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A Meta-Analysis of Father Involvement in Parent Training

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Objective: Investigate (a) whether including fathers in parent training enhances outcomes and (b) whether mothers and fathers benefit equally from parent training. Method: Using traditional meta-analysis methodology, 26 studies that could answer the research questions were identified and meta-analyzed. Results: Studies that included fathers, compared with those that did not, reported significantly more positive changes in children's behavior and desirable parenting practices, but not in perceptions toward parenting. Compared with mothers, fathers reported fewer desirable gains from parent training. Conclusions: Fathers should not be excluded from parent training and should be encouraged to attend. Further research should seek to understand how parent-training programs might better meet the needs of fathers.

Keywords: *father; parent training; meta-analysis*

Disruptive behavior disorders are the most common mental health concern among young children (Campbell, 1990), and parent training is widely recognized as one of the most effective interventions for these disorders (Brestan & Eyberg, 1998; Lundahl, Risser, & Lovejoy, 2006; McCart, Priester, Davies, & Azen, 2006). Parent-training programs attempt to decrease disruptive child behaviors indirectly by teaching parents child-rearing skills and modifying parents' assumptions about child development and child rearing. Parent-training programs are based on the premise that parenting practices contribute to the genesis, progression, and maintenance of disruptive behaviors across childhood. Most parent-training programs are based on social learning theory and attachment theory in that they attempt to teach parents appropriate contingency management, modeling, and strategies to strengthen the attachment relationship between parent and child. Many manualized parent-training programs exist and considerable research supports their use (e.g., Barkley, 1997; Forehand & Long, 2002; McMahon & Forehand, 2003; Webster-Stratton & Hammond, 1997).

Other research has shown that parent-training outcomes are influenced by characteristics of the targeted populations and how the parent training is delivered (e.g., Lundahl, Risser, & Lovejoy, 2006; Serketich & Dumas, 1996). Our study focused strictly on the impact of father involvement on parent training and how fathers respond to parent training.

Historically, *parent training* was synonymous with *mother training*, consistent with the past emphasis on mothers as the primary socializing agent (Budd & O'Brien, 1982; Coplin & Houts, 1991; Hulbert, 2003; Lamb, 1997). The idea that fathers do not play an important role in their children's social and behavioral development is no longer accepted, however, as considerable research has demonstrated that fathers do influence their children's development (e.g., Harper & McLanahan, 2004; King, 1994; Lamb, 1997). Some research even suggests that fathers' patterns of interacting with children are more strongly correlated with disruptive behaviors than are mothers' interaction patterns (Patterson & Dishion, 1988). Additionally, the absence of a father figure in the home in some situations is associated with increased delinquency and mental health difficulties in children (Harper & McLanahan, 2004).

Given that fathers' presence and behaviors toward their children have been linked to children's social and emotional development, one might assume that involving fathers in parent training would prove beneficial. Arguments could be made that involving fathers would

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enhance outcomes because fathers may develop better child-rearing skills alongside mothers, and because fathers and mothers may support each other in implementing lessons learned through parent training (Tiano & McNeil, 2005). Yet, reviews indicate that only 20% of parent-training programs include fathers (Budd & O'Brien, 1982; Coplin & Houts, 1991). It is not clear why fathers are underrepresented in parent-training programs. It may be that mothers and fathers face different pragmatic challenges or adopt different expectations that serve to limit father participation in parent training. On the other hand, fathers may not be encouraged to participate in parent training and, at least historically, fathers may have been discouraged from participating (Firestone, Kelly, & Fike, 1980; Tiano & McNeil, 2005). Although questions related to why fathers are underrepresented in parent-training programs merit further investigation, the present meta-analysis focused on two related questions: Is father involvement in parent training associated with improved outcomes? Do mothers and fathers benefit equally from parent training?

OVERVIEW OF THE LITERATURE

Competing professional opinions exist about the value of including fathers in parent training (Coplin & Houts, 1991; Tiano & McNeil, 2005). Early research on the effectiveness of parenting training suggested father involvement was unnecessary. Martin (1977) compared father-involved and father-absent parent-training groups and concluded that there were no differences. In an article published in the *Journal of Clinical Child Psychology* titled "Are Fathers Necessary in Parent Training Groups?" Firestone et al. (1980) also suggested that involving fathers in parent training was unnecessary. Both of these reports of primary research suggested that including fathers was unnecessary because mothers were primarily responsible for interacting with and disciplining their children. Reisinger (1982) took a different perspective by suggesting that fathers not directly involved in parent training learned what was taught from their partners. That is, it was suggested that unprogrammed learning took place, wherein mothers either taught what was learned in the parent-training courses directly or indirectly through modeling.

Other researchers have encouraged father involvement in parent-training programs based on the assumption that fathers play an important role in children's social and emotional development (Burbach, Fox, & Nicholson, 2004). Adesso and Lipson (1981) suggested that father involvement may have served to maintain the desirable effects of parent training at follow-up periods. Webster-Stratton (1985) also provided evidence that father involvement

increased desirable outcomes from parent training. Specifically, it was found that mothers who were accompanied by the fathers of their children retained positive changes more than mothers who were not accompanied by their children's fathers. Consistent with this view, Bagner and Eyberg (2003) found that including fathers was associated with improved long-term gains from parent training.

