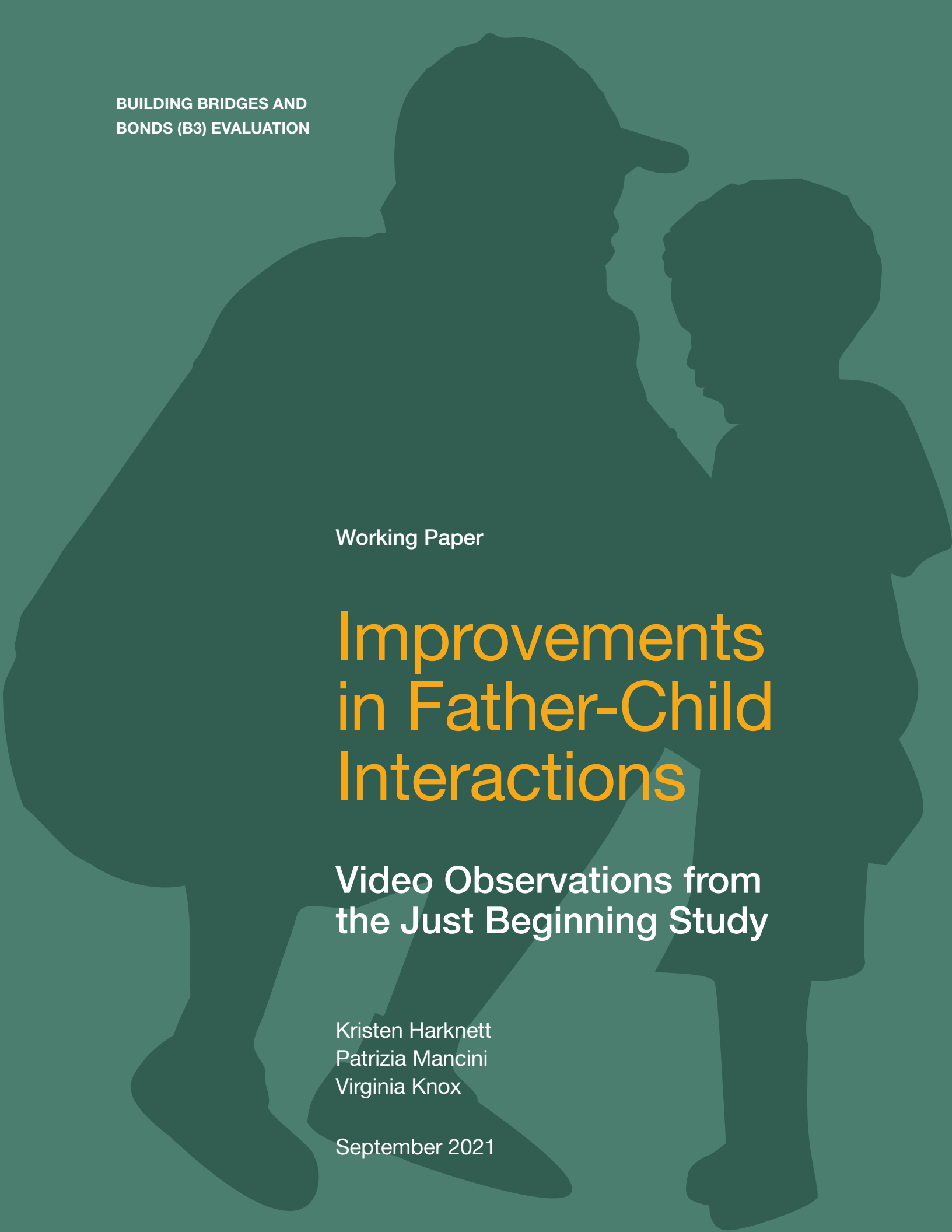

BUILDING BRIDGES AND BONDS (B3) EVALUATION

Working Paper

Improvements in Father-Child Interactions

Video Observations from the Just Beginning Study

Kristen Harknett
Patrizia Mancini
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September 2021

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SEPTEMBER 2021

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Abstract

The Just Beginning (JB) intervention aims to improve the quality of interactions between fathers with low incomes and their young children. This intervention was implemented at a fatherhood program site in Philadelphia, Pennsylvania. Fathers participated in up to five sessions of the JB program, which included unstructured play sessions with their young children. In this paper, we use growth curve models to estimate patterns of change across the five sessions in the quality of the father-child interactions, drawing on 152 video observations from 53 father-child dyads. We find that fathers' positive regard toward their children increased across JB sessions, but do not find statistically significant changes in other indicators of fathers' positive parenting behaviors or in fathers' negative parenting behaviors. Estimating results for nonresident and resident fathers, we find that improvements in positive parenting behaviors appeared to be larger and more widespread for nonresident fathers than they were for fathers who lived with their focal children.

Keywords: father involvement, fathering, parent-child interactions, dual-generation, parenting intervention

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Acknowledgments

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The Authors

Introduction

Fathers can play an important role in fostering healthy child development and in supporting children throughout their childhood and young adulthood (Cabrera, Shannon, and Tamis-LeMonda, 2007; King and Sobolewski, 2006; McLanahan, Tach, and Schneider, 2013; Videon, 2005), but prior research shows that fathers' positive influence on children depends on the quality of the father-child relationship (Adamsons and Johnson, 2013; Carlson and Magnuson, 2011; Amato and Gilbreth, 1999). Demographic trends over recent decades show a steep rise in nonmarital births (Martinez, Daniels, and Chandra, 2012; Wu, 2008), which is often associated with fathers and children spending time living apart (Musick and Michelmore, 2015). Prior research shows that nonresident fathers are often involved in parenting their children when they are first born, but later grow apart from their children (Carlson, McLanahan, Brooks-Gunn, 2008); therefore, intervening when children are young may be a good opportunity to strengthen the father-child bond, before some fathers grow more distant from their children.

Just Beginning (JB)—a one-on-one parenting program that incorporates engaging instructional videos and father-child play activities—is designed to take advantage of this moment in children's first years to strengthen the father-child bond. The JB program was modeled on the Baby Elmo intervention, which showed improvements in the quality of father-child interactions for teenage fathers who were residing in juvenile detention centers (Barr et al., 2011). The Just Beginning program intervention was part of a federally funded study of Responsible Fatherhood programs. For the study, the Just Beginning program was offered in a community setting to a diverse set of fathers with low incomes, including fathers who lived with their focal children (for each father, the child with whom he participated in Just Beginning).

In this paper, we report on results from videotaped father-child interactions over the course of the JB program. We report on how father-child interactions evolved over the course of the intervention for all fathers, and whether the changes in father-child interactions across JB sessions differed for resident fathers and fathers who lived apart from their focal children.

Prior Research

Over the past several decades, the role of fathers in families has changed dramatically. Fathers have grown increasingly likely to live apart from their children, because of the increase in children born to unmarried parents, and the high rates of relationship instability among unmarried parents (Cabrera et al., 2000; Tach and Edin, 2011). At the same time, nonresident fathers have become more involved in parenting (Adamsons and Johnson, 2013), and the normative role of fathers has expanded beyond the traditional breadwinner role to increasingly emphasize nurturing and child-rearing and to place more importance on fathers' "being there" for their children (Edin and Nelson, 2014; Summers, Boller, Schiffman, and Raikes, 2006).

Father involvement with children, especially for resident fathers, is associated with improved child outcomes (Carlson and Magnusson, 2011). Prior research on father-child interactions has found that positive father-child interaction quality in the early months of a child's life is positively associated with children's cognitive development (Sethna et al., 2017). A meta-analysis of 22 studies finds that fathers' positive engagement and parenting quality are associated with children's early learning (McWayne,

Downer, Campos, and Harris, 2013). Compiling results from 52 studies, a different meta-analysis reports that nonresident father involvement is associated with a range of positive child outcomes including children's social and emotional well-being, academic achievement, and behavioral adjustment (Adamsons and Johnson, 2013).

