

Identifying Effective Components of Parenting Programs: Two Meta-Analyses

Jennifer Kaminski, PhD

Acting Team Lead, Child Development Studies

*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
- Kaminski JW, Valle LA, Filene JH & Boyle CL (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology*, 36, 567-589.

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

Coding Challenges/Solutions Example: Components

<u>Parent/Child Training Content</u>	<u>Parent</u>			<u>Child</u>
Child Development Knowledge & Care	K[]	S[]	NS[]	
Recreation	K[]	S[]	NS[]	[]
Communication/Responsiveness/Sensitivity	K[]	S[]	NS[]	[]
Discipline-related communication	K[]	S[]	NS[]	[]
Emotional or relationship-related communication	K[]	S[]	NS[]	[]
Responsiveness/sensitivity to cues/nurturing	K[]	S[]	NS[]	
Other: _____	K[]	S[]	NS[]	[]
Discipline/Behavior Management	K[]	S[]	NS[]	[]
Attitudes about use	K[]		NS[]	
Attributions about child behaviors	K[]	S[]	NS[]	
Monitoring/Supervision	K[]	S[]	NS[]	
Reinforcement & Punishment Procedures	K[]	S[]	NS[]	[]
Positive reinforcement	K[]	S[]	NS[]	[]
Type: _____				
Time out from positive reinforcement	K[]	S[]	NS[]	[]
Other: _____	K[]	S[]	NS[]	[]

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

Filene, JH, Kaminski, JW, Valle, LA, & Cachat, P (2013). Components associated with home visiting program outcomes: A meta-analysis. *Pediatrics*, 132, S100-S109.

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!
Jennifer Kaminski
jkaminski@cdc.gov

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

