Integrating and Sustaining Evidence-Based Mental Health Services in Child Welfare

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Background

- Children in the child welfare system seldom receive mental health care that is consistent with best practices
  - Many are not provided MH treatment in any form, and most do not receive EBTs

- Lack of access is not due to a lack of EBTs
  - **82** MH treatments are rated by the California Evidence-Based Clearinghouse for Child Welfare as supported/well supported

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Parent management training interventions are highly effective
- Enhance parenting attitudes and practices
- Reduce externalizing symptoms (e.g., aggression; hyperactivity)

**Parent-child interaction therapy** (PCIT) is backed by 40 years of research, including 17 separate RCTs
- Evidence suggests PCIT also mitigates internalizing symptoms, and it has been validated with abused & neglected children

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Barriers to Care in Child Welfare

- Limited community-based MH service providers—especially that accept public insurance

- Within the child welfare system:
  - Leaky MH service pipeline
  - Limited funding for preventive services
  - Poor fit between EBTs and CW services & timelines

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Project Connect

- Novel PCIT intervention for foster parent-child dyads
- Full-day trainings with up to 8 dyads
  - Individualized PCIT with lead clinician plus opportunities for observational learning
  - Group-based PCIT activities with MSW student trainees
  - High-quality child care
  - Phone consultation & homework

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Study Design

- Randomization (N = 128)
  1. Waitlist control group received services as usual
  2. Brief PCIT (Two-day workshop + 8 weeks of homework)
  3. Extended PCIT (Three-day workshop + 14 weeks of homework)

- Assessments at baseline, 8 weeks & 14 weeks post-baseline

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### Sample Description

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Waitlist Control</th>
<th>Brief PCIT</th>
<th>Extended PCIT</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child age (range 2.5-7)</td>
<td>4.6</td>
<td>4.7</td>
<td>4.4</td>
<td>.72</td>
</tr>
<tr>
<td>Child sex (% female)</td>
<td>63%</td>
<td>55%</td>
<td>46%</td>
<td>.30</td>
</tr>
<tr>
<td>Child race (% black)</td>
<td>63%</td>
<td>59%</td>
<td>60%</td>
<td>.92</td>
</tr>
<tr>
<td>Foster parent age (range 23-69)</td>
<td>45</td>
<td>44</td>
<td>45</td>
<td>.87</td>
</tr>
<tr>
<td>Foster parent race (% black)</td>
<td>52%</td>
<td>43%</td>
<td>40%</td>
<td>.50</td>
</tr>
<tr>
<td>Foster parent educ. (range 1-5)</td>
<td>3.4</td>
<td>3.4</td>
<td>3.2</td>
<td>.57</td>
</tr>
<tr>
<td>Foster parent married (%)</td>
<td>52%</td>
<td>51%</td>
<td>51%</td>
<td>.99</td>
</tr>
<tr>
<td>N. of children (range 1-7)</td>
<td>3.1</td>
<td>2.8</td>
<td>3.0</td>
<td>.55</td>
</tr>
</tbody>
</table>
Research Questions

1. Compared to waitlist controls, do children who received group PCIT show greater improvements in emotion regulation (ER)?

2. Based on foster parent ratings of child externalizing, internalizing, and ER symptoms, how many latent mental health classes best fit the data?

3. Are there significant differences in latent class group membership between the treatment & control groups?

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Outcome Measures

- **Child Behavior Checklist** (Achenbach & Rescorla, 2001)
  - Standardized measure that produces broadband *externalizing* and *internalizing* problem scales

- **Emotion Regulation Checklist** (Shields & Cicchetti, 1997)
  - 15-item subscale of *lability* and *negativity* (e.g., arousal, reactivity)
Data Analysis Plan

1. Multivariate regression to test effects of PCIT on lability/negativity

2. Means comparisons to confirm externalizing/internalizing scores were associated with lability/negativity scores

3. Latent profile analysis of aggregate symptoms over time
   - Class enumeration based on low Bayesian information criterion (BIC), high entropy, and bootstrapped likelihood ratio tests

4. Resulting latent classes regressed on treatment condition using multinomial logistic regression
Results

Step 1. Compared to controls, children who received PCIT had lower post-baseline lability/negativity mean scores (38.7 vs. 34.5, \( p = .003 \))

Step 2. Lability/negativity scores at baseline were higher among children with externalizing scores in the clinical range than non-clinical range (42.9 vs. 32.2, \( p < .001 \))

- Lability/negativity scores were also higher among children with internalizing scores in the clinical range than non-clinical range (42.6 vs. 35.4, \( p < .001 \))
## Results

**Step 3.** A three-class solution fit the data well

<table>
<thead>
<tr>
<th></th>
<th>Estimated Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Externalizing</td>
</tr>
<tr>
<td>Mild Symptoms</td>
<td>50</td>
</tr>
<tr>
<td>Moderate Symptoms</td>
<td>67</td>
</tr>
<tr>
<td>Severe Symptoms</td>
<td>77</td>
</tr>
</tbody>
</table>

The chart above shows the estimated means for each symptom category across different externalizing, internalizing, and lability/negativity dimensions.
Latent Profile Analysis: Model Fit

(1) Mild symptoms = 31.3% of the sample; (2) Moderate = 51.5% of the sample; (3) Severe = 17.2% of the sample

The 3-class solution fit the data better than the 2-class solution:
- Lower BIC values (2802.1 vs. 2797.3)
- Higher entropy values (.817 vs. .831)
- Significant bootstrapped likelihood ratio test (-2LL = 43.6, \( p < .001 \))

Average probabilities for most likely class membership were .944, .915, and .923, indicating good prediction of class membership
Results

Step 4.

- Children who received PCIT were more likely to have mild problems than severe problems (OR = 4.14, 95% CI = 1.31-13.10)

- Children who received PCIT were more likely to have moderate problems than severe problems (OR = 5.86, 95% CI = 1.59-21.59)

- PCIT and control groups did not differ in odds of presenting with mild and moderate symptoms (OR = 1.42, 95% CI = 0.43-4.63)
Study Limitations

- Brief period of observation
- Measurement of emotion regulation
- Attrition ~ 25%
- Generalizability
Implications

- PCIT is an effective treatment for diverse MH challenges
  - Can maximize limited resources

- Transdiagnostic treatment approaches (e.g., MATCH-ADTC) are ascendant
  - Common factors such as ER deficits underlie many MH problems
  - Similar approaches are needed for young children

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Implications

- Growing interest in translational research that tests clinically validated interventions in real-world settings
  - We need solutions that are generalizable, sustainable and scalable

- **Reverse engineering** may help to increase the likelihood that EBTs are integrated into services as usual

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Implications

- New resources available through the 2018 Family First Prevention Services Act (P.L. 115-123)

- FFPSA empowers states to use Title IV-E financing to pay for services that stabilize families and reduce out-of-home placements

- A Prevention Services Clearinghouse has been established to regulate which interventions are approved for reimbursement
  - PCIT is one of six well-supported interventions currently listed by the Clearinghouse
Acknowledgments

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