Over the past few decades, Responsible Fatherhood programs have taken a variety of approaches to support men in their role as actively engaged fathers. These programs provide a mix of services, including parenting services to support fathers' parenting skills and improve the father-child bond, healthy relationship services to promote cooperative coparenting between a father and his child's other parent, and employment services that aim to help fathers be able to support their children financially (Avellar et al., 2011; Dion, Zaveri, and Holcomb, 2015).

Reviews of research on fatherhood program approaches and their effects have generally found that these programs have had small positive effects on father involvement (Holmes et al., 2018). For example, one large-scale and rigorous evaluation study of Parents' Fair Share found that the program intervention increased father involvement, but only for the subset of fathers with the most limited involvement at the start of the program (Knox and Redcross, 2000). Of note, these positive effects on father involvement do not capture the quality of the father-child relationship or interaction, which may be the key to improving child outcomes (Adamsons and Johnson, 2013; Carlson and Magnuson, 2011; Amato and Gilbreth, 1999). However, the Parents and Children Together study, a recent federally funded evaluation of four Responsible Fatherhood programs, found that the workshop services on parenting, relationships, and economic stability led to increases in fathers' self-reported nurturing behavior and in fathers' time spent with children engaging in age-appropriate activities (Avellar et al., 2018).

Given the limited evidence base for programs that generate positive changes in father-child relationships, some recent studies have endeavored to work with fathers and children together in the hopes of strengthening father-child relationships (for example, Schindler, Fisher, and Shonkoff, 2017). Historically, interventions that work with parents and children together—such as large-scale home visiting programs—have tended to focus on mother-child relationships (Michalopoulos et al., 2019; Negrão, Pereira, Soares, and Mesman, 2014; Yagmur et al., 2014). A systematic review of video interventions that work with parents and children together found moderate to large positive effects on parent-child relationship quality for 41 percent of measurements, improving outcomes such as maternal sensitivity (Balldin, Fisher, and Wirtberg, 2016). However, only 3 of 29 studies reviewed included fathers, so the evidence base is far more limited when it comes to father-child interventions. One exception is a randomized controlled trial of Fathers Supporting Success in Preschoolers: A Community Parent Education Program, which included 126 fathers with low incomes recruited from Head Start centers. This study found that the intervention improved fathers' observed and self-reported parenting behaviors (Chacko, Fabiano, Doctoroff, and Fortson, 2018). The Filming Interactions to Nurture Development study is another recent example of a video-based intervention that works with fathers and children together with the aim of improving child outcomes, but we do not yet have evidence on its efficacy (Schindler, Fisher, and Shonkoff, 2017).

Of the video intervention studies, the one most closely related to the JB program, and thus the most relevant, is the Baby Elmo intervention study. The JB program was adapted from the program model developed for the Baby Elmo intervention. Baby Elmo was implemented in a juvenile detention center and indicated improvements in emotional responsiveness and father-child relationship quality among a

sample of 20 teenage fathers and their young children, ages 6 months to 3 years (Barr et al., 2011). The Baby Elmo intervention involved 10 sessions, with fathers completing 6.8 sessions on average. The effectiveness of the intervention was gauged through a video coding scheme that captures father-child interaction quality during videotaped father-child play sessions.[1] Growth curve analyses showed statistically significant improvement over the course of the 10 Baby Elmo sessions in five out of six measures of a father's emotional responsiveness to his young child. The JB study addresses whether a similar intervention is associated with similar improvements in father-child interactions for fathers served by a Responsible Fatherhood program.

Just Beginning Intervention Study Design

The Just Beginning Program intervention was part of the Building Bridges and Bonds (B3) evaluation,[2] conducted by MDRC through a contract from the Office of Planning, Research, and Evaluation in the Administration for Children and Families (ACF) within the U.S. Department of Health and Human Services, with funding from ACF's Office of Family Assistance.

The JB intervention consisted of five sessions. The curriculum developer shortened the intervention from 10 to 5 sessions, given challenges in getting fathers and children to participate in 10 sessions and given that prior studies of the intervention showed improvements by session 4 or 5.[3] Like in Baby Elmo, each of the JB sessions had three components: (1) a father-facilitator training session that included an instructional *Sesame Street Beginnings* video, featuring developmentally appropriate strategies for interacting with young children; (2) a 30-minute, father-child unstructured play session in a child-friendly space with toys, soft mats, and books; and (3) a father-facilitator debrief session to reflect on how the play period had gone. Sessions generally occurred weekly and each session lasted between 60 and 90 minutes. The topics covered in the first four sessions were: (1) the importance of father-child relationships and noticing the child's signals and cues, (2) following the child's lead, (3) the importance of verbal communication in child development, and (4) creating a positive learning environment through praise and encouragement. The fifth session was a review and reinforcement of the earlier topics.

The JB program was implemented at three existing Responsible Fatherhood program sites. Its evaluation includes process and impact studies, which are beyond the scope of the current paper. The impact evaluation relies on an experimental design and each father's self-reports of his parenting and relationship with his child. Recognizing that some aspects and subtleties of father-child relationship quality—in particular, the nature and quality of father-child interactions—may be difficult to capture with self-reported survey

1 A pre/post open-ended questionnaire was also used as a control measure. However, no statistical analyses were conducted to measure differences in scores.

2 The Building Bridges and Bonds (B3) evaluation is testing three innovative approaches to help fathers with low incomes improve their parenting and employment skills. Innovations were added to the usual services offered by existing Responsible Fatherhood programs. One of these three innovative approaches is Just Beginning. In a separate report, the impacts of the JB program on self-reported parenting outcomes will be assessed using an experimental research design that compares the outcomes of fathers who were randomly assigned to the JB program group with those of control group fathers who did not have access to the JB program.

3 Personal communication with curriculum developer Rachel Barr, July 16, 2020.

data, the JB study also included video observations from fathers randomly assigned to participate in Just Beginning at one of the three sites (People for People). These video observations are the basis for the current paper.

At the People for People site, as at the other two sites, the JB program was added to the usual services offered. Because People for People offers a variety of services, including employment and healthy relationship services, not all fathers entered the program with an expressed interest in learning about being better parents. Yet all fathers who sought services at People for People were screened for study eligibility, whether or not they had an interest in parenting services. To be eligible for the study, a father had to have a child between 2 months and 3 years of age, to have seen his child at least once in the past 30 days, and to have no reasons (legal or otherwise) that prevented him from participating in JB with his child.

At People for People, fathers who had been randomly assigned to the JB program group, as well as their coparents, were asked to consent to have the father-child play session videotaped for inclusion in this video-observation study.[4] Those who consented and subsequently participated in JB sessions comprise the analytic sample in this paper. If consent was not obtained, then the father/child play sessions were not recorded. Video observations were not conducted for fathers in the control group, because these fathers did not participate in Just Beginning sessions.

Data and Methods

SAMPLE AND DATA COLLECTION

This study included 53 father-child dyads from the JB program group. Video recordings of the 30-minute father-child play sessions were made by facilitators of the JB program at People for People. We received a total of 152 father-child video recordings (about three video recordings per father-child dyad on average), because some fathers attended fewer than five sessions, and because often consent for the use of video recordings in research was not obtained until after one or more sessions had already been completed. We received all five videos for 11 percent of the sample (N=6 fathers).

Video recordings of the session were encrypted and securely transferred to a trained coding team at Columbia University's Teachers College. Videos were coded using two coding schemes that capture the quality of parent-child interactions: Three-Bag Task and IGDI-IPCI (the Individual Growth and Development Indicator, Indicator of Parent-Child Interaction).

