The Impact of the Language Samples in Children with Autism Spectrum Disorders

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Introduction
• Child language sampling methods, including context and examiner behavior, influence sample-derived measures of complexity and productivity (e.g., Dehorne & Chanwell, 2007; Evans & Craig, 1992; Masterson & Kamhi, 1991; Nettl-Bublitz, et al., 2001; Southwood & Russell, 2004; Wagner, et al., 2000)
• Natural language samples are recommended for measuring the expressive language skills of children with ASD (Tager-Flusberg et al., 2009); however, conversational language samples may not reflect full linguistic abilities as children with ASD show weaknesses in contingent talk within conversational contexts (Tager-Flusberg & Anderson, 1991)
• Language performance of children with ASD may be particularly sensitive to sampling context given evidence that as social communicative demands associated with language tasks increase, language complexity decreases (Condorus, et al., 2003)
• The current study addressed the following research question:
  ✓ How does language context influence the personal narrative and expository language samples produced by children with ASD?

Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N = 8</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years/months)</td>
<td>Mean = 6.2 SD = 1.1 Min-Max = 4.4-7.0</td>
<td></td>
</tr>
<tr>
<td>Gender (F/M)</td>
<td>2/6</td>
<td></td>
</tr>
<tr>
<td>Diagnosis*</td>
<td>Autism Spectrum Disorder 5, Asperger’s Syndrome 1, PDD-NOS 2</td>
<td></td>
</tr>
<tr>
<td>Nonverbal IQ (SS)</td>
<td>Mean = 93.9 SD = 15.7 Min-Max = 71-115</td>
<td></td>
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<tr>
<td>Expressive Language (SS)</td>
<td>Mean = 72.0 SD = 13.6 Min-Max = 47-90</td>
<td></td>
</tr>
<tr>
<td>Receptive Language (SS)</td>
<td>Mean = 92.9 SD = 23 Min-Max = 55-128</td>
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</tbody>
</table>


Approach
• Participants completed four different language samples, on different days, within a two-week timeframe; order of administration was counterbalanced across participants

Example Expository Model Sample
E Tell me everything you can think of so that someone who has never played football before would know how to play.
C Like when (you) you’re quarterback “hail mary."
E And you throw it.
C What else?
E The receiver.
E Me.
C Or you could hand it off to a running back.
E (UH) there can be fake like when someone cheating.
C And there’s also like fake endzone and touchdown/ 
E <uhh> Oh can you catch it, like a wide receiver.
E Yeah.
C Yeah, they get torn ACLs and
E Oh ouch!
C Yep, you’re rightouch is the word.
E What are you going to say now?
C Oof I was just going to say thanks for telling me about football.
E Thanks for telling me how to play.
C Well you’re welcome.
E Is there anything else you wanted to add about it?
E Nah.
E 0:03:49

Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expository</th>
<th>Expository + Model</th>
<th>Personal Narrative</th>
<th>Personal Narrative + Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNM</td>
<td>(5.0-37.0)</td>
<td>(5.0-61.0)</td>
<td>(2.5-13.7)</td>
<td>(2.8-64.0)</td>
</tr>
<tr>
<td>MLUm</td>
<td>5.35</td>
<td>5.11</td>
<td>5.51</td>
<td>5.44</td>
</tr>
<tr>
<td>TTR</td>
<td>65</td>
<td>62</td>
<td>67</td>
<td>62</td>
</tr>
<tr>
<td>Mazes per 10</td>
<td>(0.38-1.0)</td>
<td>(0.39-1.0)</td>
<td>(0.38-1.0)</td>
<td>(0.49-0.83)</td>
</tr>
<tr>
<td>Utterance*</td>
<td>0.71</td>
<td>0.82</td>
<td>0.82</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Note: *significant difference, p<0.02, p<0.04, p<0.54, other comparisons had small to medium effect sizes (r<0.33 r=0.27)

Conclusions
• Sampling type and amount of examiner support affect the mazes children with ASD produce, but may not significantly impact other measures of language productivity
• Personal narrative context without a clinician model may have been less cognitively demanding because there were fewer social expectations; thus, decreasing maze production

The authors have no relevant financial or nonfinancial relationships to disclose. Special thanks to the children and families who made this research possible and funding from the National Institutes of Health (RO3 DC 13659-0) and the University of Minnesota Leadership Education in Neurodevelopmental Disabilities (LEND) Program.