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Effects of a Program to Promote High Quality Parenting by Divorced and Separated Fathers

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Abstract

This paper reports on the effects on parenting and on children's mental health problems and competencies from a randomized trial of a parenting program for divorced and separated fathers. The program, NBP-Dads, includes ten group sessions (plus two phone sessions) which promote parenting skills to increase positive interactions with children, improve father-child communication, use of effective discipline strategies, and skills to protect children from exposure to interparental conflict. The program was adapted from the New Beginnings Program, which has been tested in two randomized trials with divorced mothers and shown to strengthen mothers' parenting and improve long-term outcomes for children (Wolchik, Sandler, Weiss, & Winslow, 2007). Fathers were randomly assigned to receive either NBP-Dads or a two-session active comparison program. The sample consisted of 384 fathers (201 NBP-Dads, 183 comparison) and their children. Assessments using father, youth and teacher reports were conducted at pretest, posttest and ten-month follow-up. Results indicated positive effects of NBP-Dads to strengthen parenting as reported by fathers and youth at posttest and ten-month follow-up. Program effects to reduce child internalizing problems and increase social competence were found at ten months. Many of the program effects were moderated by baseline level of the variable, child age, gender, and father ethnicity. This is the first randomized trial to find significant effects to strengthen father parenting following divorce. In view of recent changes in family courts to allot fathers increasing amounts of parenting time following divorce, the results have significant implications for improving outcomes for children from divorced families.

This paper presents findings from a randomized controlled trial of a parenting program that is designed to strengthen the quality of father parenting following divorce. Theoretically strengthening father parenting following divorce is likely to improve child outcomes because concurrent and prospective correlational studies have found that quality of father parenting is an important protective factor for children following divorce (Adamsons & Johnson, 2013; Menning, 2006). The research has important implications for public health because of the high prevalence of divorce (National Center for Health Statistics, 2008) and the increased amount of time fathers are spending with children following divorce (Cancian, Meyer,

Conflict of interest. Dr. Sandler and Dr. Wolchik are partners in an LLC that trains providers to deliver the NBP-Dads program and declare a conflict of interest.

Ethical procedures. All procedures performed in this study were in accordance with the ethical standards and approved by Arizona State University's IRB and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent. Informed consent and assent was obtained from all participants in this study.

Brown, & Cook, 2014). We first summarize the evidence on the relations between quality of parenting by divorced fathers and children's post-divorce adjustment. We then review research on the effects of parenting programs to promote effective parenting by fathers. We then describe the New Beginnings Program-Dads (NBP-Dads), a program designed to strengthen the quality of father parenting following divorce. Finally, we describe the questions addressed in this study.

Relations between Father Post-Divorce Parenting and Children's Problem Outcomes

A narrative review of the literature on father post-divorce involvement noted that multiple indicators of the quality of father parenting, including feelings of closeness between the father and child, involvement in children's activities, responsiveness, and use of effective discipline were associated with better child adjustment (Sandler et al., 2012). Several studies found specific aspects of father parenting related to specific outcomes (e.g., father engagement in a variety of activities, discussions of schoolwork related to academic outcomes; Menning, 2006). Multiple factors have been found to moderate the relation between quality of father parenting and children's well-being. Illustratively, quality of father parenting was more strongly associated with child well-being when fathers have more time with their children (Sandler, Wheeler, & Braver, 2013), when there is high interparental conflict and a poor mother-child relationship (Sandler, Miles, Cookston, & Braver, 2008) and when children are younger (Adamsons & Johnson, 2013). One implication of these findings is that evaluations of programs to promote father post-divorce parenting should test multiple logical moderators of program effects.

Impact of Programs to Promote Effective Father Parenting

There is growing evidence from randomized trials that father parenting can be strengthened through behaviorally focused parenting programs (Lundahl, Tollefson, Risser, & Lovejoy, 2008). However, there is a paucity of evidence that the effects of the programs last over time and no randomized trials have demonstrated effects to strengthen father post-divorce parenting. Although one randomized trial with divorced fathers reported effects to reduce interparental conflict and improve co-parenting, they did not have an effect to strengthen the quality of father post-divorce parenting (Cookston et al., 2007). The lack of effects on father parenting may be because only two of the sessions focused on parenting skills training. The New Beginnings Program (NBP), a 10-session parenting after divorce program, has demonstrated effects in two randomized trials to reduce a wide range of mental health and substance use problems and to increase developmental competencies many years after program completion (Wolchik et al., 2007). NBP-Dads teaches the same parenting skills as the original NBP: positive family activities, open communication, reducing children's exposure to interparental conflict, and effective discipline (Wolchik et al., 2007). The program was adapted by the use of male actors to model the parenting skills and use of father testimonials of program impact, and was pilot tested in four groups involving 38 fathers. The current study reports on the posttest and 10-month follow-up results of a randomized effectiveness trial of the NBP-Dads program.

The study tests three hypotheses. 1) We hypothesized that the program would increase the quality of father parenting and reduce interparental conflict. Although the program did not directly target amount of parenting time, it is theoretically plausible that a more positive father-child relationship would lead fathers to spend more time with their children. Thus, as an exploratory analysis, we investigated program effects on amount of contact fathers have with their children. 2) We hypothesized that NBP-Dads would decrease children's mental health problems and increase competencies at posttest and at 10-month follow-up, and as reported by fathers, children and teachers. 3) We hypothesized that factors that had previously been found to moderate the effects of parenting programs, or to moderate the relationship between quality of father parenting and child well-being would also moderate the effects on NBP-Dads, including child gender (e.g., Sandler et al., 2003), child age (Adamsons & Johnson, 2013), initial level of child problems (e.g., Wolchik et al., 2007), amount of time fathers have with their children (Sandler et al., 2013), and level of interparental conflict (Sandler et al., 2008). The prior large-scale efficacy trial of the NBP with mothers was conducted with a non-Hispanic White population, so that in this trial ethnicity (i.e., Hispanic vs. non-Hispanic White) was tested as a moderator on an exploratory basis.