We chose the IGDI-IPCI coding scheme (Carta, Greenwood, Walker, and Buzhardt, 2010) because it is well aligned with the JB curriculum and has been used in assessments of the Baby Elmo program. We also included the Three-Bag Task coding scheme (Brady-Smith et al., 1999), because it is more commonly used and provides more opportunities for benchmarking against prior published work. Each of these coding

4 This study was approved by the MDRC Institutional Review Board on March 15, 2017. Approval number: 797029-9.

schemes is intended to measure multiple dimensions of positive and negative parenting behaviors during parent-child interactions.

The Three-Bag Task coding scheme is typically applied to a semistructured play interaction and thus was adapted for the JB intervention since the interaction involved unstructured free play. Coders reviewed the video recordings to select a 10-minute time frame to code; for consistency, whenever possible, they coded from minute 10 to minute 20 to allow for warming up at the beginning of the activity and reducing possible fatigue at the last part. Coders reached 85 percent agreement (within 1 point) or higher with a "gold standard" coder on practice videos. The gold standard coder had extensive prior training and experience with both the Three Bag and IGDI coding schemes. Twenty percent of all videos thereafter were used to check coders' ongoing reliability.

This study sample is limited to the subset of fathers who attended at least one JB session and whose video consent was received. In this sample, 60 percent of fathers lived with their focal children and only 34 percent were first-time fathers. The average father was 32 years of age with a focal child of 17 months. Most fathers in the study identified as Black or African American (89 percent). At the start of the intervention, fathers reported high relationship quality with their children at baseline (4.7 out of 5 on a relationship quality scale; see Table 1).[5] Comparing the video-observation study sample (N=53) and the full sample of fathers in the JB program group at People for People (N=126) shows that these groups have largely similar attributes (see Table 1).

DEPENDENT VARIABLES

We examined 12 scales drawn from the Three-Bag Task and IGDI-IPCI coding schemes that measure the quality of the father-child interaction during the JB play sessions. A description of these scales is in Table 2.

The Three-Bag Task coding scheme has six scales for parents' behavior: parental *sensitivity*, *stimulation of cognitive development*, *positive regard*, *detachment*, *intrusiveness*, and *negative regard*. Coders watched the father-child interaction for the full 10 minutes and assigned an overall value for each parent behavior. All six parental behavior scales were rated on a scale from 1 to 7 with values of 1=very low, 2=low, 3=moderately low, 4=moderate, 5=moderately high, 6=high, and 7=very high. In addition to the individual scales, we also analyze the "parental supportiveness" composite measure as the average of the scales for parental *sensitivity*, *stimulation of cognitive development*, and *positive regard*. (Separate analysis shows that these three measures have a Cronbach's alpha of 0.80.) Negative parenting behaviors scales for *detachment*, *intrusiveness*, and *negative regard* are analyzed as individual scales and are not combined into a composite measure because they are only moderately correlated (Cronbach's alpha of 0.43).

The IGDI-IPCI coding scheme (Carta, Greenwood, Walker, and Buzhardt, 2010) is designed to assess caregiver-child interactions and how caregivers respond to children in ways that promote positive social-emotional behaviors. The six scales for parent behavior include measures of *conveys acceptance and warmth*, *uses descriptive language*, *follows the child's lead*, *maintains or extends the child's focus*, *uses restrictions or*

5 The full sample of fathers participating in the Just Beginning intervention at the three B3 Responsible Fatherhood organization also reported high-quality relationships with their children at baseline (4.7 out of 5).

intrusions, and *uses criticism or harsh voice*. A "parent facilitators" composite measure averages together scales for *conveys acceptance and warmth*, *uses descriptive language, follows the child's lead*, and *maintains or extends the child's focus*. (Separate analysis shows that these four measures have a Cronbach's alpha of 0.78.) The "parent interrupters" scales for *uses restrictions or intrusions* and *uses criticism or harsh voice* are used as individual scales and not combined because there are only two items and they are only moderately correlated (Cronbach's alpha of 0.60).

For the IGDI-IPCI scales, the same 10-minute father-child interaction sections were coded every 30 seconds and assigned a code of 0 or 1, with 1 indicating the given behavior was observed and 0 indicating the behavior was not observed. Each scale was then summed across the entire 10 minutes to generate an overall score ranging from 0 to 20. A value of 0 indicates that the behavior was absent during the entire father-child interaction. A value of 20 indicates that the behavior was present in all 20 of the 30-second segments during the 10-minute father-child interaction.

Because we have the same father-child interaction coded using two different coding schemes, we have an opportunity to make a direct comparison of the Three-Bag Task and IGDI-IPCI scales to see how highly correlated they are with one another. We make this comparison in Table 3, showing that parental supportiveness, the composite indicator of positive parenting from the Three-Bag Task, and the parent facilitators, the parallel composite of positive parenting in the IGDI-IPCI coding scheme, are highly correlated (r=0.71).

ANALYTIC APPROACH

The central research question for this analysis is whether the quality of the father-child interaction improves across JB sessions. We used individual growth curve analysis to analyze the change in quality of father-child interaction for all Three-Bag Task and IGDI-IPCI composite and individual scales across the five JB sessions. Growth curve models were estimated in SAS using the PROC MIXED procedure. The basic model is a growth curve model where the dependent variable is a measure of interaction quality, and the main independent variable is a time variable representing the session number (0 to 4), with the first session used as the baseline. The estimated intercept from this model, which is specified to vary randomly across father-child dyads, represents the average quality score for fathers at the first JB session. The regression coefficient (slope) on the session variable, which is also specified to vary randomly across dyads, represents the average change in scores associated with each additional JB session.

In addition to the model described above, we examine whether the change in scores differs across resident and nonresident fathers, by estimating a model that also includes an indicator for whether the father lives with his child and an interaction term between this indicator and the session variable. In this model specification, the regression coefficient (slope) on the session indicator represents the average change in scores associated with each additional JB session for nonresident fathers, and the coefficient on the interaction term represents the difference between the change across sessions experienced by resident compared with nonresident fathers.[6]

6 We also estimated models that examine whether the change in scores across sessions differs by child age, child gender, and whether a father is a first-time father. We do not find that the patterns of growth across sessions vary by these characteristics, so we omit these results in the interest of brevity.

Growth Curve Model Results: Did Father-Child Interactions Change Across JB Sessions?

The main research question of interest in the video study is whether the quality of the father-child interaction improved across JB sessions. Even if a growth curve analysis does not permit causal inferences, a pattern of positive and significant change across sessions will suggest that as fathers attended more JB sessions, an improvement in the quality of the father-child interaction was observed. The right panel of Table 4 addresses this question by presenting the growth curve model results, which include no covariates aside from the JB "session" indicator. The "intercept" column contains the intercept, which can be interpreted as the mean value of the behavior code at baseline (the first session). The "slope" column summarizes the average change in the behavior code associated with one additional JB session. The "p-value" column contains the p-value of the slope coefficient.

For the Three-Bag Task coding scheme, results show that the composite measure of parental supportiveness was positively associated with JB session attendance, but did not change across sessions by a statistically significant amount (p=0.11). All three of the detailed measures of supportive parenting were positively associated with JB session attendance, but only one of three showed statistically significant improvement across sessions. Specifically, parents' *positive regard* significantly increased across JB sessions. At the start of the intervention, the average *positive regard* score (intercept) is 4.15. For each additional JB session, the *positive regard* score increases by 0.11 on average (a bit more than 1/10 of a standard deviation). These model results indicate a 0.44 point increase in *positive regard*—nearly half of a standard deviation—when a father attends all five JB sessions.[7] The two other parental supportiveness codes—parental *sensitivity* and *stimulation of cognitive development*—trended in a positive direction but did not improve across JB sessions by a statistically significant amount. Figure 1 presents parental supportiveness codes graphically for the full sample of fathers, showing the average value on the seven-point scale at each of the five JB sessions.

