



CAN A SMARTPHONE PROMOTE FATHERS' PROGRAM ATTENDANCE?

Findings from the B3 Exploratory Study of the DadTime Intervention

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Overview

Introduction

In recent decades, fatherhood programs have developed services to support men as they seek to boost their parenting skills, strengthen their marriages and relationships, and improve their financial well-being. Yet it remains challenging to get fathers to attend and complete these programs. The challenges can be different from those facing parenting programs where either couples or mothers are the intended participants.

In an attempt to tackle these challenges with insights from behavioral economics and other disciplines, the U.S. Department of Health and Human Services' Office of Planning, Research, and Evaluation engaged a team led by MDRC to conduct the Building Bridges and Bonds (B3) study, with funding from the Office of Family Assistance. The B3 study team convened stakeholders to collaborate on the development of a smartphone app called DadTime that integrated with Just Beginning, a five-session parenting curriculum. The app, which drew on principles of behavioral science, offered Just Beginning-related reminders, planning tools, and encouragement to program participants. This report summarizes the results of an exploratory study conducted in 2018 and 2019 that used a randomized field trial to test whether the app could be used easily by fathers and could boost program attendance and completion.

Smartphone apps were only beginning to emerge as a tool for promoting connection with fathers around the time that the study team started to develop DadTime's content and features, in 2016 and 2017. Although some of the other smartphone apps that existed in 2016 included features similar to DadTime's, they were introduced without formal evaluations. Also, the limited published research on smartphone interventions has focused on usability, and has not tested whether an app can promote program attendance specifically. This is one of the largest studies testing the effectiveness of an app for fathers.

Primary Research Questions

- What is involved in developing a smartphone app with content that promotes attendance and is tailored to a fatherhood program? How feasible is it to launch such an app and get fathers to use it?
- To what extent did the implementation of DadTime proceed as planned?

- Are fathers who have access to DadTime content during the Just Beginning fatherhood intervention more likely to attend Just Beginning sessions than fathers who only gain access to DadTime content later?

Purpose

The goal for the DadTime study was to explore the feasibility and usability of a smartphone app in the context of a highly structured intervention (Just Beginning) and to conduct an early exploratory test of its effect on attendance.

Key Findings and Highlights

- DadTime received positive reviews from fathers in initial usability interviews, but slightly more than 50 percent of fathers in the study activated the app.
- Implementation was challenging for the staff. As a result, app usage was moderate at best for all users, and declined—along with session attendance—over fathers’ time in Just Beginning.
- The study finds no evidence that the app improved Just Beginning attendance—either for the first session or overall. Fathers offered access to DadTime content during their Just Beginning sessions (the “Full DadTime” group, as described in the Methods section below) were less likely to attend the first Just Beginning session than their peers who received access to DadTime content only after their sessions were completed (the “Partial DadTime” group). The Full DadTime group also completed fewer Just Beginning sessions on average.

Various follow-up analyses do not provide a clear pattern or point to a single mechanism by which the app could have decreased attendance. Factors related to father demographics do not appear to explain the results, nor do factors related to the structure or geography of the usual-services programs. The relatively small sample size for the overall study and the low percentage of fathers who used the app overall make it difficult to analyze effects among different groups. However, lower Just Beginning participation seems to be concentrated among fathers who never activated the app and thus did not have any exposure to DadTime.

The findings in this study are consistent with research conducted since DadTime began, which shows little evidence that smartphone apps can improve program attendance. However, an app integrated with a different workshop format or curriculum could show

different effects, or perhaps an app could have an effect on a fatherhood engagement goal other than attendance.

Methods

The DadTime study used a randomized field trial to test the effect of offering access to an app on fathers' Just Beginning attendance. Due to its small scale this was an exploratory study, which means it can provide an in-depth look at the subject, but not conclusive evidence. Fathers who consented to participate in the B3 study at the three organizations implementing Just Beginning were randomly assigned to one of three groups: the services-as-usual group (50 percent of fathers); the "Full DadTime" group (25 percent), with access to the DadTime app content both during and after Just Beginning participation; or the "Partial DadTime" group (25 percent), with access to DadTime content only after Just Beginning participation concluded. The design team developed content for two versions of DadTime:

- **Full DadTime.** The Full DadTime app included content aligned with the Just Beginning sessions. While they were participating in the Just Beginning intervention, fathers in the Full DadTime group had access to reminders and planning tools before sessions, reflection prompts after sessions, and ideas for weekend activities with children. The Full DadTime app also included notifications and activities that fathers could access after the conclusion of Just Beginning.
- **Partial DadTime.** The Partial DadTime app included notifications and activities reinforcing the skills learned in Just Beginning, but fathers could access that content only after the conclusion of the scheduled Just Beginning sessions. Fathers in the Partial DadTime group did not have access to the app content while they were participating in Just Beginning.

Over the course of 18 months, 245 fathers were randomly assigned to the Full and Partial DadTime groups. Of those, 224 fathers (91 percent) reported having smartphones at intake: 117 in the Full DadTime group and 107 in the Partial DadTime group. This is one of the largest studies testing an app meant to increase fathers' attendance at an intervention.

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Introduction: Background and Motivation



One of the dilemmas facing social service programs is how to improve attendance. Individuals who enroll in social service programs related to parenting or employment are likely to benefit only if they receive the services—but those programs often have low attendance rates. People may not attend because they are dealing with complex relationship dynamics, intermittent housing and work, and few public transit options.¹ In programs designed to build skills, these same constraints can make it difficult for people to practice what they have learned and improve those skills.

Attendance rates are sometimes low in fatherhood programs.

Since the 1990s, federal and state governments have funded programs to support fathers' involvement with their children, strengthen two-parent families, and address barriers to fathers' financial stability. Along these lines, "Responsible Fatherhood" programs—funded by the Office of Family Assistance (OFA) within the Administration for Children and Families at the U.S. Department of Health and Human Services—are required to conduct activities to promote or sustain healthy marriage and relationships, strengthen parenting skills, and support economic stability by helping fathers improve their economic status.² These fatherhood programs have the same challenges described above in engaging participants.

