Parent support for children with hearing loss:
Participation in intervention and shared reading at home

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HEARing CRC & National Acoustic Laboratories

Australian Hearing Hub Conference, 18th April, Macquarie University
The involvement in early education services and engagement in language activities within the home environment.
May be measured by examining…

At Home
- Shared Reading
- Doing homework
- Number of resources available
- Collaborating with the community

At School/ EIA
- Attending lessons
- Volunteering
- Participating in parent groups
- Participating in decisions
- Attending workshops
- Teacher- parent communication
- Requesting information/ services

Interactions
- Values placed on language and literacy
- Parent/ Child interactions during reading
- Initiations, turn-taking, discussion
- Parent’s expectations
Background

• **At EIA**
  - Studies have indicated an association between parent involvement in EIA on receptive vocabulary (Moeller, 2000), and later reading outcomes (Calderon, 2000)
  - But these are retrospective ratings by teachers …

• **Reading at home**
  - Parent-child reading interactions shown to have an impact on language and literacy outcomes (DesJardin et al, 2011, 2009; Westerlund & Lagerberg, 2008; Aram et al, 2006)
Method
Shared Reading

“How often do you read with or to your child?”

“Approximately, for how long would you read for on average?”
**Participation in EIA**

Overall, how would you describe you/your family’s participation in the child’s early intervention?

<table>
<thead>
<tr>
<th>Method</th>
<th>Participation in EIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Participate very regularly (almost 100% attendance)</td>
</tr>
<tr>
<td>4</td>
<td>Participate Mostly (around 75% attendance)</td>
</tr>
<tr>
<td>3</td>
<td>Participate about half the time (50% attendance)</td>
</tr>
<tr>
<td>2</td>
<td>Participate Sometimes (around 25% attendance)</td>
</tr>
<tr>
<td>1</td>
<td>Limited Participation (attend 25% of time or less)</td>
</tr>
</tbody>
</table>

Moeller, 2000
## Participation in EIA

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Good adjustment, pursue information, effective conversational partner with child, extended family supportive</td>
</tr>
<tr>
<td>4</td>
<td>Regularly attend meetings &amp; sessions, active role in decision, some family members are effective communicators</td>
</tr>
<tr>
<td>3</td>
<td>Busy schedules / stressors limit therapy carryover, relies primarily on professional guidance, ongoing support and direction required</td>
</tr>
<tr>
<td>2</td>
<td>Struggles to accept diagnosis, inconsistent attendance, significant life stressors, basic communicative interactions with child</td>
</tr>
<tr>
<td>1</td>
<td>Significant life stressors, limited understanding, participation may be sporadic, communication limited</td>
</tr>
</tbody>
</table>

Results
## Results: Shared Reading

<table>
<thead>
<tr>
<th></th>
<th>3 years</th>
<th>5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>70</td>
<td>217</td>
</tr>
<tr>
<td><strong>Age range</strong></td>
<td>3;0 – 3;6</td>
<td>5;0 – 5;12</td>
</tr>
<tr>
<td><strong>Average number of days/week participating in shared reading</strong></td>
<td>6.2</td>
<td>5.85</td>
</tr>
<tr>
<td><strong>Mean time spent per shared reading experience</strong></td>
<td>19.2 mins</td>
<td>20.97 mins</td>
</tr>
</tbody>
</table>
Frequency of shared reading:

3 Years

5 Years
How much time spent reading?

• Average 2.2 hours / week
• Up to 10.5 hours a week spent reading with child

• Average 1.9 hours / week
• Up to 7 hours a week spent reading with child
## Results: EIA Participation

<table>
<thead>
<tr>
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<th>3 years</th>
<th>5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age range</strong></td>
<td>3;0 – 3;6</td>
<td>5;0 – 5;12</td>
</tr>
<tr>
<td><strong>Average Rating: Parent</strong></td>
<td>4.6 (n=205)</td>
<td>4.6 (n=194)</td>
</tr>
<tr>
<td><strong>Average Rating: Teacher</strong></td>
<td>4.5 (n=176)</td>
<td>4.3 (n=194)</td>
</tr>
</tbody>
</table>
Results: EIA Participation

3yr EIA Involvement

- Involvement Rating:
  - 1
  - 2
  - 3
  - 4
  - 5

- Percent:
  - 0
  - 10
  - 20
  - 30
  - 40
  - 50
  - 60
  - 70
  - 80
  - 90

- Graph Colors:
  - Parent: Orange
  - Teacher: Purple

- Involvement Rating:
  - 1
  - 2
  - 3
  - 4
  - 5

- Percent:
  - 0
  - 10
  - 20
  - 30
  - 40
  - 50
  - 60
  - 70
  - 80
  - 90
Results: EIA Participation

5yr EIA Involvement

Percent

Involvement Rating

- Parent
- Teacher

National Acoustic Laboratories
A division of Australian Hearing

THE HEARING CRC

Involvement Rating

0 1 2 3 4 5

Percent

90 80 70 60 50 40 30 20 10 0
Parental participation and age at fitting

Graph showing the relationship between parental participation rating and age at fitting for children with and without disabilities. The graph includes data for parent and teacher ratings. 

- No Add Disab:
  - Fit <6m: n=46
  - Fit 6m+: n=34

- Add Disab:
  - Fit <6m: n=20
  - Fit 6m+: n=26

Legend:
- Parent rating
- Teacher rating

Statistical details:
- Current effect: F(1, 122) = 2.0047, p = 0.15936
- Vertical bars denote 0.95 confidence intervals.
Preliminary analysis: parental participation, home reading and language at 5 yrs.

<table>
<thead>
<tr>
<th>N = 125</th>
<th>Parent Part.</th>
<th>Home Reading</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Part – Parent rating</td>
<td>-</td>
<td>0.155</td>
<td>0.073</td>
</tr>
<tr>
<td>Home Reading</td>
<td>-</td>
<td>-</td>
<td>0.251*</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N = 91</th>
<th>Home reading</th>
<th>Parent part – teacher rating</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Reading</td>
<td>-</td>
<td>0.280*</td>
<td>0.262*</td>
</tr>
<tr>
<td>Parent Part – Teacher rating</td>
<td>-</td>
<td>-</td>
<td>0.344*</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>
# Preliminary analysis

<table>
<thead>
<tr>
<th>N = 68</th>
<th>Parent Part – parent rating</th>
<th>Home Reading</th>
<th>Parent part – Teacher rating</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Part – Parent rating</td>
<td>-</td>
<td>0.073</td>
<td>0.032</td>
<td>0.058</td>
</tr>
<tr>
<td>Home Reading</td>
<td>-</td>
<td>-</td>
<td>0.183</td>
<td>0.187</td>
</tr>
<tr>
<td>Parent Part – Teacher rating</td>
<td></td>
<td></td>
<td>-</td>
<td>0.417*</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>
Summary

• One average LOCHI participants engage in shared reading activities at home with their families on a daily basis

AND

• Have families who are highly involved in this child’s early intervention.

BUT...!
• Continue to consider EIA participation and reading in 5yr analyses to see if has an impact.

• Sub-studies to investigate possible components related to participation in more detail.

...So what other factors are impacting on outcomes?
Discussion

Strengths and Limitations:

Quality of reading interaction?

Inflation of responses by parents?

Maternal vs paternal responses

Prospectively collected (decreased recall bias)

Asked of families and teachers for involvement

Ratings from a range of different services
Thanks for listening

Acknowledgements

Outcomes.nal.gov.au
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