For three negative parent behavior codes from the Three Bag coding scheme—*detachment*, *intrusiveness*, and *negative regard*—the slope coefficient is close to zero and does not approach statistical significance. A change in negative parenting behaviors across JB sessions was not demonstrated.

Table 4 also presents results for the measures based on the IGDI-IPCI parent behavior codes. The parent facilitators composite measure did not change across JB sessions by a statistically significant amount. Two specific items among the positive parenting behaviors—*conveys acceptance and warmth*, and *maintains and extends the child's focus*—showed a pattern of increase across JB sessions, but these relationships did not achieve conventional levels of statistical significance (p=0.11 and p=0.09). Figure 2 presents changes in the parent facilitators codes and detailed positive parenting indicators across the JB sessions.

Results for two negative parent behavior codes from the IGDI coding scheme—*uses restrictions or intrusions* and *uses criticism or harsh voice*—show that although both of the slope coefficients are negatively signed, in neither case was the change across sessions statistically significant.

7 Attending five JB sessions is associated with 4 times 0.11 growth in positive regard = 0.44, because the first session is used as baseline (the intercept).

Tables 5 and 6 turn to the question of whether change in parenting behavior across JB sessions was influenced by whether the father lived with his child or was a nonresident father. The models in Tables 5 and 6 interact JB session with a dummy variable for fathers who lived with the focal children (that is, "resident father"). In these models, the session slope represents the change in behavior across sessions for nonresident fathers, and the regression coefficient on the interaction term represents the difference in the change across sessions for resident fathers relative to nonresident fathers. By extension, the change in behavior across sessions for resident fathers is the sum of the session slope and the regression coefficient on the interaction term.

Tables 5 and 6 reveal that, to the extent that father-child interaction quality improved across JB sessions, the improvement was concentrated among nonresident fathers and not among fathers who lived with their focal children.

Table 5 presents results for the Three-Bag Task coding scheme. The table shows that parental supportiveness did not significantly change across JB sessions for nonresident (0.09 slope, p=0.24) or resident fathers (0.09–0.02 = 0.07 slope). However, for nonresident fathers, additional JB sessions were associated with a statistically significant increase in *stimulation of cognitive development*. For nonresident fathers, the *stimulation of cognitive development* session slope (0.21) is positive and statistically significant while for resident fathers, the slope is 0.03 (0.21–0.18). The other two positive parenting codes—*sensitivity* and *positive regard*—did not significantly change across JB sessions for nonresident or for resident fathers.

Figure 3 displays the results for positive parenting behaviors graphically, showing that nonresident fathers' *stimulation of cognitive development* behavior increased across JB sessions, but resident fathers did not exhibit any noticeable change in this behavior.

Table 5 also shows that negative parenting behaviors—*detachment*, *intrusiveness*, and *negative regard*—did not significantly change across JB sessions for nonresident or for resident fathers.

Table 6 presents a parallel set of results for the IGDI coding scheme. The composite measure of parent facilitators was positively associated with JB session attendance, but the relationship fell short of statistical significance. Nonresident fathers experienced an average increase of 0.48 points on the parent facilitators measure with each additional JB session (p=0.09). In contrast, for resident fathers, the average change on the parent facilitators scale with each JB session was close to zero (0.48–0.41 = 0.07).

The patterns of improvement for nonresident fathers but not for resident fathers were statistically significant for *uses descriptive language* (average increase of 1.03 points per session for nonresident fathers) and *maintains or extends the child's focus* (average increase of 0.54 points per session for nonresident fathers). These results are displayed graphically in Figure 4.

ROBUSTNESS

We tested the robustness of the results to the exclusion of videos flagged for minor quality issues and to the exclusion of father-child dyads with fewer than three video observations. In each case, we found results consistent with those we presented.

Father-child interactions were not always videotaped under ideal conditions. The video camera was not always set up correctly or the space where the interaction took place was at times distracting or busy. Videos with severe problems (for example, no sound) were dropped from the analysis (N=16 videos). However, whenever possible, videos with minor quality issues were still coded and included in the analysis. Videos in this category have either minor technical quality issues (for example, poor audio, framing of the camera not ideal) or protocol issues (for example, minor interference from the facilitator during the interaction). Out of the 152 videos used for the video observations study, 21 videos were flagged for quality issues for the IGDI-IPCI codes and 28 for Three-Bag Task codes. However, when we reestimated growth curve models for only those videos without quality issues, the results were consistent with those presented.

As reported earlier, we received on average three JB session video recordings per father-child dyad. However, for eight father-child dyads only one JB session was videotaped. These videos were used in the growth curve analysis because they contribute to the estimation of the intercept. As a robustness check, we ran the growth curve model using only the subset of father-child dyads who were videotaped at least three times (33 fathers for IGDI-IPCI and 32 fathers for Three-Bag Task), and the results were consistent with those for the full sample.

Discussion

The JB Program intervention aimed to strengthen the bond between fathers with low incomes and their young children by pairing an accessible, video-based parenting curriculum with father-child play sessions. In this paper, we describe the video-observation study that was conducted to assess how father-child interactions changed across JB sessions.

Overall, we did not observe statistically significant changes in the parent supportiveness and parent facilitators composite measures of positive parenting behaviors over the course of the JB intervention. However, for some specific measures of positive parenting, we observed improvements across JB program sessions. The statistically significant improvement appeared for a father's *positive regard* toward his child. We also observed a positive trend in *maintains and extends the child's focus*, though this trend fell short of statistical significance (p=0.09).

The positive results of this video-observation study are more limited than the positive results previously found in the Baby Elmo intervention study, which targeted teenage fathers in detention centers and found significant improvements for most measures of father-child interaction quality (Barr et al., 2014). Fathers in the JB program were quite different from fathers in the earlier Baby Elmo studies. More than half of fathers in the JB study lived with their children, only one-third were first-time fathers, and their average age was 32. In contrast, the Baby Elmo sample members were far younger and were residing in detention centers, and none were living with their children. Also, positive parenting behavior scores for fathers in our sample were better than those for the teenage fathers living in juvenile detention centers in the Baby Elmo study (Barr et al., 2014).[8] These differences in sample characteristics across studies may have played

8 On the composite IGDI-IPCI parent facilitators measure, fathers in our sample have almost twice as high an average score as fathers in the Baby Elmo study.

a role in the difference in the results. Considering the Baby Elmo and JB results together, we see that a similar intervention design showed more widespread patterns of improvement when implemented for incarcerated teenage fathers than it did for a more diverse sample of fathers living in the community. It could be that the JB or Baby Elmo program intervention is more beneficial for fathers with more tenuous relationships with their children and with more limited father-child contact and parenting experience. The difference in the number of sessions—5 for JB versus 10 for Baby Elmo—could also have contributed to the relatively larger and broader changes in father/child interaction quality across sessions in the Baby Elmo study.

Results from the JB video-observation study provide some suggestive evidence that the change in father-child interactions across JB sessions may have been larger for nonresident fathers than for fathers who lived with their focal children. For nonresident fathers, we found statistically significant improvements in three of nine measures of positive parenting behaviors. From the Three-Bag Task coding scheme, we see an improvement across JB sessions in *stimulation of cognitive development*. From the IGDI-IPCI coding scheme, we see improvements across sessions in the parent facilitators composite measure as well as in *uses descriptive language* and *maintains and extends the child's focus*. These results suggest that the JB program intervention was more strongly associated with changes in father-child interactions for nonresident fathers, who may have had more to gain from the intervention, than for resident fathers, who may have had more opportunity to interact and bond with their focal children even in the absence of the program intervention.

