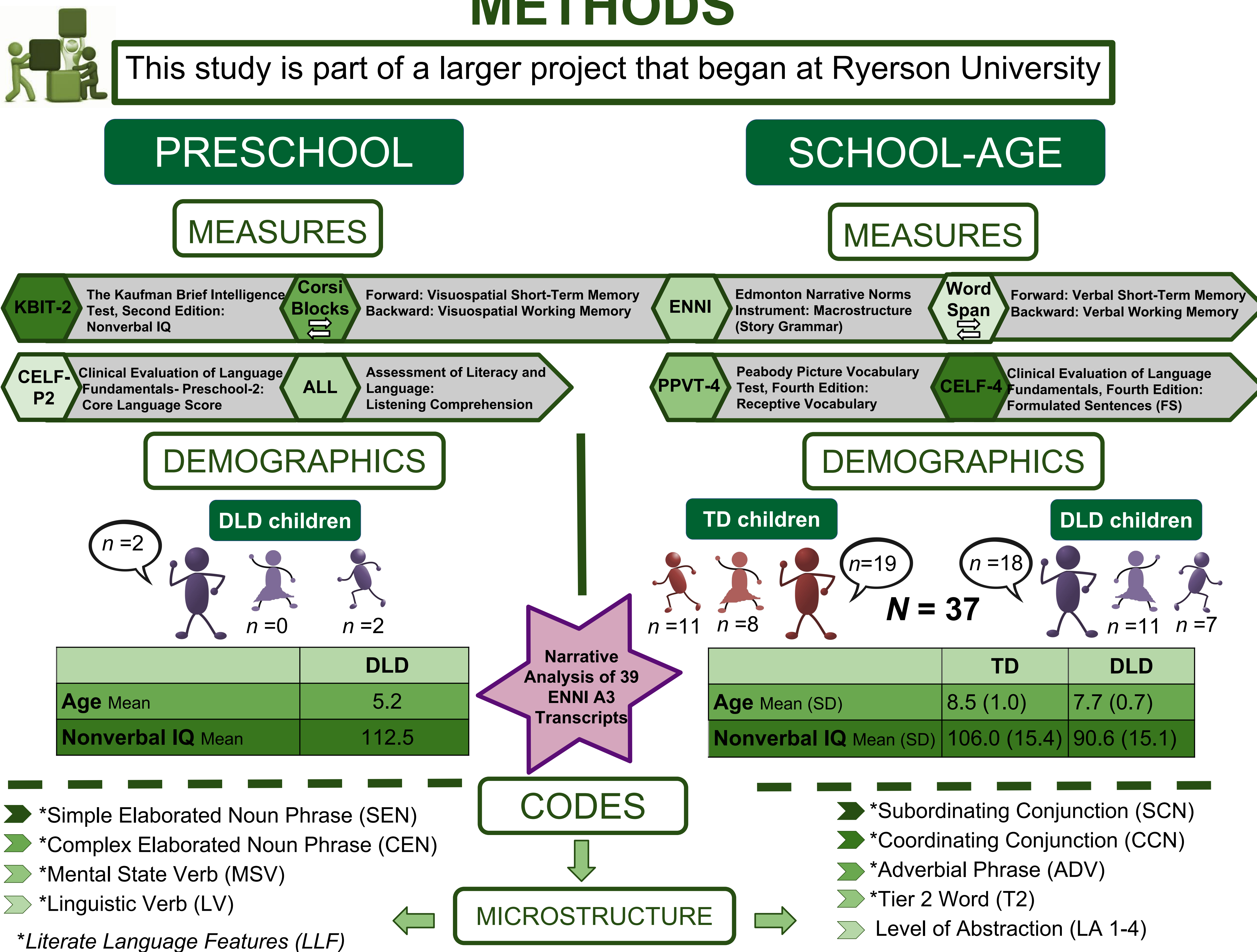
RATIONALE

- Young children experience rapid development of narrative production¹ and the use of literate language.^{2,3}
- Elements of microstructure, macrostructure, and levels of abstraction (LA) may differentiate children with typical language development (TD) and developmental language disorder (DLD).
- Specifically, literate language features (LLF), or use of complex sentence structure, sophisticated vocabulary, and decontextualized language may differ between the two groups.²
- Furthermore, memory is associated with children's narrative production and language processing in both preschool and school-aged children.⁴
- Research shows associations between memory and narrative tasks (e.g. story generation)⁵, but is unclear how memory relates to specific aspects of narratives such as macrostructure, microstructure, and LA.