Methods

Participants

The sample consisted of 384 fathers (201 NBP-Dads, 183 comparison) and their children from a larger randomized effectiveness trial that also included mothers and their children. The fathers were ethnically diverse (65% non-Hispanic White, 27% Hispanic, and 7% other race or ethnicity). The children ranged from 3 to 18 years old ($M = 8.57$; $SD = 4.17$). Mean age of the fathers was 39.18 ($SD = 8.31$). Fathers varied in terms of their legal divorce status (26% legally divorced, 60% currently seeking a divorce, 14% never married but were in court to determine their child support obligations and parenting time with their children). Fathers also varied greatly in terms of their time with the child (range of overnights in the past month = 0 – 30, $M = 14.16$, $SD = 9.35$). A full description of the demographic characteristics of studied variables at baseline by condition is presented on-line in Appendix 1.

Parents in four counties in Arizona were recruited to participate in the trial. The main method through which parents were recruited was by viewing a 12-minute DVD shown in the four-hour Parent Information Program (PIP), which is mandated for all parents seeking a divorce or separation through the family courts in Arizona. The DVD informed parents about the benefits of the NBP and invited them to participate on a voluntary basis in an evaluation of either a 2-session or a 10-session version of the program. Parents anonymously completed a brief form on demographic information and a 15-item risk index which has previously been demonstrated to predict long-term problems for children following divorce (Tein, Sandler, Braver, & Wolchik, 2013) and indicated if they were interested in the program and their level of interest (Interested now, Interested later, Not sure, Want more information). Those who expressed interest provided their name and contact information and were contacted by phone and screened for eligibility. Eligibility criteria were: filing for

divorce or modification of a divorce decree within the past two years or, if never married, being in court to establish or change a parenting time agreement following separation from the child's mother in the past two years; having at least one child between the ages of 3 and 18 with whom the parent spends three or more hours each week or one or more overnights every other week; being able to do the program and assessments in English; and not being mandated to a parenting class by Child Protective Services or the Juvenile Court. Parents were also recruited from the community through media about the program and from court referrals. All parents who were eligible and enrolled in the program completed an informed consent and were interviewed with the pretest battery over the phone. Following completion of the pretest interview, parents were randomly assigned to receive either the NBP-Dads program or a 2-session comparison condition. Figure 1 shows the recruitment, randomization, and assessment at each step of the trial.

During the pretest interview fathers were asked for permission to interview their children who were ages 9 to 18 and for permission to obtain an assessment of their child by their child's teacher(s) for children who were (1) 6 to 18 years old, (2) currently enrolled in school, and (3) not home-schooled. Data were obtained for 224 of the 345 (65%) youth who were age 9 and above and from teachers for 302 of the 313 (96%) eligible youth age six and above for whom fathers had provided permission to collect teacher data. Note that children who did the interviews had more contact with their father than children who were eligible but did not do interviews (M = 17.69 vs. 14.11 days, t = 3.59, $p < .001$). Parents and children were paid $50 and $30, respectively, for their interviews. Teachers in the first cohort were paid $10 and in the second through fourth cohorts were paid $5 for completing the forms. Interviewers were blind as to program condition. Success of masking was assessed at posttest and 10-month follow-up by asking interviewers whether they thought they knew which condition the parent was in, and, if so, which condition; 94% at posttest and 96% at 10-month follow-up reported that they did not know or had the incorrect answer about group assignment.

Intervention and Comparison Conditions

NBP-Dads.—As described in the introduction, the NBP-Dads is a 10-session (plus two phone sessions) parenting program that was adapted from the New Beginnings Program that was originally tested with divorced mothers of children ages 8–15 (Wolchik et al., 2007). To adapt the program for the population of divorced families, activities and examples that applied to a broader age range of children (age 3–18) were added and videos of testimonials from fathers and father modeling of the skills were used in the father program. The program was adapted to be culturally competent through manual review by experts (prevention scientists and program providers) on working with Latino and African American families and ethnic minority parents who provided feedback after pilot testing the program. The feedback led to multiple surface structure changes, but reinforced the idea that the topics taught in the program would be appropriate cross-culturally. The program was delivered in groups of fathers (total of 24 groups; M = 9.09 per group, range = 4–12) led by a trained leader.

Comparison condition.—The 2-session comparison condition was designed to be an active control in which the same risk and protective factors targeted in NBP-Dads were discussed in supportive groups. Prior trials of NBP used no-treatment and literature controls. An active control was used in this study because our recruitment from the parent education program required that we offer interested parents a credible alternative to the 10-session NBP. In the 2-session program parents set their own goals for changes and the program discussed each of the factors targeted in NBP-Dads. Fathers were asked to identify strategies they could use to strengthen parenting and reduce their children's exposure to interparental conflict, barriers that made it difficult, and how they could overcome these barriers. The program then didactically presented the program skills taught in NBP-Dads as suggested strategies, however there was no role play or home practice. The program was delivered in small groups (total of 22 groups; $M = 9.00$ per group, range = 4–12) led by a trained leader.