Some important methodological caveats should be kept in mind when interpreting these results. First, the small sample size of fathers (N=53) limits our ability to detect significant findings. Also, the fathers included in this study are not necessarily representative of a broader population of fathers with low incomes. The sample is composed only of fathers who sought services at a Responsible Fatherhood program, and categorically omits fathers who had not seen their children in the previous 30 days. In addition, only those fathers who actually attended JB sessions could be videotaped playing with their children. Although descriptive comparisons (Table 1) showed that fathers who did and did not attend sessions were similar in their measured attributes, there may nevertheless be unobserved differences that limit the generalizability of these results.

Second, our results could be biased by conducting multiple comparisons. We prespecified our analyses to include 5 model specifications for each of 14 dependent variables. We present results from 28 of 70 model estimates, but estimated a total of 70 separate models. The moderately large number of models estimated pose a risk of generating statistically significant results by chance.

Perhaps the most important overarching caveat is that the results we presented rely on a nonexperimental, observational study design, and as a result we are not able to make causal inferences about the patterns of change we observe. Although improvements in father-child interaction quality were observed across JB sessions, we cannot attribute them to the JB program intervention. A rival hypothesis, consistent with the results we present, is that father-child interaction quality improves with time and practice, with or without a parenting program curriculum.

The experimental component of the JB study can provide causal estimates, albeit for self-reported parenting outcomes measured five or more months after the JB intervention took place. The rationale for this complementary study of video observation is that the nuances of father-child interaction quality may be difficult to capture with self-reported survey data. Another benefit of the video observations is that they are collected in real time, whereas survey data are collected before and then a few months after the JB intervention. Therefore, results from this video-observation study represent a valuable complement to the forthcoming experimental impact results.

Exhibits

TABLE 1. JUST BEGINNING BASELINE CHARACTERISTICS

Outcome	Fathers at P4P in the JB Program Group	P4P Fathers Who Attended at Least One JB Session	Fathers with Any Videos	Fathers with 3 or More Videos
Relationship status (%)				
Married	9.1	11.5	11.5	19.4
Engaged	4.1	5.8	5.8	3.2
In a relationship, living with partner[a]	33.1	39.1	48.1	54.8
In a relationship, not living with partner[b]	24.0	24.1	19.2	19.4
Not in a relationship	29.8	19.5	15.4	3.2
Race/ethnicity (%)				
Hispanic	4.0	1.1	0.0	0.0
White/non-Hispanic	0.0	0.0	0.0	0.0
Black/non-Hispanic	89.7	90.0	88.7	90.6
Other/multiracial	6.4	8.9	11.3	9.4
Coparenting conflict scale (1 = least to 4 = greatest)	1.9	1.7	1.7	1.6
Maternal gatekeeping scale (1 = least to 4 = greatest)	1.6	1.4	1.4	1.3
Challenges that made it hard for nonresident fathers to spend time with their focal children in the past month[c] (%)				
Work or school schedule	11.1	7.3	9.5	9.1
Car problems or lack of transportation	19.1	17.1	19.1	27.3
Not having a stable place to live	20.6	17.1	14.3	9.1
Child's mother's spouse or partner did not want them around	6.9	2.8	0.0	0.0
A court order or legal restriction	1.6	2.4	0.0	0.0
Residential father (%)	50.0	54.4	60.4	65.6
First-time father[d] (%)	36.8	35.6	34.0	25.0
Average age of the father (years)	29.9	30.8	31.9	33.9
Average age of the focal child (months)	17.9	17.6	17.4	16.0
Father-child relationship quality (1 = lowest to 5 = highest)	4.7	4.6	4.7	4.7
Sample size	126	90	53	32

(continued)

TABLE 1 (continued)

SOURCES: MDRC calculations using data from the B3 applicant characteristics survey and the Just Beginning baseline survey.

NOTES: P4P=People for People.

[a]"In a relationship, living with partner" includes sample members who reported being in a relationship and living with a partner "most of the time" or "all of the time."

[b]"In a relationship, not living with partner" includes sample members who reported being in a relationship and living with a partner "some of the time" or "none of the time."

[c]These measures includes sample members who reported that the given challenge often made it difficult for them to spend time with the focal child in the past month. These survey questions were only shown to fathers who reported not living with their focal children all or most of the time (that is, nonresident fathers).

[d]This measure includes fathers who reported only having children three years old or younger.

TABLE 2. THREE-BAG AND IGDI-IPCI TASK DEFINITIONS

THREE-BAG TASK

Sensitivity. Awareness of child's needs, moods, interests, and capabilities. How a parent tunes in and responds to the child's cues, both in times of distress and nondistress. Child-centered.

Stimulation of cognitive development. Parent's efforts at teaching to enhance perceptual, cognitive, and linguistic development, which aim to encourage child above the child's current developmental level by providing rich stimulation through language, explanations, activities, or toys.

Positive regard. Parent's expression of love, respect, and/or admiration for the child. Indicated through expressions of physical and emotional affection, warm tone of voice, attentiveness, praise.

Detachment. Parent's lack of quality awareness of, attention to, and engagement with the child. Parent's lack of response to the child's vocalizations or other cues that call for a parent's attention, lack of emotional involvement with or awareness of the child and the child's activities.

Intrusiveness. Parent's overcontrol or regulation, having a negative effect on a child's autonomy and interest in an activity. Continuation/escalation of such parent behaviors even after child expresses negative affect or disengagement. Adult-centered.

Negative regard. Parent's expression of discontent, disapproval, anger, or rejection of the child. Indicators include belittling the child's efforts, threatening punitive behavior, physical roughness, harsh language/vocalizations, showing signs of frustration, and lack of patience with the child.

IGDI-IPCI

Conveys acceptance and warmth. Responds to the child's behavior/effort with clear and appropriate signals of acceptance and warmth. Provides positive affirmations to the child through smiling, gentle and affectionate touch, agreement/acknowledgement of something the child has said.

Uses descriptive language. Uses language that (1) labels and connects objects/persons and actions or (2) labels and connects objects and adjectives in a complete sentence. Uses rich descriptive language regardless of whether the comment is a response to a child's actions/behaviors.

Follows the child's lead. Responds to the child's interest/behavior or joins in the same activity without interrupting the child or redirecting the child's behavior.

Maintains or extends the child's focus. Actively engages and responds to the child's interest so that the child's interest is extended or continued beyond the child's capability, without the parent's support.

Uses restrictions or intrusions. Unnecessarily controls the child's actions/behaviors or takes things away from the child. Uses intense and ill-paced behaviors that are not in appropriate response to the child's signals. May include the use of instructions such as "No," "Don't," "Stop," "Quit."

Uses criticism or harsh voice. Ignores the child's request for attention or support. Indicators may include raised/harsh tone of voice, derogatory nicknames, physical displays of negative affect toward the child (for example, eye rolling).

TABLE 3. CORRELATION COEFFICIENTS BETWEEN THREE-BAG TASK AND IGDI-IPCI PARENT CODES

	IGDI-IPCI						
Three-Bag Task	*Parent Facilitators*	Conveys Acceptance and Warmth	Uses Descriptive Language	Follows the Child's Lead	Maintains or Extends the Child's Focus	Uses Restrictions or Intrusions	Uses Criticism or Harsh Voice
Parental supportiveness	0.714	0.571	0.634	0.482	0.495	-0.169	-0.109
Sensitivity	0.648	0.491	0.530	0.533	0.442	-0.293	-0.182
Stimulation of cognitive development	0.663	0.431	0.634	0.449	0.567	-0.064	-0.005
Positive regard	0.482	0.539	0.428	0.216	0.213	-0.068	-0.097
Detachment	-0.317	-0.320	-0.280	-0.168	-0.165	-0.010	0.000
Intrusiveness	-0.160	-0.050	-0.073	-0.321	-0.057	0.604	0.247
Negative regard	-0.174	-0.142	-0.113	-0.180	-0.094	0.414	0.469

SOURCE: MDRC calculations using Three-Bag Task and IGDI-IPCI video data.