In a recent qualitative review of parent training studies that included fathers, Tiano and McNeil (2005) reported that the evidence did not support father inclusion. However, these authors suggested that the literature was inconclusive or poorly designed to answer this question and suggested that fathers probably should be included in parent-training programs. This sentiment is shared by researchers investigating fathers' roles in families, by policy makers, and by developers of widely used parent-training programs (Barkley, 1997; Curran, 2003; McBride, 1991a, 1991b; McBride & Rane, 1997).

A uniform opinion does not exist about the value of including fathers in parent-training programs in the literature that has addressed this question. Primary studies have provided mixed outcomes, and a qualitative review suggests that even though the evidence does not clearly support a recommendation to include fathers, they probably should be included. In an attempt to provide a more objective evaluation of the potential value of including fathers in parent training we conducted a meta-analysis that addressed the value of including fathers in parent training and whether mothers and fathers respond similarly to parent training.

METHOD

Selection of Studies

Two strategies were used to identify parent-training studies that involved fathers. First, potential studies were identified through computer searches of PsychInfo and Educational Research Information Center using various combinations of the terms father, dad, parent training, parent education. Only studies written in English were eligible for inclusion. This search was conducted in August 2005 and allowed for all articles published before this time. This strategy grossed 562 potential studies. Second, we searched the reference lists of review articles identified through the computer searches that discussed fathers in parent training. This strategy identified approximately an additional 16 studies for review. Studies had to meet the following nine criteria for inclusion.

First, the studies had to report on parent-training programs that targeted disruptive child behaviors. Second, as a means of selecting studies with high rigor, only those that included a treatment group and either a treatment

control or wait-list group were included. Third, each treatment and control group must have included at least five participants. Fourth, the target children and/or parents were not identified as having developmental or cognitive delays. Fifth, only reports on formal parent-training interventions delivered to actual parents were included, as opposed to a laboratory-type experiment. Sixth, self-directed parent-training programs, such as bibliotherapy or watching videos, were excluded because this meta-analysis investigated whether inclusion of fathers in "traditional parent training" should be recommended. Seventh, only studies published in peer-reviewed journals were included. Eighth, only studies that reported means and standard deviations were included, as this provides the most accurate method for calculating effect sizes when comparing specific groups (i.e., mothers to fathers). Ninth, only studies that explicitly reported on whether fathers were included in parent training were included. Some studies explicitly indicated that all participants were mothers; these studies were included as a comparison group to studies that included mother–father pairs. In some cases it was not clear whether father involvement was singular or in combination with mothers. Only studies that indicated that mother–father pairs participated together were included. Thus, studies including only fathers and those involving fathers who did not clearly attend with their partner were excluded. Father-only studies were excluded because they could not help answer either question. Father-only studies do not help to answer the question of the relative benefit from including fathers as only fathers were included. Furthermore, because several studies provided data from mothers and fathers who received the exact same treatment and were parenting the same children, we viewed these studies as superior because they suffer from fewer potential confounds.

In total, 28 studies met all 9 inclusion criteria; of these, 4 reported on two treatment groups. Thus, the outcomes of 32 intervention groups measured with a comparison group were analyzed. Table 1 provides details of these studies. In this set of studies, 11 separately reported data from mothers and fathers, which allowed us to compare whether mothers and fathers benefited equally from parent training. Of the remaining 17 studies, 15 included data only from mothers, and 2 studies reported data aggregated from fathers and mothers. However, as discussed below, two of the mother-only studies (Martinez & Forgatch, 2001; Wolfe, Edwards, Manion, & Koverola, 1988) were eventually removed because they drew from samples with extremely high rates of single mothers.

Coding Moderator Variables

As studies on parent training differ based on the particular research questions being asked, variance exists in

what outcomes are measured, who is included, and how the study is conducted. Such variance may be associated with outcome strength and, in meta-analytic research, become moderator variables. The following moderators were coded from each study.

First, studies were coded whether (*yes or no*) they (a) included fathers alongside mothers, (b) included mothers only, and (c) reported outcomes for fathers and mothers separately. Next, several characteristics of participants and parent-training programs were coded, the rigor of each study was estimated, and effect sizes were derived.

Confidently answering the question of whether father involvement in parent training influences outcomes is challenged by several confounds, including family structure and family socioeconomic status. If studies on parent-training programs that did not include fathers primarily sampled single-parent families, whereas programs that included fathers sampled more two-parent families, family structure and father involvement would be confounded. Moreover, single-parent families typically face greater socioeconomic challenges than do two-parent families. Thus, father inclusion may also be confounded with socioeconomic challenge if father inclusion was in part a function of whether the sample had a high percentage of single parents.

In an attempt to evaluate the possibility of these potential confounds, we coded the percentage of single parents in each study. Studies were then divided into two groups, studies with a relatively high percentage of single parents (top 51% of the studies in our sample) and studies with a relatively lower percentage of single parents (bottom 49% of studies in our sample). The median percentage of single parents in our study was 38%. Twenty-two of the studies also reported information that allowed for a coding of the sample's expected socioeconomic challenges. Factors used to judge socioeconomic challenge included family income, education level, or formal indicators of socioeconomic status (e.g., Hollingshead Index). Studies were coded into two groups: low socioeconomic challenge or high socioeconomic challenge.

Several other variables were also coded. The number of participants in control and experimental groups was recorded, as was the target child's age in months and whether parent training was delivered individually or through a group.

