

# Storytelling Study: A Look at the Impact of Prosody on Visual Attention in Preschoolers During a Read-Aloud Story

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## Introduction

**Prosody of Speech:** Variations and patterns of stress and rhythm in a language (Ladd, 1996).

**Expressive Prosody:** “*Lively speech*”

Large fluctuations in fundamental frequency (f0 or pitch), intensity (loudness), and duration.

**Inexpressive Prosody:** “*Monotone speech*”

Few fluctuations in f0, intensity, and duration between syllables and between words (Mira and Schwanenflugel, 2013).

**Visual Attention:** “The tendency of visual processing to be attracted to an item in response to some stimuli” (Pons et al, 1996, p. 16).

## Research Goals

1. To examine a relationship between visual attention and expressive prosody for preschool aged children during a read-aloud session.
2. To examine a possible relationship between visual attention and comprehension of a story for preschool aged children in a read-aloud session.
3. To examine the focus of visual attention during a read-aloud session.

## Hypotheses

1. If a story is read in an *expressive* manner then the *visual attention* levels of preschool aged children will be higher compared to being read to in an *inexpressive* manner.
2. If a story is read in an *expressive* manner, then preschool aged children will answer *comprehension* questions *more accurately* than if the story is read in an *inexpressive* manner.

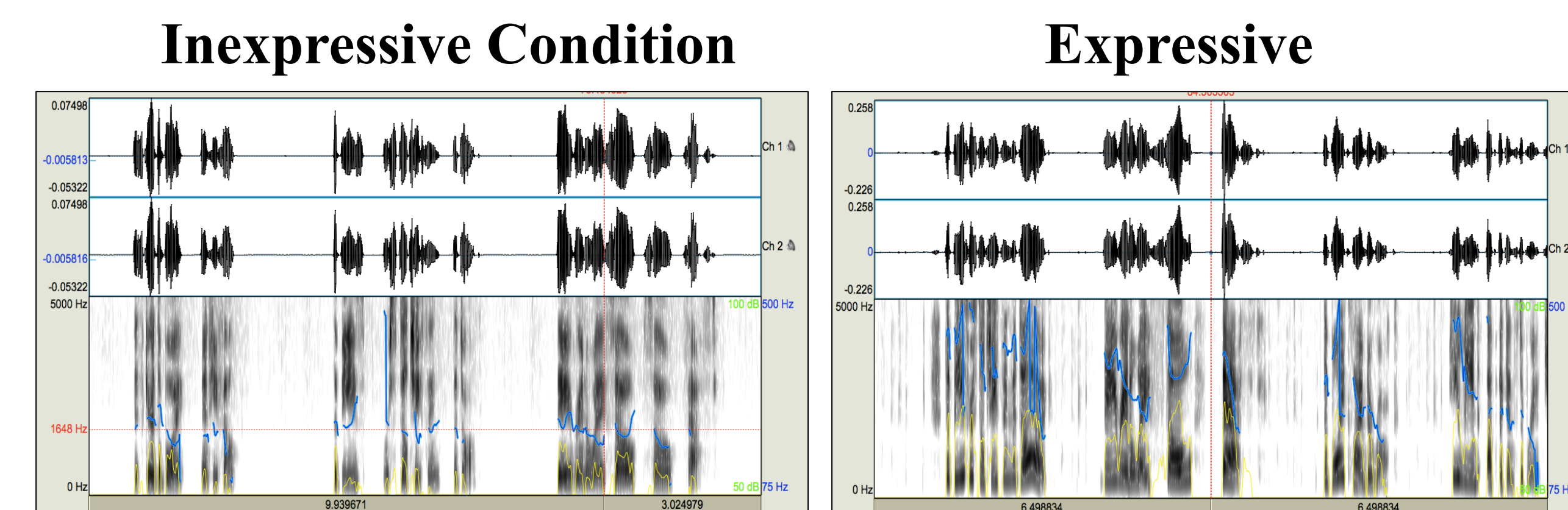
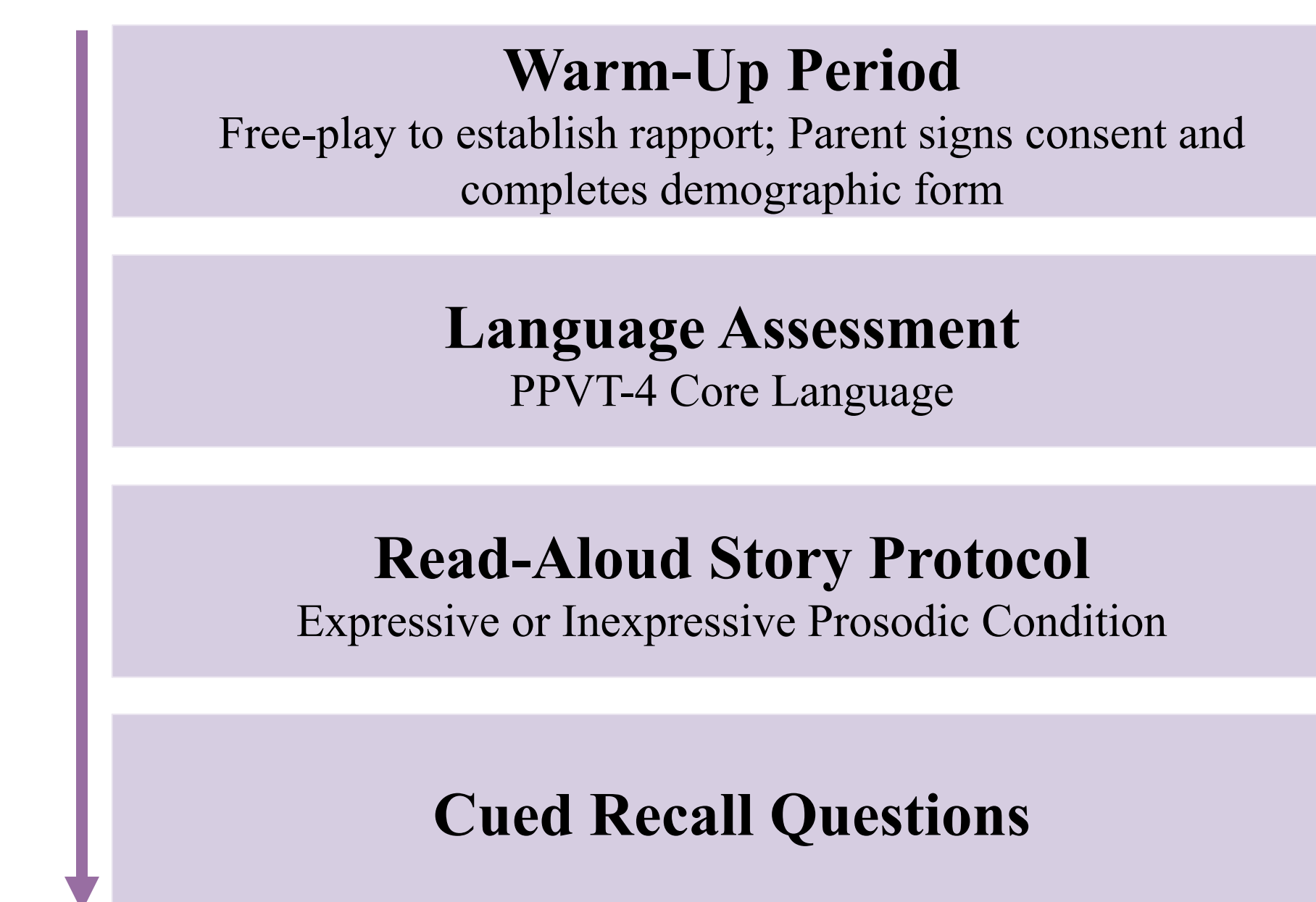
## Methods

### Participants

- No Intellectual Disability
- No Speech/Language Disorders
- English as a primary language
- No documented hearing loss

N = 9  
M = 3;8  
(2;11-4;9)

### Procedure



### Cued Recall Questions

1. Who ran away at night?
2. What was something that scared the boy and the dog?
3. Why did the boy fall in the water?
4. Where did the boy and the dog find the frog?
5. Who went home with the boy and the dog?

### Scoring Rubric

0: No accuracy 1: Somewhat accurate 2: Mostly accurate  
3: Completely accurate

## Discussion

- No statistically significant difference in regards to **Visual Attention Levels** between reading conditions as well as **Cued Recall Question Scores** between reading conditions.
- Statistically significant difference between conditions in regards to the **Focus of Attention**.
- Moderate correlation between **PPVT Standard Score and Cued Recall Question Score**.