NOTE: Sample size = 152 video observations.

TABLE 4. DESCRIPTIVE STATISTICS AND GROWTH CURVE MODEL ESTIMATES

	Descriptive Statistic		Growth Curve Model Result		
Outcome	Mean	SD	Intercept	Slope	P-Value
Three-Bag Task parent behaviors (scale from 1 = very low to 7 = very high)					
Parental supportiveness	4.28	(0.90)	4.10	0.07	0.11
Sensitivity	4.30	(1.07)	4.24	0.02	0.77
Stimulation of cognitive development	4.11	(1.15)	3.93	0.08	0.20
Positive regard	4.43	(0.95)	4.15	0.11 *	0.03
Negative parent behaviors					
Detachment	1.39	(0.69)	1.36	0.03	0.43
Intrusiveness	2.89	(1.10)	2.86	0.02	0.76
Negative regard	2.01	(1.08)	2.00	0.00	0.99
IGDI-IPCI parent behaviors (scale from 0 = lowest to 20 = highest)					
Parent facilitators	9.93	(3.01)	9.42	0.20	0.24
Conveys acceptance and warmth	13.19	(4.68)	12.16	0.37	0.11
Uses descriptive language	10.48	(4.57)	9.70	0.28	0.29
Follows the child's lead	13.60	(3.83)	13.77	-0.10	0.71
Maintains or extends the child's focus	2.46	(2.44)	1.85	0.27 #	0.09
Parent interrupters					
Uses restrictions or intrusions	2.95	(3.02)	2.97	-0.01	0.97
Uses criticism or harsh voice	1.54	(2.10)	1.83	-0.15	0.18
Sample size = 152 video observations					

SOURCE: MDRC calculations using Three-Bag Task and IGDI-IPCI video data.

NOTES: Statistical significance levels are indicated as: ** = 1 percent; * = 5 percent; # = 10 percent. SD = standard deviation.

TABLE 5. GROWTH CURVE MODEL ESTIMATES FOR THREE-BAG TASK PARENT BEHAVIORS USING "RESIDENT FATHER" AS A COVARIATE

		Intercept	Slope	P-Value
Parental supportiveness	Intercept	4.20		
	Session		0.09	0.24
	Resident father		-0.19	0.53
	Resident x session		-0.02	0.81
Sensitivity	Intercept	4.37		
	Session		-0.05	0.63
	Resident father		-0.22	0.49
	Resident x session		0.10	0.43
Stimulation of cognitive development	Intercept	4.04		
	Session		0.21 *	0.05
	Resident father		-0.23	0.58
	Resident x session		-0.18	0.19
Positive regard	Intercept	4.20		
	Session		0.11	0.22
	Resident father		-0.08	0.78
	Resident x session		0.00	0.99
Detachment	Intercept	1.49		
	Session		-0.04	0.55
	Resident father		-0.23	0.26
	Resident x session		0.12	0.17
Intrusiveness	Intercept	2.71		
	Session		0.10	0.37
	Resident father		0.25	0.51
	Resident x session		-0.12	0.38
Negative regard	Intercept	1.94		
	Session		-0.06	0.56
	Resident father		0.12	0.75
	Resident * session		0.08	0.54

SOURCE: MDRC calculations using Three-Bag Task video data.

NOTES: Statistical significance levels are indicated as: ** = 1 percent; * = 5 percent; # = 10 percent.
Three-Bag Task scores range from 1 = very low to 7 = very high.

TABLE 6. GROWTH CURVE MODEL ESTIMATES FOR IGDI-IPCI PARENT BEHAVIORS USING "RESIDENT FATHER" AS A COVARIATE

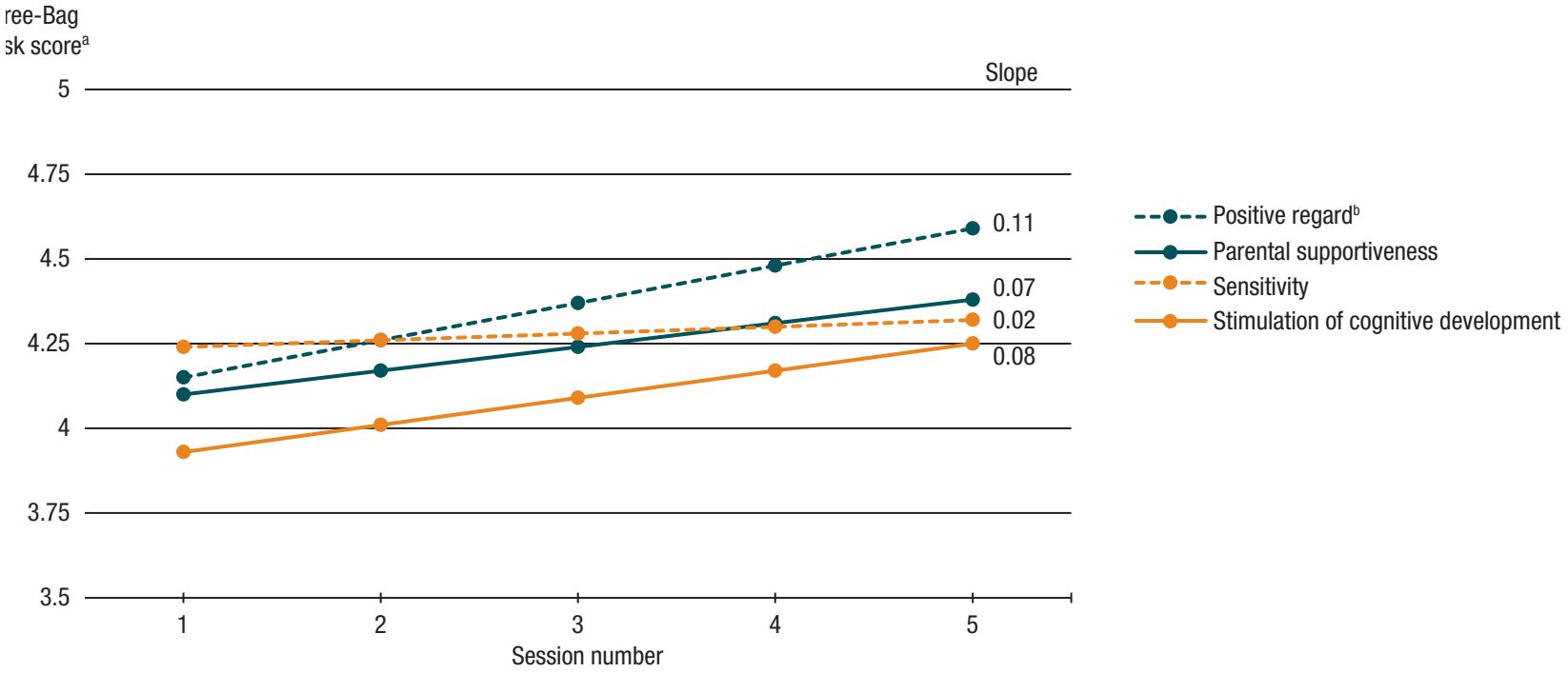
		Intercept	Slope	P-Value
Parent facilitators	Intercept	9.27		
	Session		0.48 #	0.09
	Resident father		0.20	0.83
	Resident * session		-0.41	0.25
Conveys acceptance and warmth	Intercept	11.84		
	Session		0.42	0.30
	Resident father		0.55	0.69
	Resident * session		-0.08	0.88
Uses descriptive language	Intercept	9.21		
	Session		1.03 *	0.02
	Resident father		0.68	0.66
	Resident x session		-1.12 *	0.04
Follows the child's lead	Intercept	14.18		
	Session		0.01	0.99
	Resident father		-0.79	0.54
	Resident x session		-0.11	0.85
Maintains or extends the child's focus	Intercept	1.50		
	Session		0.54 *	0.05
	Resident father		0.58	0.44
	Resident x session		-0.42	0.22
Uses restrictions or intrusions	Intercept	2.30		
	Session		0.13	0.66
	Resident father		1.19	0.30
	Resident x session		-0.25	0.51
Uses criticism or harsh voice	Intercept	1.43		
	Session		-0.12	0.53
	Resident father		0.71	0.32
	Resident x session		-0.07	0.76

SOURCE: MDRC calculations using IGDI-IPCI video data.

