Improving Maternal Responsivity to Children with FXS: Results from a Pilot Study

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Introduction

The amount and types of interactions between mothers and young children have been found to affect child development across a number of domains, including communication and language. Exposure to highly responsive parenting style, characterized by frequent contingent responses to child communication attempts, following the child’s lead in conversations and providing linguistic input, corresponds with better child outcomes for children with a variety of developmental disabilities (Warren & Brady, 2007). Interventions aimed at improving responsivity have shown positive effects for mothers of children with Down syndrome and other developmental disabilities.

Research Questions

1. Does an intervention package designed to enhance maternal responsivity show positive outcomes for a small sample of low responsive mothers of children with Fragile X syndrome (FXS)?

2. Secondly, do child communication behaviors increase during the intervention period?

Intervention Package

An adapted version of the Harren Early Language Program (Girogretto & Wertzman, 2006) was implemented with each family by a local speech language pathologist who was certified to provide this intervention.

- Ten sessions were held approximately 1 week apart.
- Each session followed the Harren curriculum but lessons were individualized. Key components of the intervention included:
  - teaching parents to wait for their children to initiate interactions
  - recognizing communication attempts
  - following the child’s lead
  - providing simplified input

Participants

4 mother-child dyads

<table>
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<tr>
<th>Child</th>
<th>CA</th>
<th>Exp Age</th>
<th>Rec Age</th>
<th>CARS</th>
<th>Maternal Responsivity Score</th>
<th>Total Score</th>
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<tr>
<td>Matt</td>
<td>6.02</td>
<td>3.9</td>
<td>1.8</td>
<td>46</td>
<td>27.5</td>
<td>169</td>
</tr>
<tr>
<td>Josh</td>
<td>6.10</td>
<td>3.9</td>
<td>1.8</td>
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<td>27.5</td>
<td>169</td>
</tr>
<tr>
<td>Brandon</td>
<td>5.10</td>
<td>3.9</td>
<td>1.8</td>
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<td>Seth</td>
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</tbody>
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Dependent Variables

Maternal Behaviors - Maternal behaviors toward their children were coded using Noldus Observer software. Subsequent principal component analyses yielded two components: facilitative interaction and behavior management style:

- Facilitative interaction style comprised of comments, use of gestures, recodes of child communication and requests for verbal complies
- Behavior management style comprised of redirects, zaps (verbal reprimands) and requests for behavioral complies

Facilitative interaction has been associated with advanced child communication; whereas behavior management style was not significantly correlated with child outcomes (Sterling, Brady & Warren, 2006).

Discussion

Results from this pilot study showed that an intervention aimed at increasing maternal responsivity is feasible and likely to show benefits for some mothers and their children with FXS. The mother who showed the least amount of change over time, Matt’s mom, was the mother who also had the full mutation of the fragile X gene. Future intervention studies may have better or more consistent results if younger children participate because much of the curriculum is focused on children younger than 4 years of age. In addition, the inclusion of a concurrent intervention targeting child behaviors would likely benefit both child and maternal interaction behaviors.

References


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