Measures

The time frame for the measures was "within the last month." Fathers with multiple 3- to 18-year-old children completed all measures for a randomly selected "target child." All of the children in the family who were nine and above and consented to the study were assessed. Teachers reported on all children in the family for whom the father provided permission.

Parenting.—Fathers and children aged nine and above reported on parenting using multiple measures that represent the broad range of parenting behaviors that have previously been found to be related to outcomes for children from divorced families. Fathers and children were administered the same measure (with different wording for the reference person) unless specified. Closeness was assessed by a single item, "How close do you feel to your child/father?" (Menning, 2006). Three subscales from the Child Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965) were used to assess acceptance (16 items, father report $\alpha = .87$, child report $\alpha = .95$), rejection (16 items, father report $\alpha = .80$, child report $\alpha = .88$), and consistency of discipline (eight items, father report $\alpha = .80$, child report $\alpha = .80$). The seven-item family routine scale was adapted from the Family Routines Inventory (Jensen, James, Boyce, & Hartnett, 1983; father report $\alpha = .82$, child report $\alpha = .78$). Involvement was measured using a scale adapted from Menning (2006) to assess six types of activities fathers engage in with children (e.g., shopping, playing sports; reliability not applicable). Communication was assessed using the 10-item open communication subscale of the Parent-Adolescent Communication scale (Barnes & Olson, 1982; father report $\alpha = .82$; child report $\alpha = .93$). Because the scale was originally developed for adolescents we calculated reliability separately for father report of younger children ($\alpha = .72$ for children age 9 and below). In addition, fathers reported on three discipline scales, follow-through (11 items, $\alpha = .75$), appropriate discipline (9 items, $\alpha = .76$), and inappropriate discipline (5 items, $\alpha = .70$), from the Oregon Discipline Scale (Oregon Social Learning Center, 1991). A ratio of appropriate to appropriate plus inappropriate discipline was used to assess effective discipline. For youth 9 and above, monitoring was assessed by child and father reports of a shortened version of the Child Monitoring Scale (Hetherington et al., 1992; 11 items, father report $\alpha = .90$, child report $\alpha = .85$). Father parenting time was based on a single father report item developed for this project: "In the last 30 days, how many days did you spend two or more hours with [child] while you were both awake?"

Interparental conflict.—Fathers and children reported on the frequency and intensity of interparental conflict using the 15-item Children's Perception of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992; father report α = .90, child report α = .87). Children also reported on their perception of being caught in the middle between their parents using the Caught in the Middle scale (Buchanan, Maccoby, & Dornbusch, 1991; 7 items, α = .78) and two single items reporting badmouthing by the father and mother (Sandler, Wolchik, & Braver, 1988).

Child mental health problems.—Fathers reported on their child's behavioral problems using the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) for children ages 6 to 18 (α = .89, .90, and .95 for internalizing, externalizing, and total problems) and using the Child Behavior Checklist-Preschool (pre-CBCL; Achenbach & Rescorla, 2000) for children ages 3 to 5 (α = .89, .91, and .95 for internalizing, externalizing, and total problems). T scores were separately calculated for all CBCL and pre-CBCL measures based on child age and gender and combined to assess internalizing, externalizing, and total problems across the broad age range (T. M. Achenbach, personal communication, 2015). The Brief Problem Monitor (BPM; Achenbach, McConaughy, Ivanova, & Rescorla, 2011) was administered to children aged 9 and above to assess internalizing (6 items; α = .79), externalizing (7 items; α = .71), and total behavior problems (19 items; α = .86). Teachers completed a parallel form of the BPM to assess school-age children's internalizing (6 items, α = .88), externalizing (6 items, α = .88), and total behavioral problems (18 items, α = .91). T scores for child and teacher reports were also calculated based on child age and gender.

Developmental competencies.—Teachers completed five subscales of the Teacher-Child Rating Scale (Hightower et al., 1986) to assess children's learning problems (6 items, α = .95), assertive social skills (7 items, α = .92), task orientation (8 items, α = .96), frustration tolerance (10 items, α = .93), and social competence (5 items, α = .95).

Covariates and moderators.—In all analyses, county of residence, the baseline measure of the outcome of interest, the baseline risk index (Tein et al., 2013), and an indicator of whether the mother was also enrolled in the study (56 families had both parents enrolled in the study) were included as covariates. Baseline measure, child age, child gender, father ethnicity (non-Hispanic White vs. Hispanic), father contact, and interparental conflict were analyzed as moderators of the intervention effects.

Data Analysis Approach

We conducted attrition analyses (Jurs & Glass, 1971) to examine whether attrition rates differed across intervention conditions using χ^2 tests and whether main effects of attrition status or program by attrition status interactions on baseline variables were significant using ANOVAs (for continuous variables) or logistic regression (for categorical variables). We also performed multivariate outlier analyses to identify influential data (Neter, Wasserman, & Kutner, 1989). We assessed the equivalence of the demographic and pretest variables across conditions using *t*-tests for continuous variables and logistic regression for categorical variables.