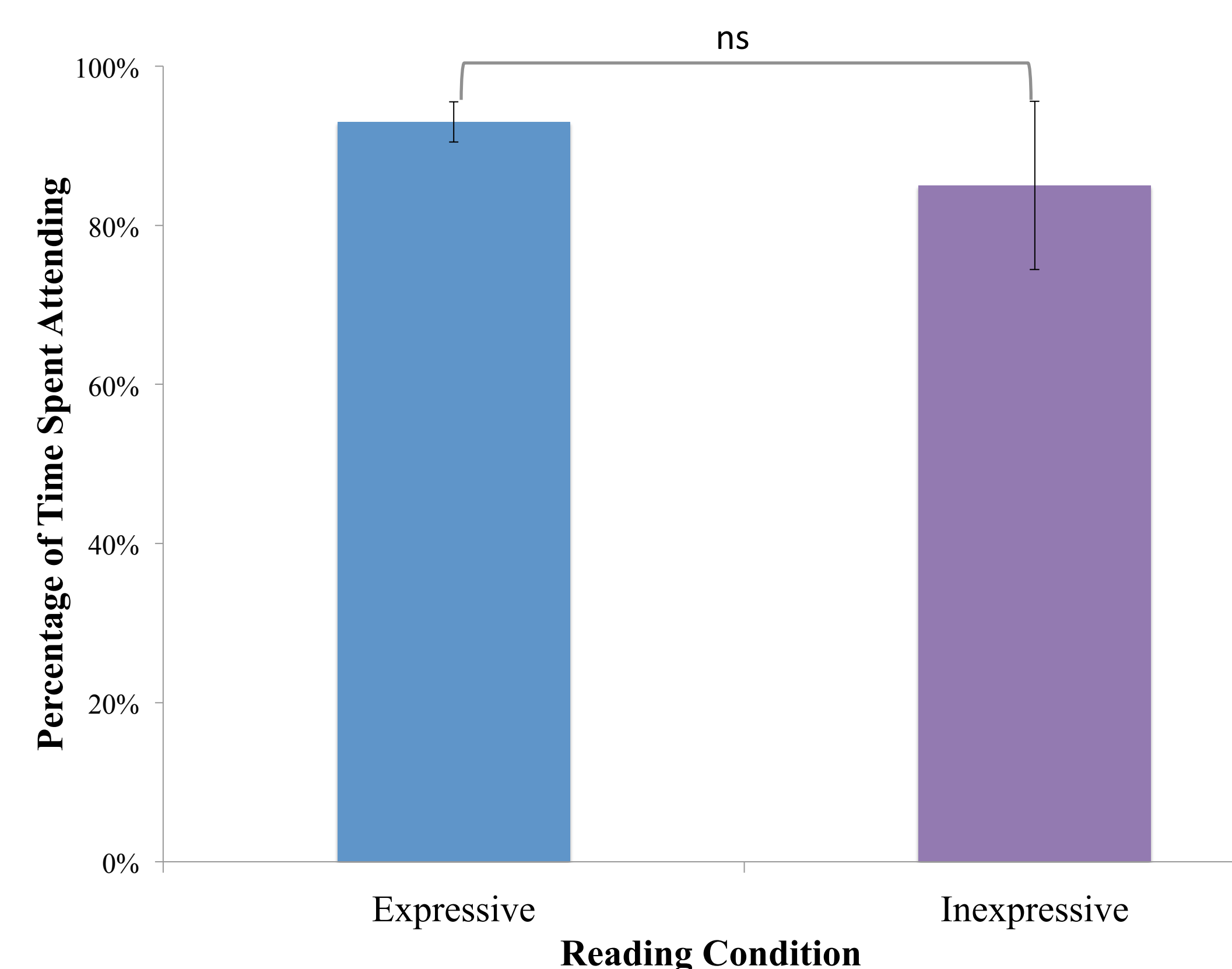
**Limitations:** small sample size and little diversity in population of participants.

This research may help with education plans for children ages 3-4.