As the quality of a study may be related to outcomes, overall study rigor was estimated using a 7-point scale across six categories. The only category for which a study could earn 2 points was group assignment: A study earned 2 points if groups were randomly assigned, 1 point if the groups were characterized as being statistically significant despite using a nonrandom assignment, and no point if information about group assignment was missing. For the remaining five categories, studies earned 1 point for

TABLE 1: Study Characteristics and Effect Sizes Immediately Following Parent Training

Study	Father Included?	Study Characteristics	Child Behavior	Parent Behavior	Parent Perceptions
Anastopolus, Shelton, DuPaul, & Guevremont, 1993	No	1/2/19,15/198/6.5	–	–	1.26
Barber, 1992	No	–1/107,17/2/–2.5	–0.19	–0.33	0.27
^a Brestan, Eyberg, Boggs, & Algina, 1997	No	2/1/16,13/1/54/7.0	1.11	–	–
Forgatch & Toobert, 1979	No	1/2/6,6/1/39/5.5	0.92	–	–
Hoath & Sanders, 2002	Yes	2/1/16,13/1/54/7.0	0.44	0.52	1.12
Hughes & Wilson, 1989	Yes	2/1/109,112/2/57/7.0	0.09	0.34	–
Huhn & Zimpfer, 1989	No	–1/–10,8/2/–6.0	–	–	0.35
Jang, 2000	No	–1/–14,16/2/75/4.5	–	–	0.26
^b Kanigsberg & Levant, 1988	Yes	1/2/15,12/2/135/5.5	0.00	–	0.27
^b Kanigsberg & Levant, 1988	Yes	2/2/7,12/2/135/5.5	–0.08	–	0.53
^c Martinez & Forgatch, 2001	No	2/1/88,52/2/94/6.5	–0.08	–0.05	–
Mullin, Quigley, & Glanville, 1994	No	1/2/39,40/2/–1.5	0.35	–	–
Myers et al., 1992	No	2/1/109,64/2/–3.5	–0.03	0.20	–
^a Nixon, Sweeney, Erickson, & Touyz, 2003	Yes	1/2/17,18/1/–7.0	0.78	1.30	1.05
Odom, 1996	No	2/1/10,10/2/–5.5	–	–	0.58
Pisterman et al., 1989	Yes	1/–23,23/1/50/7.0	0.64	1.06	–
^{a,b} Sanders, Markie Dadds-Tully, & Bor, 2000	Yes	1/1/58,71/1/41/7.0	0.73	0.68	0.26
^{a,b} Sanders, Markie Dadds-Tully, & Bor, 2000	Yes	1/1/65,71/1/40/7.0	0.77	0.44	0.47
^a Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998	Yes	2/2/34,30/1/59/7.0	1.10	1.51	1.21
Scott & Stradling, 1987	No	2/1/27,28/2/62.4.5	0.78	–	–
Sheeber & Johnson, 1994	No	1/2/20,20/2/48/6.0	0.16	–	0.67
Sonuga-Barke Daley, Thompson, Laver-Bradbury, & Weeks, 2001	No	–2/30,20/1/42/6.5	0.25	–	0.67
^a Tucker, Gross, Fogg, Delaney, & Lapporte, 1998	Yes	–2/11,12/2/30/7.0	0.44	0.42	–
Webster-Stratton, 1982a	No	2/1/10,10/2/–5.5	–	–	0.58
Webster-Stratton, 1982b	No	2/2/16,19/2/47/7.0	0.54	–	–
^{a,b} Webster-Stratton, Kolpacoff, & Hollinsworth, 1989	Yes	1/–47,48/2/54/7.0	0.71	0.70	0.41
^{a,b} Webster-Stratton et al., 1989	Yes	1/–38,48/2/54/7.0	0.63	0.63	0.24
^a Webster-Stratton, 1990	Yes	2/2/21,19/2/61/7.0	0.49	0.53	1.05
^{a,b} Webster-Stratton & Hammond, 1997	Yes	1/–43,40/2/66/7.0	0.81	0.43	1.06
^{a,b} Webster-Stratton & Hammond, 1997	Yes	1/–36,40/2/70/7.0	0.62	0.30	0.71
Webster-Stratton, 1998	Yes	2/1/109,112/2/57/7.0	0.09	0.34	–
^c Wolfe, Edwards, Manion, & Koverola, 1988	No	2/1/16,14/1/25/6.5	0.11	0.51	–

NOTE: For study characteristics, the first space provides information on relative percentage of single mothers (1 = few, 2 = many); second space is socioeconomic status (1 = low, 2 = moderate); third space is number in treatment, control groups; fourth space is parent-training delivery (1 = individual, 2 = group); fifth space is child's age in months; sixth is average rigor of two raters; – signifies that data were missing and coding could not take place.

a. Study provided data separate for mothers and fathers.

b. Within the study, two or more treatment groups were compared to a single comparison group.

c. Study removed from analyses comparing mother-only and father-included studies.

each of the following characteristics if present: (a) used two or more measurement approaches (e.g., direct observation, self-report), (b) used well-known or standardized outcome measures, (c) used a written treatment guide or manual, (d) fidelity to the treatment manual was judged as adequate, and (e) means and standard deviations were reported.

Coding reliability. Two researchers coded each study independently with a high degree of interrater reliability

(average for continuous variables, $r = .91$, categorical, $\kappa = .89$). Disagreements were resolved through discussion and consulting the articles.