NOTES: Statistical significance levels are indicated as: ** = 1 percent; * = 5 percent; # = 10 percent.

IGDI-IPCI scores range from 0 to 20. A value of 0 indicates that the behavior was absent during the entire father-child interaction. A value of 20 indicates that the behavior was present in all 20 of the 30-second segments during the 10-minute father-child interaction.

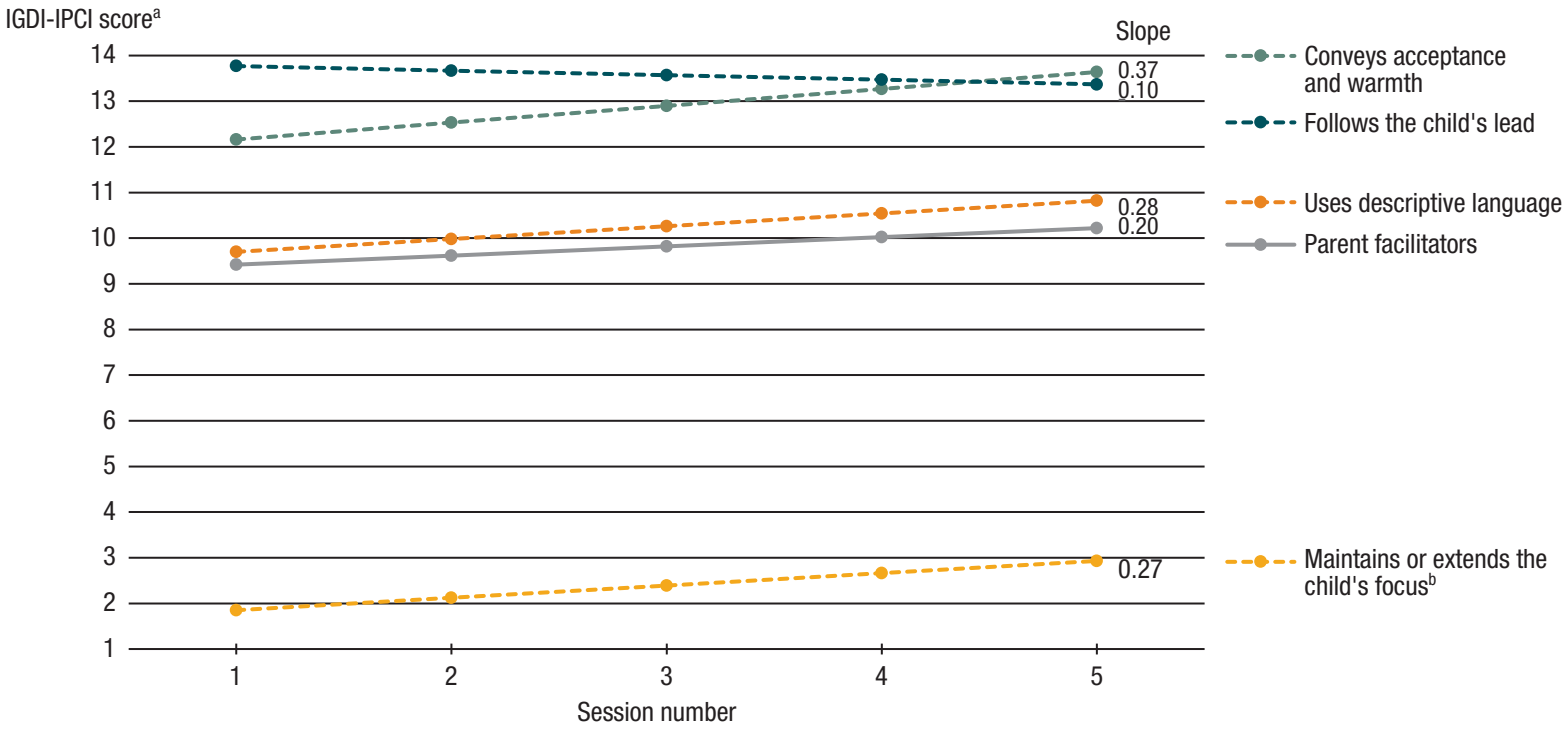
FIGURE 1. CHANGES IN THREE-BAG TASK PARENTAL SUPPORTIVENESS CODES ACROSS JUST BEGINNING SESSIONS



URCE: MDRC calculations using Three-Bag Task video data.

TES: Sample size = 152 video observations.
[a]Three-Bag Task scores range from 1 = very low to 7 = very high.
[b]The increase in scores for *positive regard* is positive and statistically significant across Just Beginning sessions (p-value = 0.03).