## Results

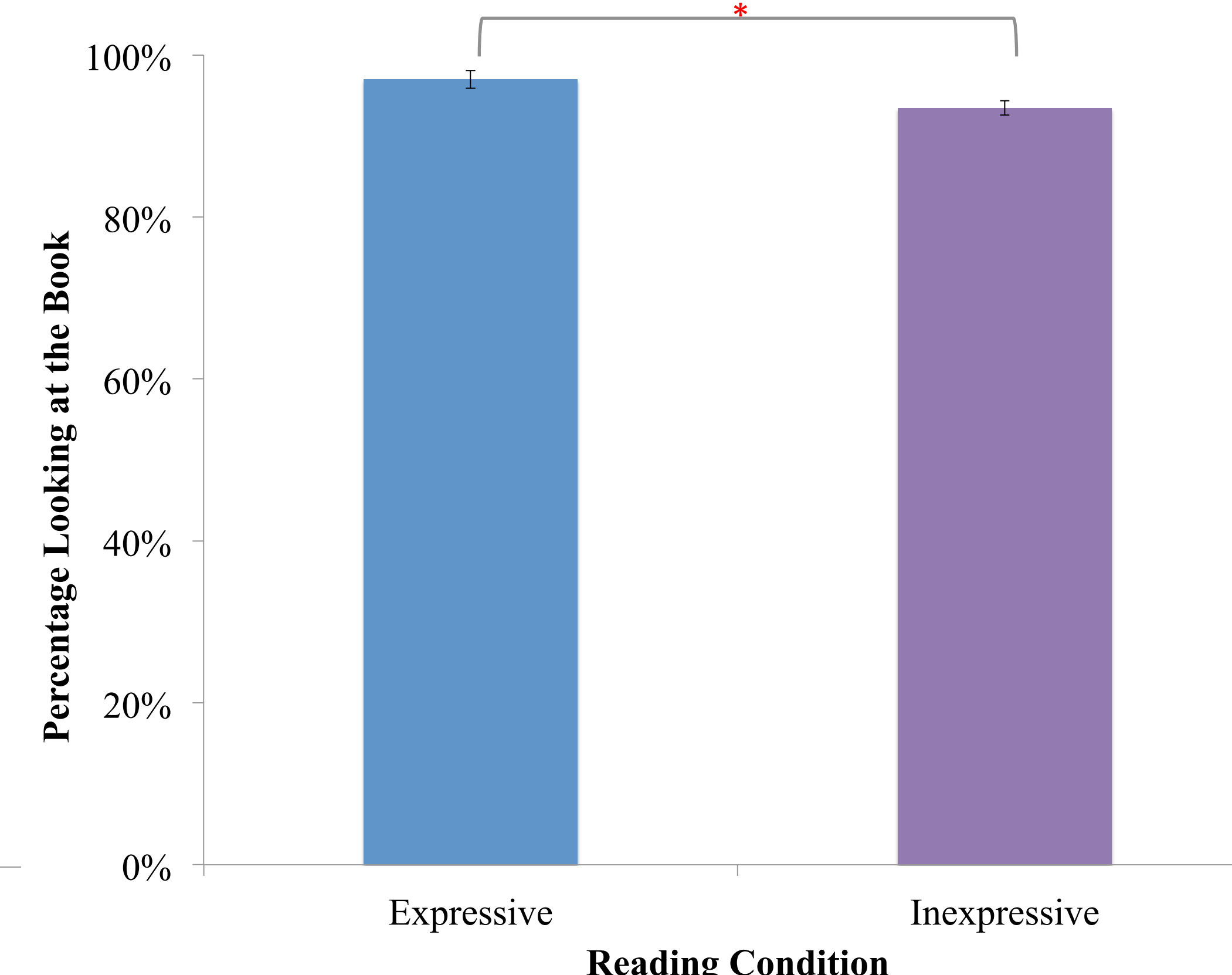
### Percentage of Time Spent Visually Attending

Expressive:  $M=93\%$ ,  $SD=.06$  Inexpressive:  $M=85.53\%$ ,  $SD=.211$ ,  $t=0.073$ ,  $p=0.551$