To capture the full breadth of parenting behaviors and minimize measurement errors, we conducted confirmatory factor analysis (CFA) to examine a 2-factor model for parent and child reports, separately. For the parent model, acceptance, rejection, closeness, parent-child communication, family routines, and parental involvement were hypothesized to load onto the quality of parent-child relationship factor and follow-through, appropriate discipline, and consistency of discipline to load onto the discipline factor. For the child model, the same indicators as the parent model were hypothesized to load onto the parent-child relationship factor, and monitoring and consistency of discipline were hypothesized to load onto the discipline factor. For child report, we also examined a CFA for interparental conflict which was assessed by being caught in the middle, badmouthing, and children's perception of interparental conflict. Because there were only three observed measures for interparental conflict, the fit of the factor structure could not be evaluated. As an alternative, using the item-level scores, a second-order factor model was used to evaluate the factor structure (i.e., items were loaded onto the three first-order factors which were then loaded onto one second-order factor). We analyzed the CFAs with the full sample in the larger trial which included mothers. For the well-defined factors, we created the factor scores and applied them in the analyses. As a sensitivity analysis, for the well-defined factors, we also used unit weighting to create the factors. The evaluation of the program effects on the factor scores and the unit-weighted scores were consistent.

Analysis of covariance (ANCOVA) was used to compare the outcomes at the posttest and 10-month follow-up between the NBP-Dads and comparison conditions, controlling for covariates as described above. We used the intent-to-treat approach, using full information maximum likelihood estimation to handle missing data and Yuan and Bentler's (2000) robust correction to standard errors to adjust for clustering using M*plus* 7.3 (Muthén & Muthén, 1998–2014). The intraclass correlations (ICCs) were low for fathers nested in the intervention groups (average group size = 8.35; M_{ICC} = .01) but were high for children nested in families (average children per family = 1.54; M_{ICC} = .21 for child report, M_{ICC} = .20 for teacher report). We adjusted the standard errors to account for clustering by family.

We examined whether the intervention effects were moderated by baseline score, child age, child gender, father ethnicity (non-Hispanic White vs. Hispanic), father contact, and interparental conflict, one moderator at a time. For significant moderation effects, we estimated simple main effects, identified values of the moderator where the groups differed significantly, and calculated the proportion of the sample that fell in the region of significance (Aiken & West, 1991). We report the effect size (Cohen's *d*) at the level where the groups differed significantly for categorical moderators or at one standard deviation below or above the mean for continuous moderators. To control for Type I errors, we applied the false discovery rate procedure (FDR, Benjamini, Drai, Elmer, Kafkafi, & Golani, 2001) for the multiple tests of parenting and child behaviors, separately by father, child, and teacher reports. We focused our interpretations of effects on those that had false discovery rate (FDR) *p*-values ≤ 10% (Benjamini et al., 2001).

Results

Preliminary Analyses

A comparison of the NBP-Dads and comparison condition on 33 demographic and pretest variables found only one significant difference. Fathers in the 10-session program had more overnights per month with the child compared to fathers in the 2-session program ($M_{\text{NBP-Dads}} = 15.12$; $M_{\text{C}} = 13.09$; $t = 2.14$, $p = .03$). There were no differential attrition rates across conditions at posttest or 10-month follow-up. None of the program by attrition status interactions were significant. However, there were a few main effects of attrition. Fathers who dropped out at posttest were less educated than completers ($F(1,380) = 10.13$, $p = .002$); children of the families who dropped out at the follow-up were older ($t = -2.67$, $p = .009$), were more likely to be girls ($Wald\ \chi^2 = 4.15$, $p = .02$), and by child report, had lower scores on positive parenting ($t = 2.91$, $p = .004$) and higher scores on conflict ($t = -2.42$, $p = .02$) than children of the families who stayed. The results of multivariate outlier analyses showed that four data points across all analyses had a Cook's distance ≥ .20 (see Bollen & Jackman, 1990). Analyses were run with and without these data points. The results were consistent; thus, we retained these cases in all analyses.

Treatment Integrity

Fathers attended an average of 5.25 sessions (52%) of NBP-Dads and 1.52 sessions (76%) of the comparison condition. Fidelity of implementation was assessed by objective rater coding of leader behavior for one activity (e.g. home practice review, didactic) per session. Each instruction in the manual representing something the leader was asked to do or say (e.g., review slide on listening skills; normalize parent response) was rated on a 0–2 scale (not completed, partially completed, fully completed). There was an average of 46.4 items per activity. Fidelity was assessed as the number of points awarded divided by the number of points possible. The mean fidelity score was 63% (ICC reliability of coders was .86, SD = 0.16).

Confirmatory Factor Analysis of Parenting and Conflict

The initial two-factor model of parent report of warmth and discipline had poor fit, $\chi^2(26) = 486.05$, RMSEA = .15, CFI = .75. Rejection did not load with the other indicators of the warmth factor. After dropping the rejection subscale and allowing the unique variances between acceptance and consistency of discipline (due to common source of the scale, CPPBI) and between involvement and family routines (due to their conceptual similarity) to correlate, the fit of the two factor model was adequate, $\chi^2(17) = 69.86$, RMSEA = .06, CFI = .96. This model also had adequate fit at posttest, $\chi^2(17) = 57.77$, RMSEA = .06, CFI = .97, and at ten-month follow-up, $\chi^2(17) = 41.25$, RMSEA = .05, CFI = .97.

The initial child report 2-factor model had poor fit at pretest, $\chi^2(19) = 352.15$, RMSEA = .19, CFI = .78. The correlation between the quality of parent-child relationship and discipline factors was .92, indicating that they might not be separate constructs. We collapsed the two factors into one child report of positive parenting factor. After adding correlations of the unique variances for the same scale (i.e., acceptance, rejection, and consistency of discipline) and for involvement and family routines, the fit of the model was acceptable,

$\chi^2(17) = 53.25$, RMSEA = .07, CFI = .98. This model also had good fit at posttest, $\chi^2(17) = 32.63$, RMSEA = .05, CFI = .99, and at ten-month follow-up, $\chi^2(17) = 44.58$, RMSEA = .06, CFI = .98. The fit of child report model on interparental conflict was passable (at pretest: $\chi^2(249) = 1060.03$, RMSEA = .08, CFI = .89; at posttest: $\chi^2(249) = 1050.05$, RMSEA = .09, CFI = .90; at ten-month follow-up: $\chi^2(249) = 1004.60$, RMSEA = .09, CFI = .90). Based on the CFAs, factor scores were created for father report of warmth, discipline and child report of positive parenting and conflict. Father report of rejection, monitoring, and parenting time were analyzed as three separate parenting measures.