Coding-Dependent Variable

Parent-training programs targeting disruptive child behaviors children are designed to change parental behavior directly with the expectation that such changes will ultimately modify children's behavior. Thus, studies

tended to gather data on parent and child outcomes. We organized outcomes into three groups based on improvements in child behaviors, parenting behaviors, and parents' perceptions related to child rearing. All studies provided information immediately following the intervention; fewer studies provided follow-up data at least 2 months beyond completion of parent training.

Studies included in the analysis examined positive and negative child behaviors. Positive child behavior included prosocial behaviors, such as compliance and cooperation. Negative child behavior included disruptive behaviors, such as defiance, crying, whining, or disobedience. Child behavior was assessed by both parent-report measures and behavior-observation measures. An example of parent-report measures of child behavior used in the analysis was the Eyberg Child Behavior Inventory (Eyberg & Robinson, 1983). An example of an observational measure used by research teams includes the Dyadic Parent-Child Interactive Coding System (Robinson & Eyberg, 1978). We only analyzed results obtained from measures of child behavior taken while children were under parental supervision, as opposed to behavioral measures taken in school or another setting, as this seems to be the most direct measure of parent-training effectiveness.

Studies included in the analysis examined desirable parenting behaviors, such as the use of praise or warm behaviors, and undesirable behaviors, such as use of corporal punishment (e.g., spanking) or inconsistent follow-through. Parent outcomes were assessed by both parent self-report and behavioral observation measures. An example of a self-report measure utilized in these studies is the Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1992). An example of an observational measure utilized in these studies includes the Dyadic Parent-Child Interactive Coding System (Robinson & Eyberg, 1981).

Parents' perceptions related to child rearing were measured exclusively using self-report instruments. Examples of measures assessing parenting perceptions include the Parenting Sense of Competence Scale (Gibaud-Wallston & Wandersman, 1978), the Parental Locus of Control Scale (Campis, Lyman, & Prentice-Dunn, 1986), the Parenting Stress Index (Abidin, 1986).

Effect Size Organization and Calculation

Outcomes were transformed into the Cohen's d effect size, which reflects the differences between the posttreatment means of the treatment group and the control group divided by the pooled standard deviation, adjusted for sample size (Lipsey & Wilson, 2001). Thus, d represents the difference between the treatment and control group

expressed in standard deviation units. Effect size computations and summary analyses were done using *DSTAT 1.10* (Johnson, 1993), a meta-analytic software program. Given our selection criteria, only studies that provided means, standard deviations, and sample size statistics were used to calculate d values—that is, d was not calculated from t tests, F tests, or p values. If studies indicated nonsignificant findings but did not report means and standard deviations, we assigned an effect size of 0.00 for that particular variable. Some indices of interest examined “desirable” characteristics (e.g., compliance, praise), whereas others examined “undesirable” characteristics (e.g., noncompliance, coercive parenting, parenting stress). An increase in desirable characteristics or a decrease in undesirable characteristics in the treatment group, relative to the control group, resulted in a positive d statistic. A decrease in desirable or an increase in undesirable characteristics in the treatment group, relative to the control group, resulted in a negative d statistic. As a guide, a d in the 0.20 range is considered small, though significant, a d in the 0.50 is considered to be moderate in magnitude, and a d in the range of 0.80 is considered to be large (Cohen, 1988).

Many studies provided multiple measures within one or more of the three outcome constructs. When this occurred, the average effect from the multiple measures was calculated to limit an individual study's contribution to a given construct (Lipsey & Wilson, 2001). That is, any given study contributed at most 1 effect size to each outcome construct.

Within immediate and follow-up assessment periods overall statistics are presented first. Moderator analyses are typically pursued when a set of studies is heterogeneous as measured by the *within-class goodness-of-fit* statistic, or Q_w (Johnson, 1993). A significant Q_w statistic suggests heterogeneity within a set of studies and the need for moderator analyses. Statistical differences between categories within participant and parent-training program characteristics were tested with the *between-class goodness-of-fit* statistic, or Q_b . A significant Q_b statistic indicates the magnitude of the effect differs between moderator variable categories.

RESULTS

Study Characteristics

Prior to presenting the syntheses of the effect sizes, we describe characteristics of the included studies. The total number of participants across all treatment groups was 1,075 and 965 for the comparison groups with average group sizes of 35.83 ($SD = 32.59$) and 32.17 ($SD = 28.46$), respectively. The first set of analyses examined

the degree of similarity between studies that included or did not include fathers. Two studies that only included mothers (Martinez & Forgatch, 2001; Wolfe et al., 1988) appeared to be outliers with regard to the percentage of single parents (i.e., 90% and 100%) and were removed from further analyses because these samples could not have easily included fathers. A median split (Median = 37%) was run on the remaining 24 treatment groups that reported the percentage of single parents. Of the studies that included both mothers and fathers, eight were judged to have relatively few single mothers, and eight were judged to have relatively many single mothers. Of the studies that included only mothers, four were judged to have relatively few single mothers, and four were judged to have relatively many single mothers. Thus, the studies were balanced and did not significantly differ with regard to percentage of single mothers, $\chi^2(1, n = 24) = 0.00, ns$. Twelve of the parent-training groups were judged to have low socioeconomic challenges, and 12 were judged to have high socioeconomic challenges; eight studies could not be classified. Studies that included both mothers and fathers did not differ from studies that included only mothers on socioeconomic challenge, $\chi^2(1, n = 24) = 0.17, ns$. Mother-only and father-included studies did not differ on the average age of the children, $t(23) = 0.62, ns$, nor on the distribution of studies that delivered parent training via a group or individual format, $\chi^2(1, n = 30) = 0.38, ns$. Based on these indicators, studies that included fathers and those that did not were considered statistically equivalent.