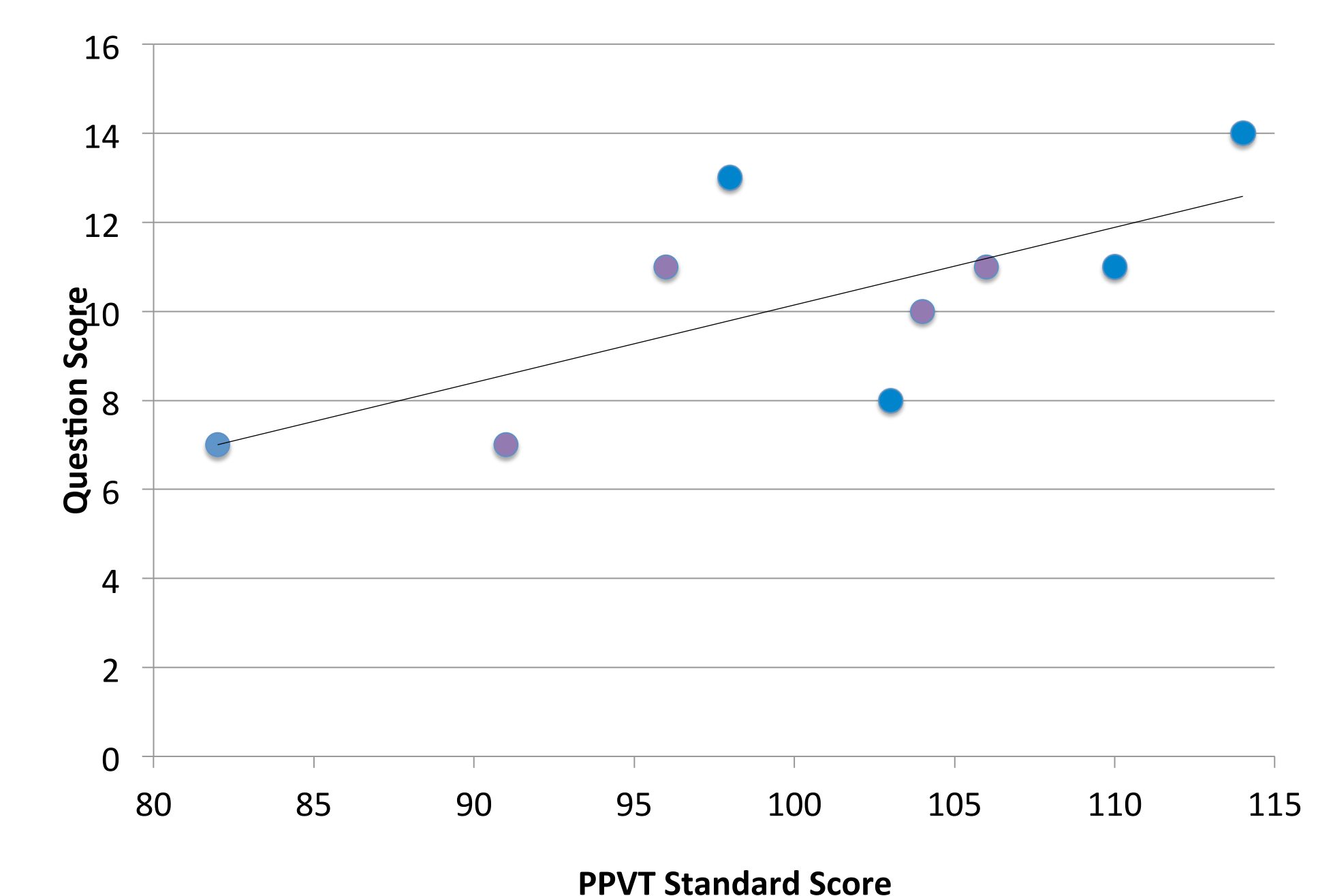


### Percentage of Time Looking at the Book

Expressive:  $M=96.98\%$ ,  $SD=0.02$ , Inexpressive:  $M=93.45\%$ ,  $SD=0.02$ ,  $t=5.098$ ,  $p=0.041$



### Correlation Between PPVT Score and Cued Recall Score ( $r=0.495$ )



### Additional Results

*Cued Recall Score Between Expressive and Inexpressive Conditions*  
Expressive— $M=10.4$ ,  $SD=3.29$  Inexpressive— $M=10$ ,  $SD=1.41$ ,  $t=0.887$ ,  $p=0.414$

## Acknowledgements & References

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