Program Effects on Proximal Outcomes: Parenting and Interparental Conflict

Posttest effects on parenting.—Table 1 summarizes the program effects on parenting and child outcomes. There were three main effects on parenting at posttest: compared to fathers in the comparison condition, fathers in the NBP-Dads had higher discipline ($B = 0.15$, $SE_B = 0.07$, $z = 2.07$, $p = .04$) and lower rejection scores ($B = -0.06$, $SE_B = 0.03$, $z = -2.32$, $p = .02$) by father report and had higher positive parenting scores (B = 0.23, $SE_B = 0.09$, $z = 2.57$, $p = .01$) by child report. There were also significant moderated effects on father report of parental warmth and monitoring. The program effect on warmth was moderated by father ethnicity ($B = -0.41$, $SE_B = 0.15$, $z = -2.80$, $p = .01$), such that a program effects on warmth occurred for non-Hispanic White fathers ($d = .40$). The program effect on monitoring was moderated by the baseline scores ($B = 0.36$, $SE_B = 0.15$, $z = 2.37$, $p = .02$); program effects occurred for fathers who had high baseline monitoring scores (43% of families were in the region of significance; $d = .39$).

10-month follow-up effects on parenting.—The program effects on father reports of discipline, rejection, monitoring, and parenting time were moderated by child age ($B = 0.04$, $SE_B = 0.02$, $z = 2.02$, $p = .04$; $B = -0.02$, $SE_B = 0.01$, $z = -2.26$, $p = .02$; $B = 0.11$, $SE_B = 0.04$, $z = 2.67$, $p = .01$; $B = 0.42$, $SE_B = 0.20$, $z = 2.07$, $p = .04$, respectively), such that for families with older target children, fathers in the NBP-Dads reported higher scores on discipline and monitoring, lower scores on rejection, and more days of contact than fathers in the control condition (discipline: 11% in the region of significance, $d = .21$; monitoring: 42% in the region of significance, $d = .36$; rejection: 16% in the region of significance, $d = .18$; contact: 54% in the region of significance, $d = .33$). The program effects on child reports of positive parenting was moderated by baseline level of positive parenting ($B = -0.43$, $SE_B = 0.22$, $z = -1.94$, $p = .05$). Among fathers who were rated to have lower scores on baseline positive parenting, those in the NBP were rated as having higher positive parenting scores than fathers in the control group (41% in the region of significance; $d = .33$).

Posttest and 10-month follow-up effects on interparental conflict.—There were no main effects of the program on father or child report of interparental conflict at posttest or 10-month follow-up. At posttest program effects were moderated by father ethnicity ($B = 0.19$, $SE_B = 0.09$, $z = 2.24$, $p = .03$). Non-Hispanic White fathers in the NBP-Dads indicated lower conflict than those in the control group ($d = .28$). At 10 months, although baseline interparental conflict significantly moderated the program effect on child report of conflict ($B = -0.31$, $SE_B = 0.16$, $z = -1.99$, $p = .05$), within the observed baseline conflict scores, there was no region of significance.

Program Effects on Child Outcomes

Posttest effects on child outcomes.—At posttest, there were significant moderation effects on child outcomes based on child and teacher report, but not father report. As shown in Table 2, the program effects on child report of internalizing, externalizing, and total behavioral problems were moderated by child gender ($B = -3.69$, $SE_B = 1.81$, $z = -2.04$, $p = .04$; $B = -2.90$, $SE_B = 1.38$, $z = -2.11$, $p = .04$; $B = -3.79$, $SE_B = 1.67$, $z = -2.27$, $p = .02$, respectively). The simple effect analyses showed that compared to the girls in the control group, girls in the NBP-Dads had significantly lower externalizing problems ($d = .44$) than those in the control group. The differences were not significant for boys. Program effects on teacher reported externalizing problems and total problems were moderated by child age ($B = -0.38$, $SE_B = 0.15$, $z = -2.51$, $p = .01$; $B = -0.36$, $SE_B = 0.16$, $z = -2.33$, $p = .02$; respectively). Teachers reported higher externalizing problems for younger children who were in the NBP-Dads than those in the control condition (32% in the region of significance; $d = .26$); however, teachers reported lower externalizing problems and total behavioral problems for older children who were in the NBP-Dads than those in the control condition (externalizing problems: 9% in the region of significance;, $d = .12$; total problems: 15% in the region of significance; $d = .18$). Program effects on teacher report of externalizing problems and frustration tolerance were also moderated by father ethnicity ($B = -4.31$, $SE_B = 1.46$, $z = -2.96$, $p < .01$; $B = 0.48$, $SE_B = 0.18$, $z = 2.59$, $p = .01$). For children with a non-Hispanic White father, children in the NBP-Dads had significantly higher externalizing scores ($d = .36$) than those in the control condition. However, for children with a Hispanic father, those in the NBP-Dads had significantly lower externalizing scores ($d = .52$) and significantly higher frustration tolerance ($d = .48$) than those in the control condition. Program effects on teacher reports of learning problems were moderated by baseline measure ($B = -0.25$, $SE_B = 0.08$, $z = -3.04$, $p = .002$). For children with lower learning problems at baseline, children in the NBP had higher learning problems than those in the control condition (51% in the region of significance; at −1SD, $d = .39$).