Responsible Fatherhood programs offer services through workshops, although the number of sessions, format, and content of the workshops vary. A review conducted in 2018 of selected fatherhood programs that had received OFA funding at some point found that the percentage of sessions attended ranged from about 20 percent to 70 percent.³ Reasons for low attendance may include workshops with lengthy or frequent sessions that are difficult to balance with other needs, session topics arranged in a sequence that does not address participants' wants, and limited access to transportation.⁴

Despite this history of highly varying attendance, there have been few tests of approaches to improve attendance. The Parents and Children Together (PACT) evaluation analyzed whether different models

1 National Responsible Fatherhood Clearinghouse (2019); Baumgartner et al. (2020); Pearson, Fagan, and Kaufman (2018); Alamillo and Zaveri (2018).

2 Social Security Administration (n.d.).

3 Pearson, Fagan, and Kaufman (2018).

4 Pearson, Fagan, and Kaufman (2018).

of service delivery had different attendance rates. In PACT, programs that enrolled and served fathers in cohorts (meaning that groups of fathers were enrolled to start and end programs at the same time) saw fathers attend more total sessions than did programs that allowed fathers to enroll at any time. The economic stability workshops in PACT were also more heavily attended when the content was integrated with comprehensive work-related services.⁵

The Just Beginning fatherhood intervention included sessions that required fathers to attend with their children.

Participation can be even more challenging for fathers in interventions designed for them to attend with their children. Just Beginning is such an intervention, designed for fathers with children ages 2 months to 3 years at the time of enrollment. It is a five-session, one-on-one fatherhood curriculum that supplements the usual services offered by Responsible Fatherhood programs (including parenting and employment services). Each session focuses on a topic that is designed to promote father-child interactions and strengthen the quality of those interactions. Each session lasts between 60 and 90 minutes and consists of three components: a training component with a facilitator using instructional Sesame Beginnings videos, a father-child play session observed by the facilitator, and a reflection session in which the father discusses the play session with the facilitator and the facilitator provides encouragement, comments, and suggestions for improvement. The Just Beginning curriculum was implemented and tested in three organizations as part of a larger study called Building Bridges and Bonds (B₃), described in Box 1.1.

Recognizing that Just Beginning might face challenges with attendance, the study team sought the ideas of Just Beginning developers and staff members at the organizations implementing Just Beginning about when and why fathers might stop participating in services. The study team heard that fathers might drop out between enrollment and the first session, meaning that some fathers would never be exposed to program content. In addition, program staff members noted that attendance rates had sometimes dropped in later sessions of other workshops, especially when fathers' housing or work situations changed.

The team designed a smartphone app to address attendance and offer content.

The team conducted literature reviews and had discussions with program staff members and participating fathers, and came to see promise in using automated or technology-facilitated outreach to fathers. The team needed a system that could work across all three organizations and systems, each of which operated with a different structure, as described in Box 1.2. The team decided to pursue a smartphone app because it could work with organizations that have different program structures and would not require significantly more time of staff members already juggling many responsibilities.⁶

⁵ Zaveri, Baumgartner, Dion, and Clary (2015).

⁶ App interventions in the public health field have been used in a variety of settings and with a variety of populations, including to help people curb substance abuse and quit smoking, and to reduce risky behaviors in young people. See Gonzales, Anglin, and Glik (2013); Wei, Hollin, and Kachnowski (2011); Preston, Walhart, and O'Sullivan (2011); Free et al. (2011) for discussions of feasibility, fidelity, and app usage.

BOX 1.1. BUILDING BRIDGES AND BONDS (B3): A STUDY DESIGNED TO EXPLORE AND TEST NEW STRATEGIES FOR FATHERHOOD PROGRAMS

Recognizing the challenges that fathers with low incomes often face in maintaining stable employment and relationships with their children, the Office of Planning, Research, and Evaluation, with funding from the Office of Family Assistance, initiated the Building Bridges and Bonds (B3) study to rigorously test innovative program approaches to help fathers work toward economic stability and improved relationships with their children.

Since the 1990s, the federal and state governments have funded “Responsible Fatherhood” programs aimed at encouraging fathers’ involvement with their children, strengthening two-parent families, and increasing fathers’ economic stability. Five of the six fatherhood program sites where the B3 study was conducted were recipients of 2015 Responsible Fatherhood grants from the federal Office of Family Assistance.

The B3 study added new program components to the usual services offered by existing fatherhood programs, and rigorously estimated the effects of each added component. Three new and innovative components were implemented and evaluated across six fatherhood programs. Three of the programs implemented an employment-focused intervention; the other three implemented both Just Beginning, a parenting intervention for fathers of young children, and DadTime, the custom-built mobile application discussed in this report.*

NOTE: *The Just Beginning and DadTime interventions are described in detail in Harknett, Manno, and Balu (2017); Manno, Mancini, and O’Herron (2019); and Balu, Lee, and Steimle (2018).

The app was highly personalized to program participants. It reflected Just Beginning content and was tailored to meet each father’s needs in communicating with his child’s other caregiver (usually the mother but sometimes another relative, hereafter referred to as the “coparent”) and planning for child-friendly activities, no matter how often he spent time with his child. In addition, the app offered tools to help fathers plan to arrive at sessions each week, which could be especially helpful for people with changes in housing and work arrangements.

These features were not only designed to promote attendance and to tackle the drop-off challenges mentioned above, but also to promote Just Beginning’s goals of increasing fathers’ knowledge and changing father-child interactions at home. It focused on fathers specifically, rather than parents in general. To boost participation in the first Just Beginning session and to set a strong pattern of engagement for the remaining sessions, the team designed Just Beginning enrollment procedures so that the app would be installed on all participants’ smartphones from the start.

Past interventions involving various kinds of automated support did not offer strong evidence on ways to boost program attendance for fathers.

When the intervention design and subsequent study began in 2016, little was known about how apps worked in social service programs for a general population of participants (as opposed to how they worked

BOX 1.2. ORGANIZATIONS IMPLEMENTING JUST BEGINNING

Just Beginning was implemented in three community-based organizations that serve individuals who mainly have low incomes and are living in large cities; the three organizations have different focus areas and design their fatherhood services in different ways.