FIGURE 2. CHANGES IN IGDI-IPCI PARENT FACILITATORS CODES ACROSS JUST BEGINNING SESSIONS



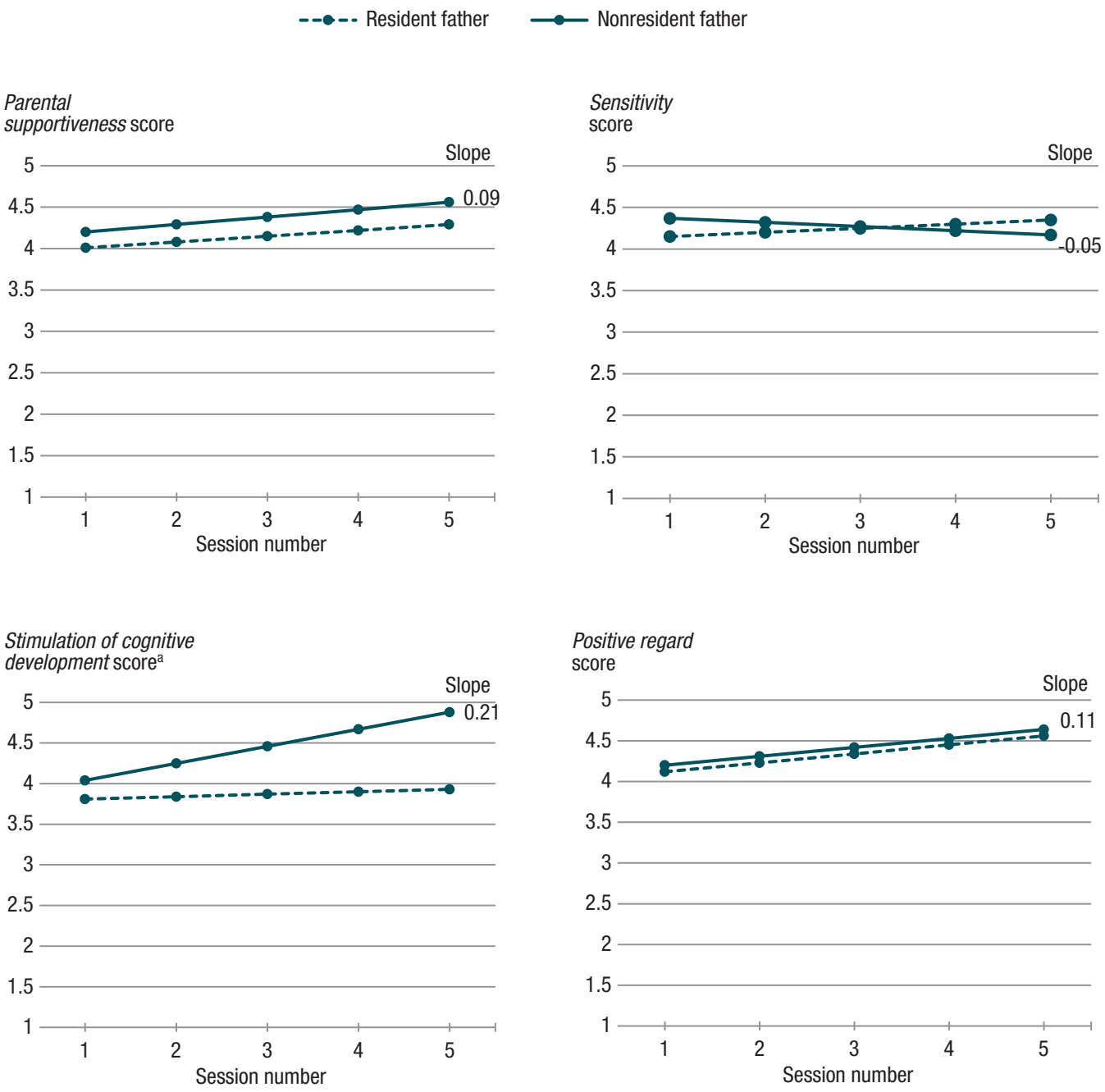
SOURCE: MDRC calculations using IGDI-IPCI video data.

NOTES: Sample size = 152 video observations.

[a]IGDI-IPCI scores range from 0 to 20. A value of 0 indicates that the behavior was absent during the 10-minute father-child interaction. A value of 20 indicates that the behavior was present in all 20 of the 30-second segments during the 10-minute father-child interaction.

[b]The change in scores for *maintains or extends the child's focus* was positive across Just Beginning sessions but fell short of the conventional threshold for statistical significance (p-value = 0.09).

FIGURE 3. CHANGE IN THREE-BAG TASK PARENTAL SUPPORTIVENESS CODES BY JUST BEGINNING SESSION, WITH "RESIDENT FATHER" AS A COVARIATE



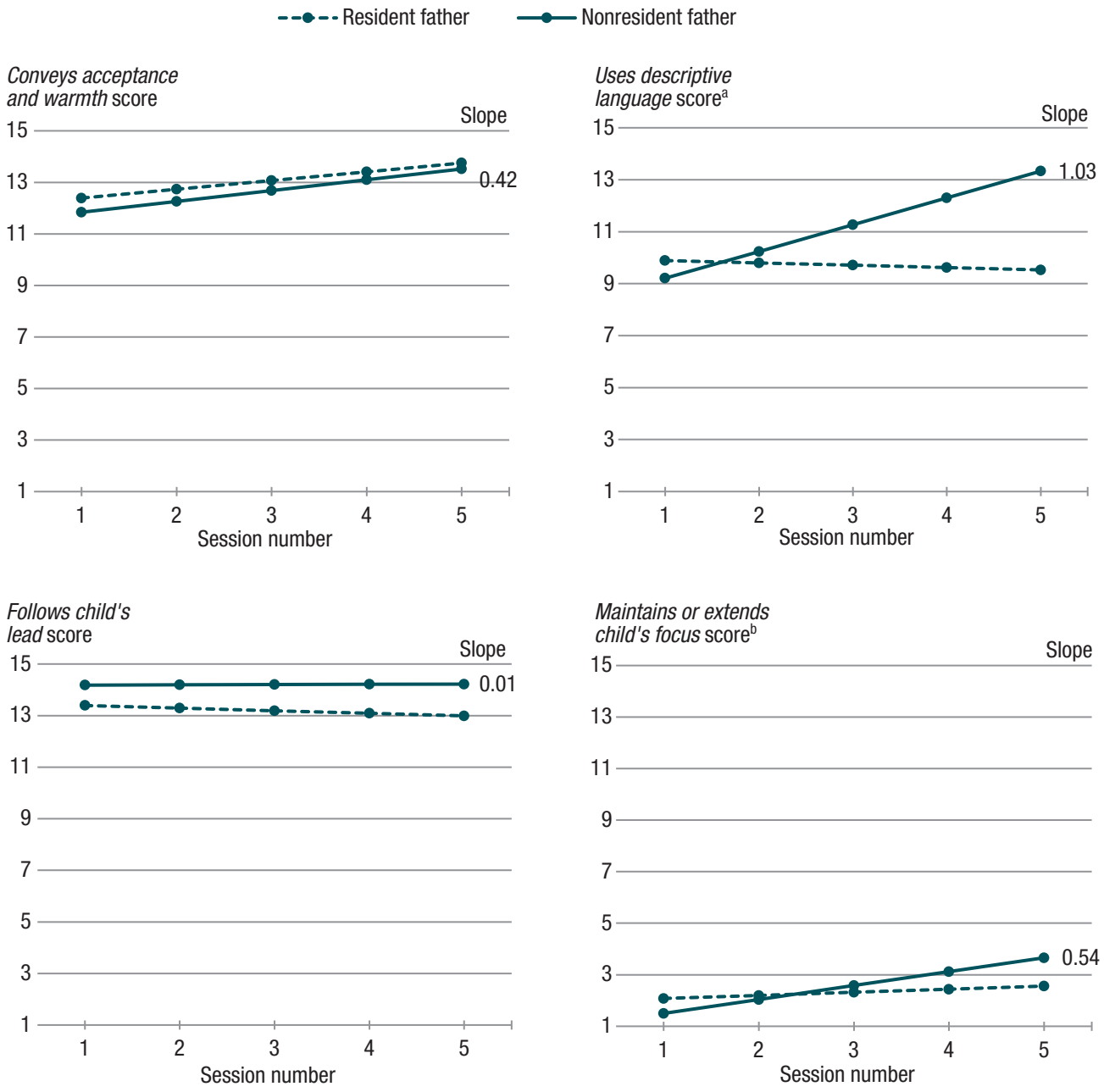
SOURCE: MDRC calculations using Three-Bag Task video data.

NOTES: Sample size = 152 video observations.

Three-Bag Task scores range from 1 = very low to 7 = very high.

[a]For nonresident fathers, the increase in scores for *stimulation of cognitive development* is positive and statistically significant across Just Beginning sessions (p-value = 0.05).

FIGURE 4. CHANGE IN IGDI-IPCI PARENT FACILITATORS CODES BY JUST BEGINNING SESSION, WITH "RESIDENT FATHER" AS A COVARIATE



SOURCE: MDRC calculations using IGDI-IPCI video data.

NOTES: Sample size = 152 video observations.

IGDI-IPCI scores range from 0 to 20. A value of 0 indicates that the behavior was absent during the 10-minute father-child interaction. A value of 20 indicates that the behavior was present in all 20 of the 30-second segments during the 10-minute father-child interaction.

[a]For nonresident fathers, the increase in scores for *uses descriptive language* is positive and statistically significant across Just Beginning sessions (p-value = 0.02).

[b]For nonresident fathers, the increase in scores for *maintains or extends the child's focus* is positive and statistically significant across Just Beginning sessions (p-value = 0.05).

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