10-month follow-up effects on child outcomes.—Teachers reported that children in the NBP had higher scores on social competence compared to those in the control condition ($B = 0.38$, $SE_B = 0.14$, $z = 2.75$, $p = .01$, $d = .32$). Program effects on father report of internalizing was moderated by baseline measure ($B = 0.24$, $SE_B = 0.11$, $z = 2.26$, $p = .02$) and teacher report of internalizing problems was moderated by father ethnicity ($B = -4.55$, $SE_B = 1.78$, $z = -2.55$, $p = .01$). For children with lower baseline internalizing, those in the NBP-Dads had lower father report of internalizing problems than controls (33% in the region of significance; $d = .25$); children in the NBP-Dads had lower teacher report of internalizing problems than those in the control condition for children whose father was Hispanic ($d = .58$).

Discussion

Because of the high percentage of children who experience parental divorce (National Center for Health Statistics, 2008) and the increasing time fathers are now spending with their children following divorce (Cancian et al., 2014, there are important potential public health benefits from strengthening post-divorce father parenting. The results of this study

indicate that NBP-Dads strengthened the quality of father post-divorce parenting and impacted child behavioral problems and competencies up to ten months following the program. The results are discussed in the context of prior literature on the effects of parenting programs for fathers following divorce. Implications of the findings to improve outcomes for children following divorce, strengths and limitations of the study, and directions for future research are discussed.

This study contributes to a growing body of evidence on the effects of parenting programs with fathers. Prior studies support positive effects of parenting programs with fathers of children experiencing behavior problems (Lundahl et al., 2008) as well as those experiencing significant life transitions (e.g., child transition to kindergarten, Cowan, Cowan, & Barry, 2011). This is the only randomized trial we know of to demonstrate effects to strengthen fathers' parenting following divorce as rated by children and parents that last over a 10-month follow-up. The cross-rater consistency indicates that the program effects do not simply reflect biased father reporting. The finding that, at the 10-month follow-up, NBP-Dads improved youth report of parenting more for those who had lower scores on quality of parenting when they entered the program indicates that those fathers who are in greatest need for the program are receiving the most benefit and is consistent with prior findings from other parenting-focused preventive interventions (Sandler, Ingram, Wolchik, Tein & Winslow, 2015). Because this is the first time the program was used with children under age nine, the lack of program effects at 10-month follow-up on the younger children on father report of rejection, discipline, and parenting time indicates the need for the program to provide additional coaching, modeling, and examples of father skills use with younger children. The lack of program effects to improve warmth and conflict for Hispanic fathers indicate that further cultural adaptation is needed. The finding that program effects to improve monitoring were strongest for older children indicates that the program facilitated fathers' provision of a developmentally appropriate parenting strategy as their children are becoming more influenced by potential sources of risk (e.g., negative peer influences). Although a formal test of mediation is beyond the scope of this paper, it may be that the program effects to strengthen quality of father-child relationship (e.g., reduction in father report of rejection and increase in youth report of positive parenting) at posttest led to the time being experienced more positively, motivating fathers to increase their subsequent time with their children (Braver et al., 1993).

The lack of consistent posttest effects on child behavior may be because at this early stage of the divorce process (i.e., 60% of the sample had not yet received their divorce) children are at a very early stage of adaptation to the change in their family, and they may not yet trust the increased attention they are receiving from their fathers. At the 10-month follow-up, a significant main effect favoring NBP-Dads was found on teacher report of social competence and moderated effects were found on both father and teacher report of lower internalizing problems. The effect of the program for Hispanic fathers to reduce teacher report of children's externalizing problems and increase frustration tolerance at posttest, and to reduce teacher report of children's internalizing at 10-months is encouraging evidence for the cross-cultural competence of the program. Although there were no significant effects on child report of mental health problems at the 10-month follow-up after the false discovery rate correction, the marginally significant treatment × baseline effects on externalizing

problems showed a benefit for NBP-Dads for those with higher problems at baseline. Although these effects are promising, it may be that, similar to other parenting programs (Wolchik et al., 2007; Sandler et al., 2015) more robust effects on child behaviors will emerge over time.

Strengths, Limitations, and Directions for Future Research

One of the strengths of this evaluation was the inclusion of father and child report of parenting using a broad array of measures. The assessment of a broad array of parenting constructs is consistent with assessments used in prior research on post-divorce fathering (Adamsons & Johnson, 2013) as well as fathering in two-parent families (Lamb & Lewis, 2010). From the perspective of the influence of fathers on child development the broad range of measures represent two aspects of fathering Palkovitz (2007) identified “that always matter, no matter what the age of the child, the context of fathering, or the moderating factors” (p. 193): affective climate (e.g., warmth, love, involvement, security) and behavioral style (e.g., moderate control, monitoring).

Several limitations of this study need to be acknowledged. First, although both father and child report of parenting were obtained, there was no assessment using behavioral observation. Second, the effect sizes on parenting and mental health problems were small. However, given the high prevalence of divorce, even small effects to strengthen protective factors can be expected to have a significant public health impact on the population. A third limitation is that the follow-up was limited to 10 months following the intervention. Longer-term follow-up is necessary to assess whether the effects grow over time as they have in other programs for divorced families (Wolchik et al., 2007).