Rigor ratings were higher for studies that included both mothers and fathers, $M = 6.77, SD = 0.53$, than for studies that included only mothers, $M = 5.20, SD = 1.61$, $t(30) = 3.78, p < .001$. To assess whether rigor was related to strength of effect, averaging across all outcome measures immediately following treatment and at follow-up assessments, a positive correlation emerged, $r = .37$. This suggests that the larger effect sizes are not an artifact of less rigorous research designs.

Father Involvement

The guiding question of this meta-analytic evaluation was whether involving fathers influenced outcomes of interest. To address this question we compared parent-training programs that only included mothers to programs that also included fathers (see Table 2). When study outcomes were compared immediately following parent training, studies that included fathers demonstrated stronger effects for child behavior, $Q_b = 6.91, p < .01$, and for parenting behaviors, $Q_b = 10.56, p < .01$, but not for perceptions of parenting, $Q_b = 0.03, ns$. Note,

however, that only two mother-only studies contributed to the comparison on changes in parenting behaviors. Studies including only mothers did not evidence significant heterogeneity for any of the three outcomes, whereas studies that included fathers evidenced significant heterogeneity for all three outcomes. Thus, exploratory moderator analyses were not pursued. At follow-up periods, father inclusion was not reliably related to better outcomes. That is, the contrasts that were statistically significant immediately following treatment disappeared and no other significant differences emerged.

We next sought to answer the question of whether mothers and fathers respond similarly to parent training (Table 3). To answer this question, we compared the outcomes for fathers and mothers in the 11 studies that included parents of both genders. Treatment gains tended to be greater for mothers ($d = 0.91$) compared with fathers ($d = 0.68$) with regard to reports on improvement in children's behaviors immediately following treatment, $Q_b = 2.65, p < .10$, but not at follow-up periods ($d = .99$ and $.85$, respectively), $Q_b = 0.54, ns$. Mothers' parenting behaviors ($d = 0.84$) improved significantly more than fathers' parenting behavior ($d = 0.53$) immediately following behavior, $Q_b = 3.99, p < .05$. This difference was largely maintained at follow-up, $Q_b = 3.45, p = .06, d = 0.84$ and 0.49 , respectively. Similarly, mothers ($d = 0.68$), compared with fathers ($d = 0.37$), reported significantly more positive perceptions of parenting compared immediately after treatment, $Q_b = 4.39, p < .05$. However, the difference was not significant at follow-up, $Q_b = 0.81, d = 0.84$ and 0.66 , respectively.

DISCUSSION AND APPLICATIONS TO SOCIAL WORK PRACTICE

Does including fathers lead to improved outcomes? Yes, to a degree. Immediate outcomes were enhanced in studies that included fathers compared with studies that did not include fathers with regard to positive changes in children's and parents' behaviors, but not parents' perceptions toward child rearing. At follow-up, no significant differences emerged between studies that included or did not include fathers. Interestingly, the results for the studies that included fathers are similar to a previous meta-analysis on parent training (Lundahl, Risser, & Lovejoy, 2006), in which fathers were often included; whereas those that did not include fathers are lower. Thus, it may be that failing to include fathers, whatever the reason, tends to diminish outcomes and that including fathers results in more typical outcomes.

TABLE 2: Comparisons between Studies That Only Included Mothers to Studies That Included Mothers and Fathers

	Child Behavior			Parent Behavior			Parent Perceptions		
	<i>k</i>	<i>d</i>	<i>Q_w</i>	<i>k</i>	<i>d</i>	<i>Q_w</i>	<i>k</i>	<i>d</i>	<i>Q_w</i>
Immediate results									
Mothers only	8	0.20 ^a	<i>ns</i>	2	0.06 ^a	<i>ns</i>	9	0.63	<i>ns</i>
Mothers and fathers	16	0.48 ^a	*	13	0.54 ^a	*	12	0.59	*
Delayed results									
Mothers only	3	0.63	<i>ns</i>	1	0.59	<i>ns</i>	4	0.39	<i>ns</i>
Mothers and fathers	10	0.39	*	8	0.48	<i>ns</i>	7	0.69	<i>ns</i>

NOTE: *k* = the number of studies; *d* = effect size or Cohen's *d*. *Q_w* represents test of heterogeneity; *ns* = nonsignificant.

a. significant contrast, $p \leq .01$.

* $p < .05$.

TABLE 3: Comparisons of Outcomes Made by Mothers and Fathers

	Child Behavior			Parent Behavior			Parent Perceptions		
	<i>k</i>	<i>d</i>	<i>Q_w</i>	<i>k</i>	<i>d</i>	<i>Q_w</i>	<i>k</i>	<i>d</i>	<i>Q_w</i>
Immediate results									
Mothers	11	0.91 ^b	<i>ns</i>	9	0.84 ^a	<i>ns</i>	9	0.68 ^a	<i>ns</i>
Fathers	11	0.68 ^b	<i>ns</i>	9	0.53 ^a	<i>Ns</i>	9	0.37 ^a	<i>ns</i>
Delayed results									
Mothers	5	0.99	<i>ns</i>	5	0.84 ^b	<i>ns</i>	5	0.84	<i>ns</i>
Fathers	5	0.85	<i>ns</i>	5	0.49 ^b	<i>ns</i>	5	0.66	<i>ns</i>

NOTE: *k* = the number of studies; *d* = effect size or Cohen's *d*. *Q_w* represents test of heterogeneity; *ns* = nonsignificant.

a. $p \leq .001$.

b. $p \leq .10$.