- Children’s Institute offers family-oriented programs at multiple locations in the greater Los Angeles area. Its fatherhood program, Project Fatherhood, consists mainly of a peer learning and support group that covers a variety of parenting and relationship topics. Groups meet weekly for 90 minutes. Children’s Institute’s is relatively unstructured program with open entry, meaning fathers may join groups at any time and may continue to attend the meetings indefinitely.
- People for People, Inc., offers educational and parenting services in Philadelphia. Its fatherhood program, Project Developing Active Dads (D.A.D.), is a structured, seven-week series of workshops. For B3 study participants, the fatherhood program consisted of workshops teaching fathers skills to meet challenges in the workplace.
- Seedco is a national workforce development organization. Its fatherhood program is operated by two separate community-based organizations in New York City: BronxWorks in the South Bronx and STRIVE International in East Harlem. Seedco enrolls fathers in cohorts every week or every other week, depending on the location, and workshops range from about five hours to eight hours each day, four days a week. The program includes workshops on economic stability, healthy relationships, and parenting.

among early adopters and populations specifically interested in them). Data were not widely available, for example, on how willing participants would be to download and use an app attached to a program. In addition, no apps or text message campaigns for fathers had been tested that, like DadTime, covered parenting knowledge, father-child relationships, and attendance goals in one intervention.⁷ Finally, the research and design teams knew of no rigorous studies of the effects of automated support interventions in fatherhood programs on outcomes such as program attendance (as opposed to effects on awareness or knowledge).

Among the studies of automated parenting interventions that did exist, many focused on mothers.⁸ Like DadTime, some of these automated interventions were designed to complement existing in-person interventions; for example, one text message intervention was intended to enhance in-person home visiting for mothers.⁹ Overall, such automated or technology-mediated interventions showed mixed results. The Cel-

⁷ Virani, Duffett-Leger, and Letourneau (2019).

⁸ Baggett et al. (2010); Evans, Wallace, and Snider (2012); Ondersma, Svikis, and Schuster (2007); Thraen et al. (2008); Whittaker et al. (2012).

⁹ Home visiting programs provide information, resources, and support to expectant parents and families with young children—typically infants and toddlers—in their homes.

lular Planned Activities Training program randomly assigned some mothers of preschool-age children in the evidence-based SafeCare home visiting program to be offered cell phones, cell phone service, and daily text messages from coaches. The 2013 study showed that mothers in the cellular group had less depression and were less likely to leave the program than mothers in the standard home visiting program.¹⁰

Other automated interventions were being tested at the same time. Studies of those interventions, published after DadTime was already in progress, tell a similar story.

A home visiting study—which had begun when DadTime was in development but published its results afterward—offered mothers of preschool-age children a cell phone with daily text message content. It found that mothers in that cell phone group remained in the study longer and were more likely to complete the program.¹¹ The PC-TALK study, published after the DadTime study finished data collection, tested having home visitors send parents text messages focused on parenting strategies at least three times per week.¹² The authors found that families with more messages were more engaged in home visits. However, a study from 2016 to 2018 that involved cell phone distribution and frequent text messages did not show significant results over a six-week period similar to the duration of the Just Beginning intervention.¹³ Taken together, these studies suggest that there may be some promise in using technology to support program engagement among mothers in home visiting programs. However, the programs varied in several important aspects—such as message content, frequency, and sender, and in whether the program included the distribution of phones and access to cellular services—so it is not clear what kinds of interventions or what parts of them may be effective.

Unlike DadTime, automated interventions that focus on fathers typically have not been designed to increase program attendance. Text message campaigns have focused on building fathers' knowledge of child development, parenting skills, and self-confidence with their young children; on father-child interactions generally; or on helping fathers make time for their children—but not in connection with a specific program. SMS4dads is an example of a campaign for fathers in Australia that provided encouraging text messages, links to relevant web resources, mood monitoring, and connection to crisis telephone support if needed. There was no in-person program involved.¹⁴ Its effectiveness was not evaluated.

Text4Dad sent text messages to fathers in the United States between home visits to promote their connection to a home visiting program. Although a home visiting program occurs in a different setting than do fatherhood programs like Just Beginning, the intervention was similar to DadTime in the timing of its messages and in its attempt to promote program participation. A small pilot study of Text4Dad demonstrated that it could be implemented in the context of a home visiting program. But there was no

¹⁰ Carta et al. (2013).

¹¹ Lefever et al. (2017).

¹² Bigelow et al. (2020).

¹³ Hayward et al. (2019).

¹⁴ Fletcher et al. (2017); Fletcher et al. (2016).

comparison group that could show whether Text4Dad changed fathers' parenting behavior, involvement with their children, or engagement in home visiting.¹⁵

The Suffolk County Fatherhood Initiative is a fatherhood and case management program that lasts 24 weeks—longer than Just Beginning. A study randomly assigned 71 fathers to receive either cell phones or phone minutes and twice-weekly text messages reinforcing program content; that group was compared with 73 fathers offered regular phone call reminders.¹⁶ The goal was to encourage participation in the new program, but the text messages did not specifically encourage fathers to attend. The study did not find statistically significant differences between the text message group and the phone call group in program participation or completion at 6 or 12 weeks.

Another automated mode for increasing awareness is computer-based software and instruction. The Chicago Parent Program tested a self-administered, tablet-based online curriculum called ezParent in a small, randomized trial. The efficacy study of 79 parents showed that 85 percent completed the online modules. The intervention was not designed to promote in-person attendance.¹⁷ Dad2K adapted a module from the evidence-based child-maltreatment-prevention program SafeCare, previously used with mothers (as described above). Two pilot studies showed most fathers in the target population found it acceptable. However, a randomized controlled trial of Dad2K with 99 fathers found it had no effect on program attendance or engagement.¹⁸

In short, there is little evidence on what type of automated outreach promotes program attendance in fatherhood programs. In fact, there have been few tests of content specifically designed for that purpose.

Smartphone apps, specifically, are slowly becoming available, but with limited evidence.

Smartphone apps were just beginning to emerge as a tool for promoting connection with fathers around the time that the study team started to develop DadTime's content and features in 2016-2017. Although some of the smartphone apps include features similar to DadTime, they were introduced without a formal evaluation. The 24/7 To Go app, a free National Fatherhood Initiative mobile app, provides a planning checklist fathers can download to help them schedule time and activities with their children.¹⁹ Tyro 365, an app from the Ridge Project and its Tyro Dads fatherhood program, offers a wide variety of social networking and knowledge-building features connected to its curriculum, with the aim of building a community among its participants and alumni.²⁰ The app offers “badges” and other structures to reward progress and encourage advancement to subsequent sessions or sections of the app. DadTime also includes some planning and encouragement features, as described in Chapter 2. Although these apps existed at the time DadTime was designed, they had not been evaluated.