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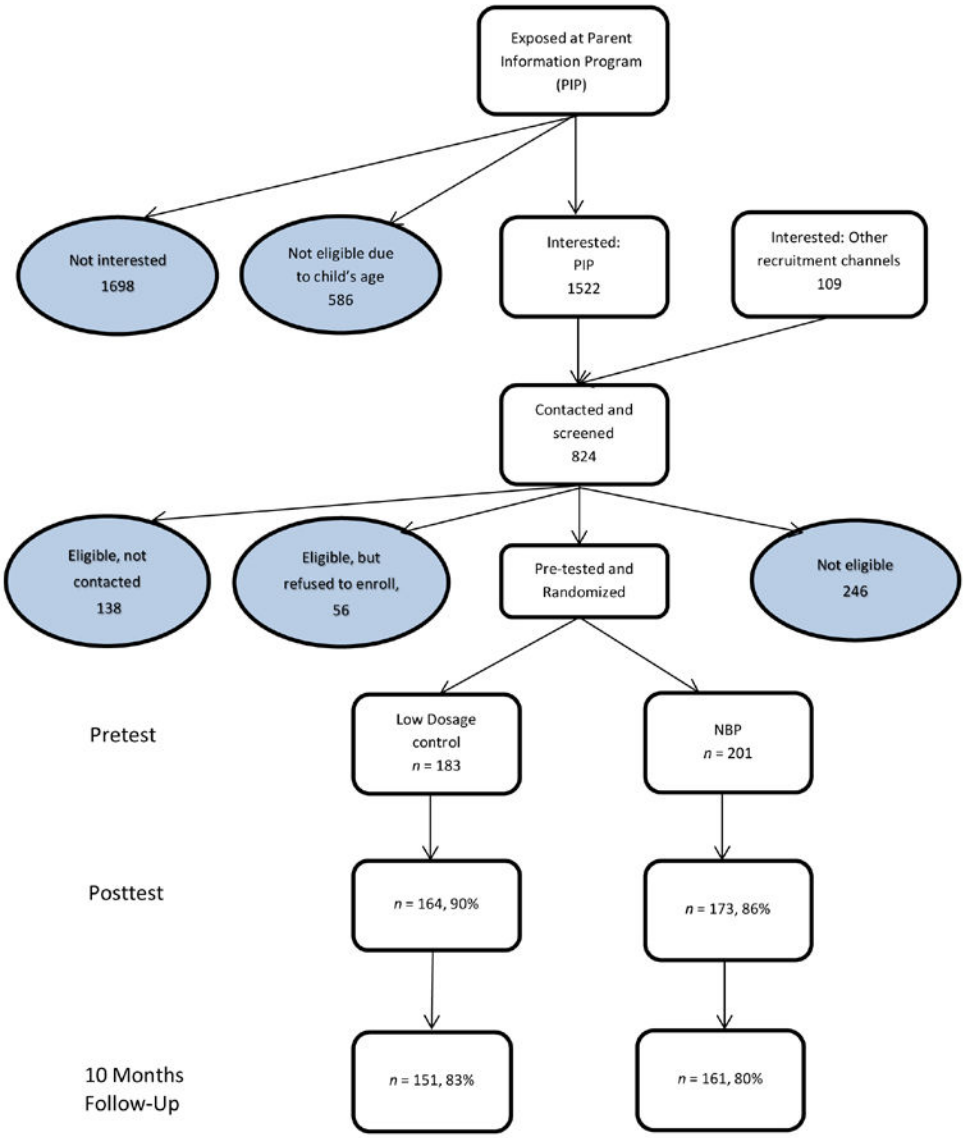

Figure 1.
Consort Diagram on recruitment and retention of participants in the trial

Table 1.

ANCOVA Results for Father and Child Reports of Parenting at Posttest and 10-Month Follow-Up

Continuous Outcome	Adjusted Mean (NBP)	Adjusted Mean (Control)	Unstandardized Program Main Effect [95% CI]	Main Effect *p*-value/p_{FDR} [1]	Significant Moderators (*p*-value/p_{FDR})	Cohen's *d*
Father Report – Posttest						
Warmth	0.04	−0.14	0.18 [0.03, 0.33]	.02/**.06**	Ethnicity (.01/**.03**) Conflict (.05/.15)	d_{white} = .40
Discipline	0.22	0.07	0.15 [0.01, 0.30]	.04/**.07**		*d* = .24
Rejection	1.38	1.44	−0.06 [−0.11, −0.01]	.02/**.06**		*d* = .21
Monitoring	4.23	4.14	0.09 [−0.11, 0.26]	.39/.49	Baseline (.02/**.09**)	$d_{+1SDbase}$ = .39
Parenting Time	16.22	15.74	0.48 [−0.87, 1.83]	.49/.49		
Child Report – Posttest						
Positive Parenting	−0.03	−0.26	0.23 [0.05, 0.40]	**.01**/NA [2]		*d* = .35
Father Report–Follow-Up						
Warmth	0.00	−0.14	0.13 [−0.03, 0.30]	.12/.20	Baseline (.03/.16)	$d_{1SDbase}$ = .24
Discipline	0.13	0.05	0.08 [−0.09, 0.24]	.36/.45	Child Age (.04/**.05**)	$d_{+1SDage}$ = .21
Rejection	1.41	1.42	-0.01 [−0.07, 0.05]	.74/.74	Child Age (.02/**.05**)	$d_{+1SDage}$ = .18
Monitoring	4.23	4.02	0.21 [0.00, 0.43]	.05/.13	Child Age (.01/**.04**) Conflict (.04/.14)	$d_{+1SDage}$ = .36
Parenting Time	16.36	14.24	2.12 [0.44, 3.80]	.01/**.07**	Child Age (.04/**.05**)	$d_{+1SDage}$ = .33
Child Report – Follow-Up						
Positive Parenting	−0.03	−0.30	0.27 [−0.02, 0.55]	.12/NA [2]	Baseline (**.05**/NA [2])	$d_{1SDbase}$ = .33

Notes. Bolded *p*-values refer to effects that were significant after the false discovery rate (FDR) procedure.