Do mothers and fathers benefit equally from parent training? No. Immediately after treatment, fathers made fewer changes in their behaviors and perceptions of child rearing as compared with mothers. Moreover, fathers tended to report relatively less optimistic views about desirable changes in children's behavior immediately following treatment. Reports on parenting behavior at follow-up show that fathers benefited less than mothers, though difference in reports on children's behaviors and perceptions of child rearing were no longer significant.

What are the implications from our findings? Excluding or limiting fathers from parent-training programs is not recommended. Although father involvement may not dramatically improve outcomes relative to typical effects (Lundahl, Risser, & Lovejoy 2006), their inclusion increases the likelihood of success. Thus, those planning parent-training programs or offering parent training should encourage father involvement and avoid statements suggesting father involvement does not matter.

Parent-training programs may need to be adjusted to meet fathers' needs. Fathers did not change their behaviors or perceptions of child rearing as much as mothers—two factors that influence children's socialization. Benefiting from parent training involves an interaction among several factors, such as individual differences of participants, characteristics of parent training programs, and cultural influences. Our study was not designed to

understand such interactions, although we believe that such understanding is critical. Several investigators have examined how parent training might be tailored to better meet fathers' needs and increase fathers' ability to benefit from such training (e.g., Fagan & Hawkins, 2001; McBride, 1990, 1991a, 1991b; McBride & Rane, 1997; Myers, 1993; Sirridge, 2001). Our sense is that this is an area that needs considerably more research and might include questions about how mothers and fathers work together (or not) to adopt recommendations delivered through parent training. Another area that needs further research, given that father involvement in parent training will likely improve outcomes, is how to better recruit and retain fathers (Fagan & Hawkins, 2001; McBride & Rane, 1997; Myers, 1993; Sirridge, 2001).

LIMITATIONS

Like all research designs, meta-analysis has strengths and limitations. Meta-analysis is well suited to answer the question of whether mothers and fathers benefit equally from parent training, because several studies reported outcomes separately for fathers and mothers. Quantitatively summarizing these outcomes provides strong evidence that fathers do not enjoy the benefits mothers do from parent training (assuming that measurements of the constructs of

interest are valid for both mothers and fathers). An answer to the question of whether father involvement improves outcomes is not as clear. The differences found across studies that did or did not include fathers may have been a function of factors other than father involvement. The two variables expected to be linked to outcomes, socioeconomic status and relative number of single parents, were partially controlled through assessing the relative number of studies in each group. Additionally, the moderate positive correlation between rigor ratings and effect sizes suggests that the larger effect sizes are not likely an artifact of less rigorous research designs. And yet, the studies that only included mothers were less rigorous, which may confound our results. Even though these three factors were largely controlled, factors that defy measurement, such as sampling rationale or investigators' attitudes toward father involvement, may have influenced outcomes across studies. Another limitation is that we may have missed studies given our search strategy; however our experience in conducting other meta-analyses on parent training leads us to believe that we identified a good number of the available studies (Lundahl, Nimer, & Parsons, 2006; Lundahl, Risser, & Lovejoy, 2006).

Notably absent from our study and the literature on which it is based are data that help to explain the mechanisms through which inclusion of fathers in parent training enhances treatment effectiveness and why fathers did not benefit as much as mothers. We expect that future research will further illuminate the role that fathers play in parent training and how parent training might be adapted to better meet their needs. Until then, however, our data suggest that, at a minimum, fathers should not be excluded from parent training and likely should be recruited to participate.