15 Lee and Lee (2020).

16 Hayward et al. (2020).

17 Breitenstein et al. (2016).

18 Rostad et al. (2017); Self-Brown et al. (2015); Self-Brown et al. (2018).

19 National Fatherhood Initiative (n.d.).

20 Gloo LLC (2019).

The limited published research on smartphone interventions at the time had focused on usability rather than effectiveness. For example, the mDad smartphone app was developed for fathers to use on their own and had been observed primarily in small-scale usability studies.²¹ mDad provides a father-friendly user interface and content, building on small-sample studies conducted with fathers in the military and those with low incomes regarding their parenting needs and intervention-format preferences.²² Usability studies found that fathers appreciated lightness in tone, regular acknowledgment of the importance of their role as a father, and tailoring related to their children.

The B₃ team built DadTime content in collaboration with the developers and evaluators of mDad, incorporating aspects of mDad that fathers in the community organizations (where Just Beginning would be tested) had rated highly in terms of usability and usefulness—such as tone, language, and personalization. The DadTime app also offered more content than mDad, connected directly to Just Beginning’s in-person component and structured curriculum. DadTime included message content timed to promote attendance at the Just Beginning sessions. The app also sent different content to fathers based on their children’s ages, to help them with age-appropriate play activities. This type of tailoring seemed like a promising approach to address fathers’ needs and barriers, so DadTime included more specific tools to align with the Just Beginning curriculum content, session format, and planning needs than previous interventions that had not shown effects on attendance. This design work took additional effort and added costs.

Since DadTime was developed, smartphone apps have been introduced to promote mothers’ connections with programs. Just as the DadTime study’s data collection ended in 2019, Nurse-Family Partnership introduced a new smartphone app called Goal Mama to be used in tandem with its home visiting program, which serves pregnant women and new mothers. Like DadTime, Goal Mama was designed in part to address challenges of goal setting, progress, attendance, and engagement—and to promote trust and connection with the mother’s nurse home visitor. Like DadTime, Goal Mama consists of two distinct components: an app for Nurse-Family Partnership participants and a web- or app-based dashboard that allows staff members to monitor topics of interest, as well as clients’ goals and goal attainment.²³ Results on the app’s effectiveness were not available at the time this report was written.

DadTime’s exploratory study provides evidence on the viability of a program-linked app and its effect on attendance.

This is the first test of a mobile application to promote program attendance. The goal for the DadTime exploratory study was to explore the feasibility and usability of a smartphone app in the context of a highly structured intervention (Just Beginning) and to conduct an early test of its effect on engagement.²⁴ To that end, within the randomized field trial of Just Beginning, fathers randomly assigned to the Just Beginning intervention were part of a second random assignment step, to receive DadTime content either while they were in Just Beginning (Full DadTime content) or after Just Beginning was over (Partial DadTime

²¹ Lee and Walsh (2015); Lee, Walsh, and Lee (2019).

²² Lee, Hoffman, and Harris (2016); Lee et al. (2013); Lee, Yelick, Brisebois, and Banks (2011).

²³ Nurse-Family Partnership (2009).

²⁴ Exploratory analyses provide an in-depth look at a subject, but not conclusive evidence.

content). The random assignment design is described further in Chapter 2. (See the forthcoming Just Beginning report for information about the Just Beginning intervention's effectiveness.)²⁵

Although the small number of fathers included in the study meant that DadTime would have to deliver a large effect to show statistically significant improvements in session attendance and other outcomes, this exploratory study is still the largest one to date of a father-focused smartphone intervention. This study adds to the evidence on engagement by testing outreach and participation with a specific fatherhood curriculum at specific programs or sites, and goes beyond the home visiting studies to reach fathers with children up to 3 years old.

Research questions for the DadTime exploratory study were:

- What is involved in developing a smartphone app with content that promotes attendance and is tailored to a fatherhood program? How feasible is it to launch such an app and get fathers to use it? (Chapter 2)
- To what extent did the implementation of DadTime proceed as intended? (Chapters 3 and 4)
- Do fathers who have access to DadTime during the Just Beginning intervention show higher attendance at the first Just Beginning session than fathers who only gain access to DadTime content later? (Chapter 5)
- Do fathers who have access to DadTime during the Just Beginning intervention complete all five Just Beginning sessions at a higher rate than fathers who only gain access to DadTime content later? (Chapter 5)

Chapter 6 discusses implications for future research. Throughout this report, boxes summarize important implementation insights and suggested considerations for practitioners.

²⁵ Manno, Sarfo, Harknett, and Bickerton (forthcoming).

DadTime Development and Research Design

2

This chapter describes in more detail why it seemed like an app could solve some of the engagement challenges that other approaches could not. It also describes the elements that were built into the app. The chapter ends with a discussion of the DadTime study's research design and an overview of how the study investigated whether the app increased engagement with Just Beginning services.

An app could include interactive, customized, and encouraging content.

During the early small-group and one-on-one discussions with fathers and staff members mentioned in Chapter 1, the B3 team learned about father and staff needs, fathers' relationships with their children, and what would help fathers feel connected to a parenting program.¹ (At this stage, the study team did not consider questions about technology or tools.) Fathers reported wanting ways to catch up on program content, feel like they were major players in their children's lives, feel close to their young children who might not yet be able to talk, and see their progress in a program. Staff members wanted easy scheduling options and consistent reminders for fathers.

A custom-built app provided a promising way to address these and other issues raised in discussions with fathers and staff members. It could be used in tandem with Just Beginning and could include multiple components to address various user needs, it could be interactive, and it could include options for ongoing tailoring and personalization. In comparison, when the intervention was being designed in 2016-2017, the text message campaign options available were largely one-way rather than interactive. Content in many such campaigns included simple reminders or suggestions rather than planning exercises. Even apart from the limitation of one-way communication, using text messages in B3 would mean sending many messages in order to reinforce content frequently and build on concepts from the in-person sessions. There is some evidence that the number of messages a campaign sends may matter—either too many or too few messages may not be effective in changing recipients' behavior.²

¹ The fathers included in the discovery and design process described here were current and former participants in the fatherhood programs offered by the organizations in the B3 study. The B3 team was introduced to these fathers by the programs, and typically conducted one-on-one and small-group discussions to gather their reactions to DadTime designs, prototypes, and early-stage versions. For more information on the DadTime design and prototyping process, see Balu, Lee, and Steimle (2018).