[1] *p*-value referred to the *p*-value from the original analysis and *p*-FDR refers to the *p*-value after FDR adjustment.

[2] Because there was only one outcome, the FDR procedure was not used.

Table 2.

ANCOVA Results for Father, Child, and Teacher Reports of Child Behavioral Outcomes at Posttest and at 10-Months

Continuous Outcome	Adjusted Mean (NBP)	Adjusted Mean (Control)	Unstandardized Program Main Effect [95% CI]	Main Effect *p*-value/p_{FDR} [1]	Significant Moderators (*p*-value/p_{FDR})	Cohen's *d*
Father Report – Posttest						
Internalizing	51.00	52.49	−1.48 [−3.30, 0.34]	.11/.33		
Externalizing	51.04	51.47	−0.43 [−2.00, 1.15]	.60/.60		
Total Problems	50.91	51.78	−0.87 [−2.50, 0.77]	.30/.45		
Child Report – Posttest						
Internalizing	55.78	55.82	−0.04 [−1.72, 1.64]	.96/.96	Child Sex (.04/**.04**)	d_{girl} = .31
Externalizing	54.26	54.90	−0.64 [−2.01, 0.74]	.36/.96	Child Sex (.04/**.04**)	d_{girl} = .44
Total Problems	56.14	56.39	−0.25 [−1.84, 1.34]	.76/.96	Child Sex (.02/**.04**)	d_{girl} = .47
Teacher Report – Posttest						
Internalizing	55.37	56.00	−0.63 [−1.95, 0.69]	.35/.81		
Externalizing	53.30	52.97	0.33 [−0.69, 1.34]	.53/.81	Ethnicity (.003/**.02**) Child Age (.01/**.08**)	d_{Hisp} = .52; d_{White} = .36 $d_{-1SDage}$ = .26; $d_{+1SDage}$ = .12
Total Problems	55.05	55.21	−0.17 [−1.34, 1.00]	.78/.90	Child Age (.02/**.08**)	$d_{+1SDage}$ = .18
Learning Problems	2.06	1.99	0.07 [−0.12, 0.26]	.46/.81	Baseline (.002/**.02**)	$d_{-1SDbase}$ = .39
Assertive Social Skills	3.67	3.66	0.01 [−0.15, 0.17]	.90/.90	Child Sex (.03/.20)	
Task Orientation	3.47	3.56	-0.09 [−0.25, 0.07]	.28/.81		
Frustration Tolerance	3.93	3.96	−0.04 [−0.18, 0.10]	.61/.81	Ethnicity (.01/**.04**)	d_{Hisp} = .48
Social Competence	4.71	4.49	0.22 [0.04, 0.41]	**.02**/.15		*d* = .27
Father Report – 10 Mos						
Internalizing	51.54	52.19	−0.65 [−2.73, 1.43]	.54/.99	Baseline (.02/**.07**)	$d_{-1SDbase}$ = .25
Externalizing	50.09	50.18	−0.10 [−1.92, 1.73]	.92/.99		
Total Problems	50.38	50.39	0.00 [−1.96, 1.94]	.99/.99		

Continuous Outcome	Adjusted Mean (NBP)	Adjusted Mean (Control)	Unstandardized Program Main Effect [95% CI]	Main Effect *p*-value/p_{FDR} [1]	Significant Moderators (*p*-value/p_{FDR})	Cohen's *d*
Child Report – 10 Mos						
Internalizing	55.53	56.77	-1.24 [−3.16, 0.69]	.21/.21		
Externalizing	52.28	53.74	-1.46 [−3.02, 0.10]	.07/.12		*d* = .25
Total Problems	55.61	57.24	-1.63 [−3.47, 0.20]	.08/.12		*d* = .24
Teacher Report– 10 Mos.						
Internalizing	53.81	54.22	-0.41 [−1.98, 1.15]	.60/.69	Baseline (.03/.20) Ethnicity (.01/**.09**)	d_{Hisp} = .58
Externalizing	52.97	53.64	-0.67 [−2.24, 0.89]	.40/.69		
Total Problems	54.75	55.18	-0.44 [−1.84, 0.97]	.54/.69	Child Sex (.02/.18)	
Learning Problems	1.92	2.02	-0.09 [−0.35, 0.17]	.49/.69		
Assertive Social Skills	3.85	3.65	0.19 [−0.01, 0.40]	.06/.24		*d* = .22
Task Orientation	3.55	3.46	0.08 [−0.16, 0.33]	.51/.69		
Frustration Tolerance	3.98	3.96	0.02 [−0.16, 0.21]	.83/.83		
Social Competence	4.71	4.33	0.38 [0.11, 0.65]	.01/**.05**		*d* = .32

Notes. Bolded *p*-values refer to effects that were significant after the false discovery rate (FDR) procedure.

[1] *p*-value referred to the *p*-value from the original analysis and *p*-FDR refers to the *p*-value after FDR adjustment.