Identifying Effective Components of Parenting Programs: Two Meta-Analyses

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What Works, Under What Circumstances, and How?
Methods for Unpacking the "Black Box" of Programs and Policies
September 3, 2014
Identifying Effective Components of Parent Training (PT) Programs:

Background

• Parent training (PT) is widely regarded as effective for child externalizing behavior problems

• Dozens of different PT models exist in the literature, with varying degrees of effectiveness

• In 2002, we began looking for a way to find out “what works” across a diverse set of approaches that “work”

• We used meta-analytic techniques to identify the program components associated with effectiveness

Identifying Effective Components of PT Programs: Methods & Challenges

- **Selected program components based on:**
  - Knowledge of the literature
  - Debates/controversies in the field
  - Previous systematic reviews

- **Conventional meta-analytic techniques used for:**
  - Literature search
  - Inclusion/exclusion screening
  - Data abstraction

- **PT is a large, complex literature, requiring:**
  - Decision points about what study results to include
  - Flexible solutions to coding challenges
Inclusion Challenges/Solutions

- “One study = one vote”: cannot include multiple effect sizes on the same sample

- Had to make decisions about:
  - Multiple published reports of the same sample
  - Multiple samples, treatment groups, comparison groups and outcome measures within a study
  - Inclusion of statistically adjusted results
  - Multiple assessment times within a study
  - Different assessment times across studies
  - Different types of treatment and comparison groups across studies
**Coding Challenges/Solutions Example: “Dosage”**

**Program Intensity**

*Total Contact Time with Parents*  
______ minutes

*Number of Sessions with Parents*  
______

*Duration of Each Session* (in minutes)  
______

*Frequency of Sessions*  
______ time(s) [ ] per week  
[ ] per month

*Duration of Sessions over Time*  
______ [ ] weeks  
[ ] months
**Parent/Child Training Content**

<table>
<thead>
<tr>
<th>Content</th>
<th>Parent</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Child Development Knowledge &amp; Care</em></td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td><em>Recreation</em></td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td><em>Communication/Responsiveness/Sensitivity</em></td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Discipline-related communication</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Emotional or relationship-related communication</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Responsiveness/sensitivity to cues/nurturing</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Other: __________________________________________________________________</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td><em>Discipline/Behavior Management</em></td>
<td>K [ ]</td>
<td>S [ ]</td>
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<tr>
<td>Attitudes about use</td>
<td>K [ ]</td>
<td>S [ ]</td>
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<tr>
<td>Attributions about child behaviors</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Monitoring/Supervision</td>
<td>K [ ]</td>
<td>S [ ]</td>
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<tr>
<td>Reinforcement &amp; Punishment Procedures</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Positive reinforcement</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
<tr>
<td>Type: __________________________________________________________________</td>
<td></td>
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</tr>
<tr>
<td>Time out from positive reinforcement</td>
<td>K [ ]</td>
<td>S [ ]</td>
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<tr>
<td>Other: __________________________________________________________________</td>
<td>K [ ]</td>
<td>S [ ]</td>
</tr>
</tbody>
</table>
Identifying Effective Components of PT Programs: Analyses

- Descriptive analyses examined
  - Average effect size (ES) across all coded parent and child outcomes (one ES per study)
  - Average “parent outcome” ES and average “child outcome” ES
  - Average ES for each category of outcome measure (e.g., parent knowledge acquisition, parent behavior/skill)

- Investigated the impact of research design (i.e., methodological rigor indicators) on overall ES
  - Random assignment into intervention and comparison groups*
  - Assessment of group equivalence at pretest*
  - Type of comparison group
  - Parent training as stand-alone treatment vs. part of a package*
Identifying Effective Components of PT Programs: Analyses

- **Component analysis:** Identifying which components predict Parent Behavior/Skill outcomes and Child Externalizing Behavior outcomes
  - Separate ANOVAs of components
  - Regressions with components and study design covariates
  - Regressions as mixed-effects model

- **Four robust predictors of outcomes were identified**
  - Parenting behaviors and skills
    - Teaching relationship-building communication skills
    - Having parents practice with their own child during the sessions
  - Child externalizing behavior
    - Teaching parents to interact positively with their children and provide positive attention
    - Teaching parents consistent disciplinary responding
Identifying Effective Components of Home Visiting (HV) Programs: Background, Methods & Challenges

• In 2010, Pew Center on the States contracted with James Bell Associates (PI: Jill Filene) to do a component analysis of Home Visiting (HV) programs

□ Used conventional meta-analytic approaches for:
  • Literature search
  • Inclusion/exclusion screening
  • Data abstraction

• Smaller literature, but a more complex analysis
  • More variability
  • Political attention and debate
Identifying Effective Components of HV Programs: Analyses

- **Descriptive analyses:**
  - Average effect size (ES) across all six coded outcomes:
  - Average ES for each category of outcome measure

- **Investigated the impact of research design on each outcome category**
  - Random assignment
  - Assessment of group equivalence at pretest
  - Type of comparison group
  - Stand-alone treatment vs. part of a package
  - Timing of assessment
Identifying Effective Components of HV Programs: Analyses

- Component analysis on all 6 outcome categories
  - Regressions with components and study design covariates using random effects model
  - Sensitivity analysis

- Some components couldn’t be tested for some outcomes

Conclusions: a different pattern of significant predictors for each of the 6 outcome domains, with little overlap

S.W.O.T. Analysis of this Approach

• **Strengths**
  - Unpacks the “black box” of packaged programs
  - Provides empirical answers to questions about “what works?”

• **Weaknesses**
  - Cannot analyze combinations of components
  - Cannot infer causality

• **Opportunities**
  - Informs development or selection of new programs
  - Informs possible improvements of existing programs

• **Threats**
  - Need a relatively large literature
  - Need well-described interventions and samples
Acknowledgements

- Linda A. Valle
- Jill H. Filene
- Patrice Cachat
- James Bell Associates
- Pew Center on the States
- Cynthia L. Boyle
Thank you!
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