² Cortes et al. (2021).

■ DadTime’s Design Goals and Content

The team began designing an app for different types of fathers with different needs: fathers who lived with their children and those who did not, new fathers and those who were having a second or third child, fathers who were young and those who were older.

The B₃ team identified several ways DadTime could be used to support Just Beginning session attendance, as shown in Table 2.1, including reinforcing information covered in the sessions, affirming progress in the curriculum and strengthening the father-child relationship, and offering action-oriented strategies to help fathers address challenges, presented in an engaging, interactive way.³ First, the app content was centered on information from the Just Beginning curriculum and its integral concepts of “Notice,” “Follow,” “Talk,” and “Encourage.” Each week the DadTime content reinforced the focus of the most recent Just Beginning session by including Sesame Beginnings video clips from that session. To keep fathers constantly learning and applying the concepts being taught, the app included prompts for session reflections and suggested activities fathers could do with their children.

Second, based on early conversations with staff members and fathers about obstacles to attendance, the B₃ team hypothesized that fathers might drop out of the curriculum if they were not making tangible progress through the sessions or achieving Just Beginning’s parenting goals. To that end, the team developed prototypes of different approaches to showing progress, as discussed in Box 2.1. Ultimately the app included a “progress tree” that showed users’ achievements in completing app content. This element provided affirmation of fathers’ progress in the app, which could also give them the feeling of making progress through Just Beginning and in their relationships with their children.

Third, a mobile app also provided an opportunity to address some of the logistical challenges that could prevent fathers from attending Just Beginning sessions. DadTime push notifications offered reminders about upcoming appointments, and those notifications were linked to interactive attendance-planning activities that encouraged users to select a time of departure for their upcoming Just Beginning sessions, as well as a mode of transportation. The app also allowed a father to send prewritten text messages to his child’s other parent to schedule the child’s attendance at Just Beginning sessions. Fathers who did not live with their children requested this feature.

Fourth, in addition to providing program-specific, encouraging content, the app was designed to be engaging. It allowed the team to create an interactive experience in which the pace and level of engagement was directed by the user, one that could feel more private than a text-message exchange, a format fathers would typically be accustomed to using with another person, even if the actual exchange were automated. During the app introduction and installation process, staff members were instructed to inform fathers that DadTime was a private space for them to reflect on the curriculum and their relationships with their children; the B₃ team would receive information on what content the fathers accessed and when, but never be able to read their responses or entries within the app. This privacy was an intentional choice meant to create a digital environment that was comfortable for the fathers.

³ Balu, Dechausay, and Anzelone (2019).

TABLE 2.1. DADTIME GOALS AND DESIGN FEATURES

CATEGORY	GOAL	FEATURE
Technical		
Capacity	Respond to fathers' concerns about whether the app would be usable on their phones and with the cellular/text plans available to them	<ul style="list-style-type: none"> • Little storage space required on a phone • Little use of of cellular data to operate • Minimal use of text messaging
Content for Fathers		
Information	Help fathers understand the Just Beginning curriculum	<ul style="list-style-type: none"> • Videos and opportunities for reflections to reinforce the concepts covered in the most recent session
Action	Encourage attendance	<ul style="list-style-type: none"> • Push notifications and reminders delivered at a time of the father's choosing
Identity	Reinforce the user's identity as a father	<ul style="list-style-type: none"> • Opportunity to upload the child's photo at setup • Opportunity to include the child's name and gender
	Tailor content to meet fathers' needs in navigating relationships with the child and the other parent	<ul style="list-style-type: none"> • Content tailored to the child's age and amount of time spent with the father • Prefilled text messages to assist in coordination with the other parent
Motivation	Make the app available to more participants	<ul style="list-style-type: none"> • Accessible in English and Spanish
	Represent progress through the app and encourage parallel growth in a father's relationship with his child	<ul style="list-style-type: none"> • "Progress tree" at end of each workflow demonstrating growth in app activities and the father-child relationship
Content for the Staff		
Action	Complement existing efforts to remind participants of upcoming sessions	<ul style="list-style-type: none"> • Automated reminders provided to fathers

The app could also be customized significantly in both text and content. For example, a father could include his child's name, gender, and photo, and the app could provide content that was appropriate to the child's age and the father's living situation (that is, living with or apart from his child). The interactive, private, and customized format was designed to appeal to fathers and encourage them to engage with the app between sessions, on their own time, when and how they preferred.

Finally, DadTime was designed to increase engagement in Just Beginning by helping fathers plan for their attendance at sessions and for how they would spend time with their children. The personalization, reminders, and encouragements listed in Table 2.1 all built on evidence-based insights from other behavioral science interventions. These insights informed features such as the personalization and planning tools, all of which targeted potential barriers to attendance that fathers talked about during the discovery and design phases described in Box 2.1.⁴

⁴ Richburg-Hayes, Anzelone, Dechausay, and Landers (2017).

BOX 2.1. PRACTICAL CONSIDERATIONS: DEVELOPING A MOBILE APP

The B3 team's design process for DadTime emphasized the recommendations and ideas of others—fatherhood program participants most of all. The team used the following approaches to design the app's content and functionality:

CREATING PROTOTYPES: The study team and the technical app developer created prototypes of the app. Initially these were hand-drawn on notecards, and then later were digital mockups much closer to the final design. The purpose of both types of mockups was the same: they allowed the team to put draft designs and content in front of fathers and gather their responses and requests, which in turn allowed them to tailor DadTime to the needs of the end user, without forcing a particular format too early. For example, fathers requested that DadTime include tools to make it easier to coordinate with a coparent, encouragement messages, and specific activities to engage in with a young child. All of these features were included in the final version of the app. (For detailed information on the development of DadTime, see [Encouraging Attendance and Engagement in Parenting Programs: Developing a Smartphone Application with Fathers, for Fathers](#).)*

CUSTOMIZING FORMAT AND STRUCTURE: The study team not only tried to provide the content that would be most useful to the end-user fathers, it also designed technical aspects of the app to be sensitive to fathers' needs and challenges. For example, both programs and participants told the team that fathers often had limited data plans for their smartphones and limited storage space on the phones themselves. DadTime was therefore designed not to use large amounts of data or require a lot of phone storage space. Program sites also had the option to obtain study-provided Wi-Fi hotspots to ensure that participants did not have to use their own data plans for the initial app installation. Further, the team was very careful to offer full privacy for any information entered into the app. The technical developers and research teams could learn who used the app, when, and how, but no one could access any of the content that fathers entered.