QUESTIONS

1. What elements of narrative production differentiate children with typical and atypical language development?
2. Is the role of memory on features of narrative production the same for children with typical and atypical language development?

METHODS



RESULTS

SCHOOL-AGE ANALYSIS

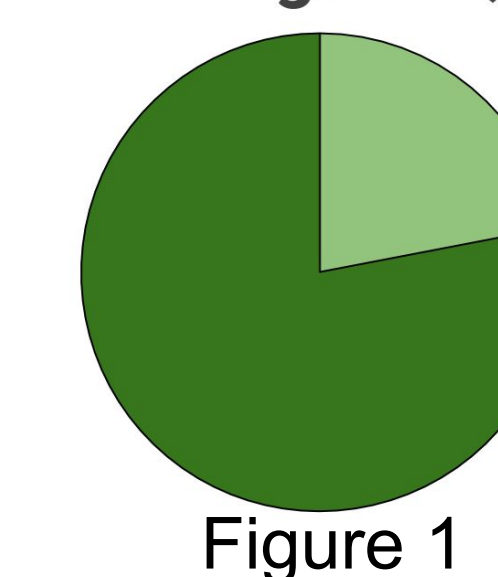
Independent Samples T-Test:

	TD	DLD	p
Age	8.5 (1.0)	7.7 (0.7)	**
KBIT-2 (SS)	106 (15.4)	90.6 (15.1)	**
PPVT-4 (SS)	107.8 (17.9)	88.4 (11.8)	***
CEL-F-4: FS (SS)	27.4 (6.6)	11.3 (5.8)	***
Corsi Fwd	18.3 (3.3)	13.2 (3.0)	***
Corsi Bkwd	13.2 (3.8)	6.9 (3.0)	***
Word Span Fwd	9.4 (1.5)	6.6 (1.6)	***
Word Span Bkwd	4.5 (1.6)	2.2 (1.7)	***
ENNI (SG)	8.1 (3.0)	6.3 (3.1)	ns
Rate of CEN	0.2 (0.1)	0.1 (0.1)	*
Rate of T2	0.2 (0.1)	0.1 (0.1)	*
Rate of LLF	1.9 (0.6)	1.7 (0.5)	ns
Rate of LA	2.3 (0.6)	2.3 (0.2)	ns

*p= <.05, **p= <.01, ***p= <.001, ns = non-significant

Question 1: Logistic Regression

(Dependent Variable: Group) • Age + IQ



- Age and nonverbal IQ predicted group membership at 79% for TD and 78% for DLD (refer to Figure 1).
- SG, LLF, and LA did not predict group membership, when controlling for age and nonverbal IQ.
- PPVT predicted group membership accuracy with 84% for TD and 83% for DLD when combined with nonverbal IQ and age.
- CEL-F-4 FS predicted group membership with 100% accuracy when combined with nonverbal IQ and age.

Question 2: Hierarchical Regression

- Controlling for age and nonverbal IQ, the four memory variables significantly predicted SG scores but only add <1% of explained variance for either group.
- Verbal short-term memory explained 52% unique variance for LLF in TD, but not significant in DLD.
- Verbal working memory explained 65% unique variance for LA in DLD, but not significant in TD.

DISCUSSION

Question 1

- CEN and T2 significantly differ across groups, as expected.³
- Syntax is a stronger predictor of DLD than vocabulary.
- Children with DLD often acquire complex morphosyntactic structures later compared to children with TD language.

Question 2

- Studies show lower working memory abilities in children with DLD compared to TD children.⁴
- Working memory may contribute to use and comprehension of inferential language at higher levels of abstraction.
- Children require higher-level language to understand the decontextualized nature of books and classroom instruction.³

LIMITATIONS

- Small Sample Size/Recruitment
- Heterogeneity of the groups
- Single Narrative Measure

CLINICAL IMPLICATIONS

1 Predictive Measures + 2 Higher Level Language = 3 Clinical Practice

NEXT STEPS

Continue to recruit a larger sample size for both age groups

References

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