REFERENCES

- Abidin, R. (1986). *Parenting Stress Index* (2nd ed.). Charlottesville, VA: Pediatric Psychology Press.
- Adesso, V. J., & Lipson, J. W. (1981). Group training of parents as therapists for their children. *Behavior Therapy, 12*, 625-633.
- *Anastopoulos, A. D., Shelton, T. L., DuPaul, G. J., & Guevremont, D. C. (1993). Parent training for attention-deficit hyperactivity disorder: Its impact on parent functioning. *Journal of Abnormal Child Psychology, 21*, 581-596.
- Arnold, D. S., O'Leary, S. G., Wolff, L. S., & Acker, M. M. (1992). The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment, 4*, 66-83.
- Bagner, D. M., & Eyberg, S. M. (2003). Father involvement in parent training: When does it matter? *Journal of Clinical Child and Adolescent Psychology, 32*, 599-605.
- *Barber, J. G. (1992). Evaluating parent education groups: Effects on sense of competence and social isolation. *Research on Social Work Practice, 2*, 28-38.
- Barkley, R. A. (1997). *Defiant children: A clinician's guide to assessment and parent training* (2nd ed). New York: Guilford Press.
- Brestan, E. V., & Eyberg, S. M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, 5,272 kids. *Journal of Clinical Child Psychology, 27*, 180-189.
- *Brestan, E. V., Eyberg, S. M., Boggs, S. R., & Algina, J. (1997). Parent-child interaction therapy: Parents' perceptions of untreated siblings. *Child & Family Behavior Therapy, 19*, 13-28.
- Budd, K. S., & O'Brien, T. P. (1982). Father involvement in behavioral parent training: An area in need of research. *Behavior Therapist, 5*, 85-89.
- Burbach, A. D., Fox, R. A., & Nicholson, B. C. (2004). Challenging behaviors in young children: The father's role. *Journal of Genetic Psychology, 165*, 169-183.
- Campbell, S. (1990). *Behavioral problems in preschool children*. New York: Guilford Press.
- Campis, L. K., Lyman, R. D., & Prentice-Dunn, S. (1986). The parental locus of control scale: Development and validation. *Journal of Clinical Child Psychology, 15*, 260-267.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Coplin, J. W., & Houts, A. C. (1991). Father involvement in parent training for oppositional child behavior: Progress or stagnation. *Child & Family Behavior Therapy, 13*, 29-51.
- Curran, L. (2003). Social work and fathers: Child support and fathering programs. *Social Work, 48*, 219-227.
- Eyberg, S. M., & Robinson, E. A. (1983). Conduct problem behavior: Standardization of a behavioral rating scale with adolescents. *Journal of Clinical Child Psychology, 12*, 347-354.
- Fagan, J., & Hawkins, A. J. (2001). *Clinical and educational interventions with fathers*. Binghamton, NY: Haworth Press.
- Firestone, P., Kelly, M. J., & Fike, S. (1980). Are fathers necessary in parenting training groups? *Journal of Clinical Child Psychology, 9*, 44-47.
- Forehand, R., & Long, N. (2002). *Parenting the strong-willed child: The clinically proven five-week program for parents of two- to six-year-olds*. Chicago, IL: Contemporary Books.
- *Forgatch, M. S., & Toobert, D. J. (1979). A cost-effective parent training program for use with normal preschool children. *Journal of Pediatric Psychology, 4*, 129-145.
- Gibaud-Wallston, J., & Wandersman, L. P. (1978, August). *Development and utility of the Parenting Sense of Competence scale*. Paper presented at the meeting of the American Psychological Association, Toronto, Ontario, Canada.
- Harper, C. C., & McLanahan, S. S. (2004). Father absence and youth incarceration. *Journal of Research on Adolescence, 14*, 369-397.
- *Hoath, F. E., & Sanders, M. R. (2002). A feasibility study of enhanced group Triple P-Positive parenting program for parents of children with attention-deficit/hyperactivity disorder. *Behaviour Change, 19*, 191-206.
- *Hughes, R. C., & Wilson, P. H. (1989). Behavioral parent training: Contingency management versus communication skills training with or without the participation of the child. *Child & Family Behavior Therapy, 10*, 11-23.
- *Huhn, R. P., & Zimpfer, D. G. (1989). Effects of a parent education program on parents and their preadolescent children. *Journal of Community Psychology, 17*, 311-318.
- Hulbert, A. (2003). *Raising America*. New York: Alfred A. Knopf.
- Hollingshead, A. B. (1975). *Four-factor index of social status*. Unpublished manuscript, Yale University, New Haven, CT.
- *Jang, M. (2000). Effectiveness of filial therapy for Korean parents. *International Journal of Play therapy, 9*, 39-56.