ENTERING AND MANAGING DATA: The team relied on program staff members to provide information about recent and upcoming Just Beginning sessions, so that DadTime could provide users with the intended content at the appropriate time. Due to time and budget constraints, the B3 team was not able to integrate this system into the common management information system that programs receiving federal Responsible Fatherhood grants were all required to use. However, in the future, it would be worth considering whether the systems could be joined, so that staff members would not need to do duplicate data entry.

NOTE: *Balu, Lee, and Steimle (2018).

■ DadTime’s Content and Structure

As illustrated in Figure 2.1, DadTime activities during the Just Beginning intervention period centered on three weekly push notifications and related activities (or “workflows”): reminders and attendance planning before sessions, reflections after sessions, and weekend prompts for father-child activities.⁵

[Reflecting on the session the day after felt] just right. Yeah, I felt like it was just right. It didn’t give me a chance to forget anything. Yeah, it was right after the session, and it gave me something else to look forward to, and even if I may, you know, fall off a task and still try to do what I want to do, the app wouldn’t let me.

—Just Beginning/DadTime participant

The research study was designed to identify whether app content delivered alongside workshops could improve attendance.

The DadTime study was not meant to be a large-scale test of a stand-alone fatherhood app, but rather a test of an app-based intervention tied to the curriculum content of Just Beginning, as delivered by organizations that already had well-developed program structures. This was the first rigorous trial of an application designed for fathers and built on a specific program’s curriculum in a study based at community organizations.

This section discusses elements of the research design, including the use of random assignment to provide credible evidence of the effects of DadTime. It also describes the fathers in the study and discusses the services received by fathers in Just Beginning who did not get DadTime until later.

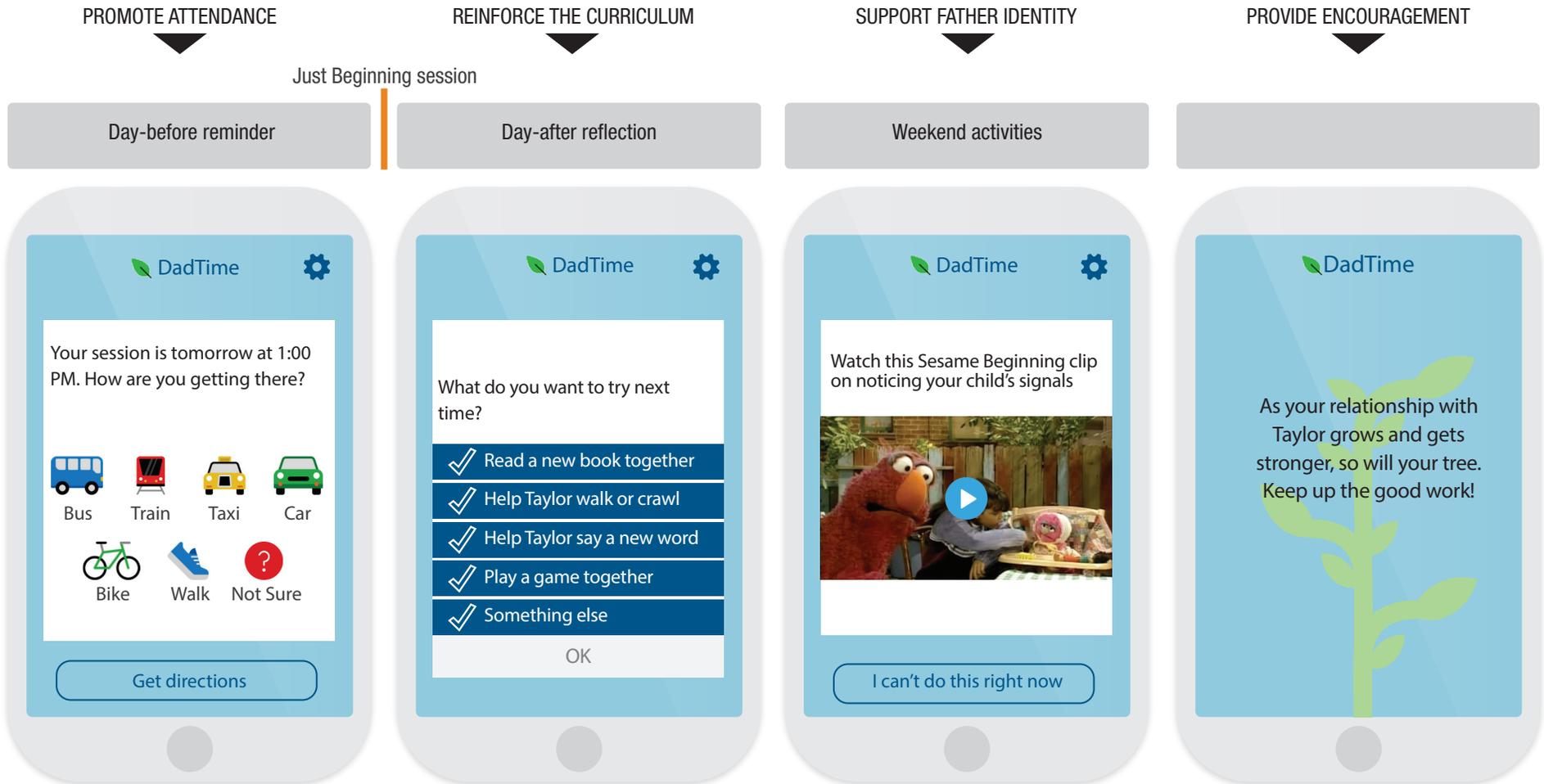
■ Random Assignment

A father was eligible for Just Beginning if he had a child between 2 months and 3 years old at the time of enrollment, if he had seen that child within the previous 30 days, and if there were no legal reasons that prevented him from spending time with the child. Eligible fathers who consented to participate in the Just Beginning study were randomly assigned to the services-as-usual group (50 percent), the Just Beginning group with Full DadTime (25 percent), or the Just Beginning group with Partial DadTime (25 percent).⁶ Fathers in the Full and Partial DadTime groups who said during intake that they had smartphones were

5 The research literature suggests that an engagement intervention—whether it is intended to boost attendance or to promote the increased use of information or other resources—is best when each interaction lasts a short time but occurs often and elicits interactions. See Hall, Cole-Lewis, and Bernhardt (2015). Studies also suggest that repeated, educational messages offered at customized intervals are more effective than single messages, though participants will opt out if there are too many messages. See Free et al. (2013); Fricke, Kalogrides, and Loeb (2018).

