Early Intervention for Foster Children

Philip A. Fisher, Ph.D.
Oregon Social Learning Center
The Early Intervention Foster Care Study, 1999-

Random Assignment

MTFC-P intervention

N= 117
Preschool
Aged
Foster Children

60

57
Regular foster care

Community comparison group (60)

Outcomes at 6 mo intervals thru middle childhood
Adrift in the foster care system

Overall sample characteristics

Mean age at first foster placement

<table>
<thead>
<tr>
<th>Age at first placement</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>birth to 6 mons</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>6 mons to 12 mons</td>
<td>7</td>
<td>6.0</td>
</tr>
<tr>
<td>12 to 24 mons</td>
<td>8</td>
<td>6.8</td>
</tr>
<tr>
<td>24 to 36 mons</td>
<td>18</td>
<td>15.4</td>
</tr>
<tr>
<td>36 to 48 mons</td>
<td>37</td>
<td>31.6</td>
</tr>
<tr>
<td>48 mons or order</td>
<td>44</td>
<td>37.6</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Age at first placement

Number of living transitions at study start

<table>
<thead>
<tr>
<th>Number of transitions</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>17</td>
<td>14.5</td>
</tr>
<tr>
<td>2.00</td>
<td>27</td>
<td>23.1</td>
</tr>
<tr>
<td>3.00</td>
<td>21</td>
<td>17.9</td>
</tr>
<tr>
<td>4 or more</td>
<td>52</td>
<td>44.4</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>100.0</td>
</tr>
</tbody>
</table>
When foster care works...

<table>
<thead>
<tr>
<th></th>
<th>Birth</th>
<th>1yr</th>
<th>2yrs</th>
<th>3yrs</th>
<th>4yrs</th>
<th>5yrs</th>
<th>6yrs</th>
<th>7yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Child 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child 6</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Percent of placement failures based on number of prior placements

(adapted from Fisher, Burraston, & Pears, 2005)
HPA axis dysregulation associated with early life stress

Anxiety and affective disorders

stress-induced 'blunted' patterns

typical daytime HPA activity

chronically elevated daytime HPA activity

(low daytime HPA activity)

(downregulation via chronic stress)
Some, but not all, foster children show altered HPA axis function

Bruce, Fisher, Pears, & Levine (submitted)
Neglect is the primary form of maltreatment associated with HPA dysregulation.

Bruce, Fisher, Pears, & Levine (under review)
Prefrontal Cortex Regions

- Inhibitory control
- Working memory
- Planning

ADHD
Substance abuse

- Decision-making in context of rewards and consequences
Association Between # of Prior Placements and Executive Functioning

$r = -.22, p = .02$
Neurobiological vulnerabilities from early stress for foster children

- HPA system
  - Disrupted daily rhythm
  - Severity of neglect

- Prefrontal cortex
  - Impaired executive function
  - # of placements

- Neurobiologically informed interventions
- Interventions with neurobiological targets
Early intervention in foster care works
MTFC-P emphasizes 3 domains:

- Caregiver-Child Relationship
- Case Management
- Child Needs

Staff:
- Foster Parent Consultant
- Family Therapist
- ‘Daily Report’ Caller
- Case Manager
- Child Therapist
- Behavioral Skills Trainer
- Child Psychiatrist

Contexts:
- Home
- Community
- Preschool/school
5 Key Program Components

- Foster parent support & consultation services
  - Pre-placement training
  - Weekly group meeting
  - 24/7 on call support
- Child treatment services
- Parenting support for birth/adoptive families
- Daily Report telephone check-in w/caregiver
- Clearly specified staff roles & responsibilities
HPA Plasticity

Three brain regions that are interconnected by neural pathways (shown schematically by red lines) are critically important in regulating fear-related behaviors. The prefrontal cortex (purple) participates in assessing danger. The amygdala (dark blue) is a major constituent of the emotion-producing limbic system (light blue). And the hypothalamus (green), in response to signals from the prefrontal cortex, amygdala, and hippocampus, directs the release of hormones (red arrows in box) that support motor responses to perceived threats. (Gray arrows represent inhibitory activity by cortisol.)

Therapeutic intervention

0 0.2 0.4 0.6 0.8 1

wakeup mid morning bedtime

Initial 3 Month 6 Month
Group effects on morning cortisol levels across time for all children

Fisher, Gunnar, Dozier, Bruce, & Pears (2007), *Annals NYAS*
Intervention effects on executive functioning:
Feedback negativity at Fz (prefrontal center electrode site)

Group:
F(2, 31) = 1.80, ns

Interaction:
F(2, 31) = 5.11, p < .05

Bruce, Martin-McDermott, Fisher, & Fox (under review)
Conditional probability of caregiver stress given child behavior problems

Fisher & Stoolmiller (in press)
Caregiver stress levels are directly related to children’s cortisol levels  
Fisher & Stoolmiller (2007)
Change in attachment (% secure behavior)

Secure behavior

Time

T1 T2 T3 T4 T5

- Reg Foster Care
- MTFC-P
- Community Comparison
Early intervention improves permanency outcomes
Successful permanent placements for children with 4 or more prior placements at study start

- Regular foster care: 9 of 23 (39%)
- MTFC-P: 23 of 29 (79%)
Acknowledgements

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