- Johnson, B. T. (1993). *DSTAT 1.10: Software for the meta-analytic review of literatures* [Computer software and manual]. Hillsdale, NJ: Erlbaum.
- *Kanigsberg, J. S., & Levant, R. F. (1988). Parental attitudes and children's self-concept and behavior following parents' participation in parent training groups. *Journal of Community Psychology, 16*, 152-160.
- King, V. (1994). Nonresident father involvement and child well-being. *Journal of Family Issues, 15*, 78-96.
- Lamb, M. E. (1997). Fathers and child development: An introductory overview. In M. E. Lamb (Ed.), *The role of fathers in child development* (3rd ed., pp. 1-18). New York: Wiley.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.
- Lundahl, B. W., Nimer, J., & Parsons, B. (2006). Preventing child abuse: A meta-analysis of parent training programs. *Research on Social Work Practice, 16*, 251-262.
- Lundahl, B. W., Risser, H. J., & Lovejoy, M. C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review, 26*, 86-104.
- Martin, B. (1977). Brief family intervention. Effectiveness and the importance of including the father. *Journal of Consulting and Clinical Psychology, 45*, 1002-1010.
- *Martinez, C. R., Jr., & Forgatch, M. S. (2001). Preventing problems with boys' noncompliance: Effects of a parent training intervention for divorcing mothers. *Journal of Consulting and Clinical Psychology, 69*, 416-428.
- McBride, B. A. (1991a). Parent education and support programs for fathers: Outcome effects on paternal involvement. *Early Child Development and Care, 67*, 73-85.
- McBride, B. A. (1991b). Parental support programs and paternal stress: an exploratory study. *Early Childhood Research Quarterly, 6*, 127-149.
- McBride, B. A. (1990). The effects of a parent education/play group program on father involvement in childrearing. *Family Relations, 39*, 250-256.
- McBride, B. A., & Rane, T. R. (1997). Father/male involvement in early childhood programs: Issues and challenges. *Early Childhood Education Journal, 25*, 11-15.
- McCart, M. R., Priester, P. E., Davies, W. H., & Azen, R. (2006). Differential effectiveness of behavioral parent-training and cognitive-behavioral therapy for antisocial youth: A meta-analysis. *Journal of Abnormal Child Psychology, 34*, 527-543.
- McMahon, R. J., & Forehand, R. L. (2003). *Helping the noncompliant child: Family-based treatment for oppositional behavior* (2nd ed.). New York: Guilford Press.
- *Mullin, E., Quigley, K., & Glanville, B. (1994). A controlled evaluation of the impact of a parent training programme on child behaviour and mothers' general well-being. *Counseling Psychology Quarterly, 7*, 167-179.
- Myers, S. A. (1993). Adapting parent education programs to meet the needs of fathers: An ecological perspective. *Family Relations, 42*, 447-452.
- *Myers, H. F., Kerby, T. A., Arrington, A., Richardson, M. A., Marigna, M., Huff, R., et al. (1992). The impact of a parent training program on inner-city African-American Families. *Journal of Community Psychology, 20*, 132-147.
- *Nixon, R. D., Sweeney, L., Erickson, D. B., & Touyz, S. W. (2003). Parent-child interaction therapy: A comparison of standard and abbreviated treatments for oppositional defiant preschoolers. *Journal of Consulting and Clinical Psychology, 71*, 251-260.
- *Odom, S. E. (1996). Effects of an educational intervention on mothers of male children with attention deficit hyperactivity disorder. *Journal of Community Health Nursing, 13*, 207-220.
- Patterson, G. R., & Dishion, T. J. (1988). Multilevel family process models: Traits, interactions, and relationships. In R. Hinde & J. Stevenson (Eds.), *Relationships with families: Mutual influence* (pp. 283-310). Oxford, England: Clarendon.
- *Pisterman, S., McGrath, P., Firestone, P., Goodman, J. T., Webster, I., & Mallory, R. (1989). Outcome of parent-mediated treatment of preschoolers with attention deficit disorder with hyperactivity. *Journal of Consulting and Clinical Psychology, 57*, 628-635.
- Reisinger, J. J. (1982). Unprogrammed learning of differential attention by fathers of oppositional children. *Journal of Behavior Therapy & Experimental Psychiatry, 13*, 203-208.
- Robinson, E. R., & Eyberg, S. (1978, August). *Systematic behavioral observation of normal and behavior problem children*. Paper presented at the annual meeting of the American Psychological Association, Toronto, Ontario, Canada.
- *Sanders, M. R., Markie-Dadds, C., Tully, L. A., & Bor, W. (2000). The triple p-positive parenting program: A comparison of enhanced, standard, and self-directed behavioral family intervention for parents of children with early onset conduct problems. *Journal of Consulting and Clinical Psychology, 68*, 624-640.
- *Schuhmann, E. M., Foote, R. C., Eyberg, S. M., Boggs, S. R., & Algina, J. (1998). Efficacy of parent-child interaction therapy: Interim report of a randomized trial with short-term maintenance. *Journal of Clinical Child Psychology, 27*, 34-45.
- *Scott, M. J., & Stradling, S. G. (1987). Evaluation of a group programme for parents of problem children. *Behavioural Psychotherapy, 15*, 224-239.
- Serketich, W. J., & Dumas, J. E. (1996). The effectiveness of behavioral parent training to modify antisocial behavior in children: A meta-analysis. *Behavior Therapy, 27*, 171-186.
- *Sheeber, L. B., & Johnson, J. H. (1994). Evaluation of a temperament-focused, parent-training program. *Journal of Clinical Child Psychology, 23*, 249-259.
- Sirridge, S. T. (2001). Parent education for fathers. In M. J. Fine & S. W. Lee (Eds.), *Handbook of diversity in parent education* (pp. 180-198). New York: Academic Press.
- *Sonuga-Barke, E. J. S., Daley, D., Thompson, M., Laver-Bradbury, C., & Weeks, A. (2001). Parent-based therapies for preschool Attention-Deficit/Hyperactivity Disorder: A randomized controlled trial with a community sample. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 402-408.
- Tiano, J. D., & McNeil, C. B. (2005). The inclusion of fathers in behavioral parent training: A critical evaluation. *Child & Family Behavior Therapy, 27*, 1-28.
- *Tucker, S., Gross, D., Fogg, L., Delaney, K., & Lapporte, R. (1998). The long-term efficacy of a behavioral parent training intervention for families with 2-year-olds. *Research in Nursing & Health, 21*, 199-210.
- *Webster-Stratton, C. (1982a). The long-term effects of a videotape modeling parent-training program: Comparison of immediate and 1-year follow-up results. *Behavior Therapy, 13*, 702-714.
- *Webster-Stratton, C. (1982b). Teaching mothers through videotape modeling to change their children's behavior. *Journal of Pediatric Psychology, 7*, 279-294.
- Webster-Stratton, C. (1985). The effects of father involvement in parent training for conduct problem children. *Journal of Child Psychology & Psychiatry, 26*, 801-810.

- *Webster-Stratton, C., Kolpacoff, M., & Hollinsworth, & T. (1989). Self administered videotape therapy for families with conduct-problem children: Comparison with two cost-effective treatments and a control group. *Journal of Consulting and Clinical Psychology*, 57, 558-566.
- *Webster-Stratton, C. (1990). Enhancing the effectiveness of self-administered videotape parent training for families with conduct-problem children. *Journal of Abnormal Child Psychology*, 18, 479-492.
- *Webster-Stratton, C., & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, 65, 93-109.
- *Webster-Stratton, C. (1998). Preventing conduct problems in Head Start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology*, 66, 715-730.
- *Wolfe, D. A., Edwards, B., Manion, I., & Koverola, C. (1988). Early intervention for parents at risk of child abuse and neglect: A preliminary investigation. *Journal of Consulting and Clinical Psychology*, 56, 40-47.
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- *Indicates that the study was included in the meta-analysis.