6 Fathers eligible for Just Beginning went through an informed-consent process with a staff member who explained the Just Beginning study requirements, risks, and benefits. Fathers who did not consent were still randomly assigned and offered services, but they were not considered study participants and no study data were collected for them.

FIGURE 2.1. DADTIME FEATURES AND TIMING



A reminder notification for the next session is sent to fathers the day before the session is scheduled to take place. If fathers request it, they will get another notification two hours before the scheduled session. The application includes tools to plan how to get to sessions, including transit options.

A notification checks in on how the session went, providing opportunities for the father to reflect on what went well and what he would like to try with his child next time.

A notification suggests activities for the father to consider when he is with his child. The app provides an opportunity to watch Sesame Beginnings videos from his session, to promote engagement with his child and allow him to practice the skills learned in the sessions.

A "progress tree" is shown at the end of each workflow to demonstrate growth in app activities and the father-child relationship.

offered DadTime and could install and activate it then. The design team developed content for two versions of DadTime:

- 1 Full DadTime.** The Full DadTime app included content aligned with the Just Beginning sessions. While they were participating in the Just Beginning intervention, fathers in the Full DadTime group had access to the reminders and planning tools before sessions, reflection prompts after sessions, and ideas for weekend activities. The Full DadTime app also included notifications and activities that fathers could access after the conclusion of their scheduled Just Beginning sessions.
- 2 Partial DadTime.** The Partial DadTime app included notifications and activities reinforcing the skills learned in Just Beginning, but fathers could access that content only after the conclusion of all the scheduled Just Beginning sessions. Fathers in the Partial DadTime group did not have access to the app content while they were participating in Just Beginning.⁷

Thus, the three weekly push notifications and related activities delivered during Just Beginning constitute the contrast between the Full and the Partial DadTime groups, as illustrated in Figure 2.2. The B₃ team elected to provide the Partial DadTime group with access to DadTime content after the conclusion of the Just Beginning intervention, rather than no content at all, to ensure that all fathers had some access to activity suggestions and content that reinforced the curriculum.⁸

■ Outreach Other Than DadTime Meant to Encourage Attendance

Each Just Beginning organization used DadTime in addition to other “business-as-usual” strategies to encourage attendance. Staff members at the participating fatherhood programs used phone calls, in-person contacts, and personally crafted text messages, among other tools, to reach fathers. In addition to the usual outreach efforts, the programs promoted Just Beginning participation using appointment reminder cards and incentives.

■ Sample Size and Statistical Power

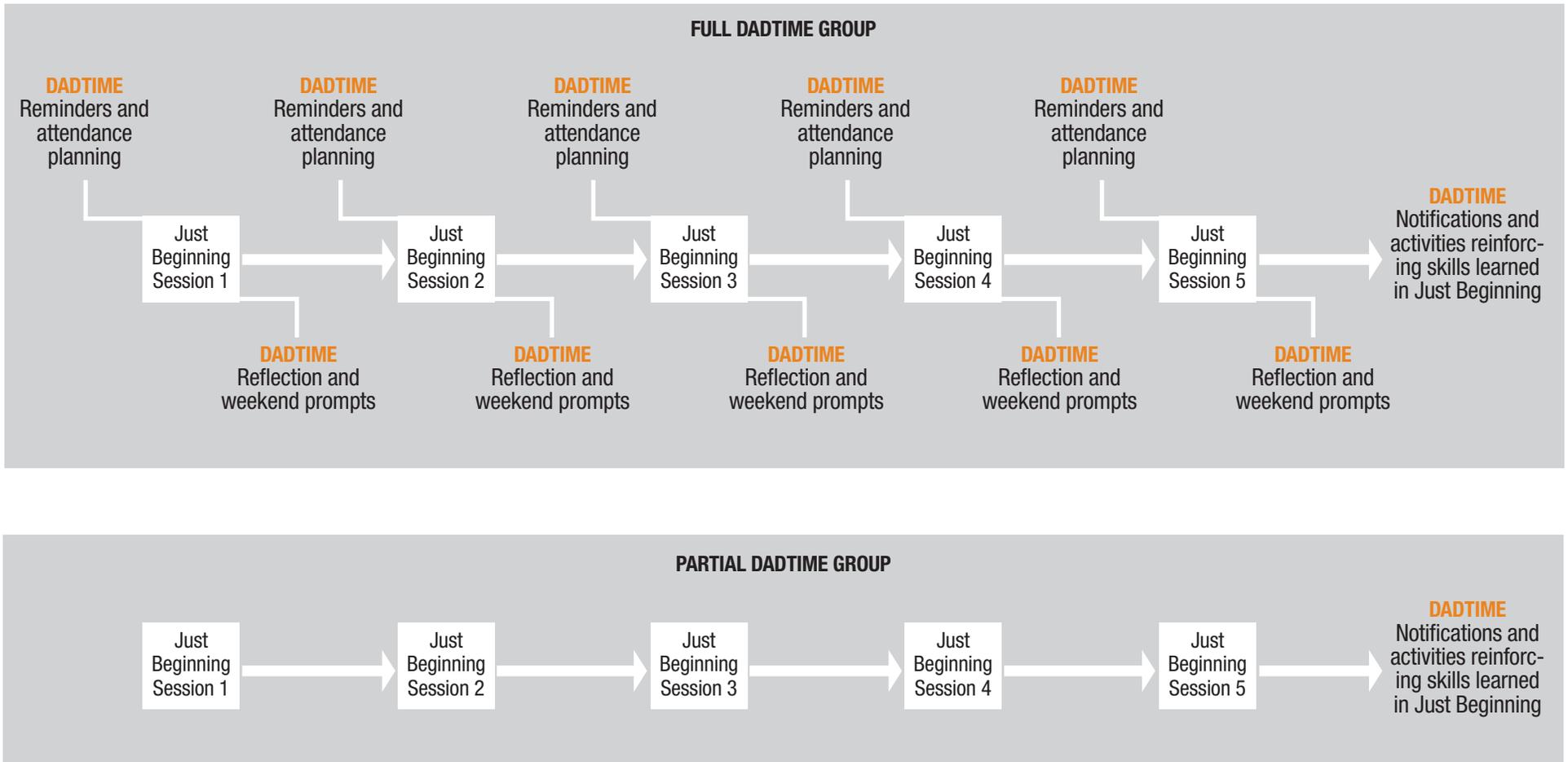
DadTime was implemented several months after the Just Beginning intervention started.⁹ The later implementation of DadTime reflected the additional time required to design, develop, and test a custom-built app. Over the course of 18 months, 245 fathers were randomly assigned to the Full and Partial DadTime

7 Both Full and Partial DadTime fathers received DadTime notifications and content after eight weeks, though some fathers took longer than eight weeks to complete their Just Beginning sessions. Partial DadTime fathers did not receive the attendance reminders and planning tools.

8 This choice also made the intake process simpler. Because all fathers with smartphones would at some point have access to DadTime content, all were asked to download and activate the app; there was no need to change the steps in the intake process based on the participant’s DadTime assignment.

9 Random assignment for the Just Beginning intervention started in October 2016. However, DadTime was initially offered in February 2017 and fully launched on June 26, 2017 (when the app was considered to be out of beta-testing mode). Only fathers randomly assigned after the full release are included in the analysis.

FIGURE 2.2. COMPARISON OF FULL AND PARTIAL DADTIME CONTENT



groups; of those, 224 fathers (91 percent of all fathers) reported having smartphones at intake: 117 in the Full DadTime group and 107 in the Partial DadTime group. This sample size for an app-specific study is larger than that in many other app studies described in Chapter 1.

Because the DadTime study relies on a small sample, the impact analysis is exploratory. The study team had initially projected a sample between 400 and 500 men, with the minimum detectable effect on first-session attendance ranging from 11.2 percentage points to 12.5 percentage points.¹⁰ The actual sample size is under 230 men, meaning the study can only detect a difference of between 15 percentage points and 16 percentage points. Despite this limitation, the study still provides an opportunity to learn about app implementation in fatherhood program settings, and to generate hypotheses about possible mechanisms for behavior change.

¹⁰ Harknett, Manno, and Balu (2017).

DadTime Implementation Within Programs

3

The study team sought to make it as easy as possible for staff members to implement the app and support fathers as they used it. However, some level of staff effort was required and in fact, staff members played an important role in helping fathers access the app and its content. This chapter focuses on staff members' communication with Just Beginning fathers, and on their work supporting DadTime activation and scheduling.

Key Findings

- As intended, staff members reached out to Just Beginning participants in the Full and Partial DadTime groups equally to provide support and session reminders.
- Staff members added 91 percent of fathers with smartphones to the web-based DadTime system. However, far fewer fathers activated the app, indicating that there was a barrier to downloading and activating the app (for example, lack of time or staff support).
- Staff members did not always use the web-based DadTime system to schedule sessions, which meant that some fathers in the Full DadTime group who activated the app did not have a chance to see session-related DadTime reminders, content, or planning tools.

To assess the implementation of the DadTime intervention, the study team collected quantitative data and qualitative information.¹ Data were also used by the research team for ongoing monitoring and technical assistance. The Full and Partial DadTime groups were similar with respect to characteristics related to parent-child relationships, employment, and demographics when they entered the study.²

¹ Appendix Table A.1 describes all data sources used for the study of DadTime.

² Appendix Table B.1 compares the baseline characteristics of the Full DadTime and Partial DadTime research groups. Although the table shows a couple of significant differences between the research groups, some differences are expected by chance because of the number of characteristics shown. To confirm that there was no systematic difference between the Full and Partial DadTime groups, a logistic regression was run using the baseline variables to predict research group status among fathers. A joint test indicated that the baseline characteristics are not collectively related to whether the fathers were in the Full or Partial DadTime group. (The p-value is 0.227.)

Staff members used similar outreach strategies for Just Beginning with both DadTime study groups.

Staff members at the Just Beginning organizations used engagement strategies that included phone calls, in-person conversations, and text messages. Table 3.1 shows that program staff members engaged most fathers in the two groups in some way (92 percent), and made contact with fathers around seven times each, on average. Differences between the Full and Partial DadTime groups are small and not statistically significant. This finding suggests that staff members used similar outreach strategies with both DadTime groups, as intended.

TABLE 3.1. NO DIFFERENCES IN ENGAGEMENT CONTACTS BETWEEN FULL AND PARTIAL DADTIME GROUPS

Measure	Full DadTime Group	Partial DadTime Group	Difference (Effect)	P-Value
Any engagement contacts with the program ^a (%)	92.3	92.5	-0.2	0.952
Average number of engagement contacts	6.6	7.6	-1.0	0.220
Sample size (total = 224)	117	107		

SOURCE: MDRC calculations using management information system data. This table reflects services received no more than six months after random assignment.

NOTES: Rounding may cause slight discrepancies in sums and differences.

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

The p-value indicates the likelihood that the estimated effect (or larger) would have been generated by an intervention with zero true effect.

These results are regression-adjusted comparisons, but not part of the formal impact analysis. The study was not designed to detect effects on these outcomes.

^aEngagement contacts are defined as contacts that last less than 15 minutes; they include contacts related to both Just Beginning and other services offered by the fatherhood programs. They can take place during a home visit, in the community, in a high school, or in the office. They can also occur by email, mail, telephone, or text message, or in other ways. They do not include DadTime app notifications.

Program staff members played an essential role in offering and activating DadTime.

The DadTime intervention was intended to be as easy as possible on program staff members. However, the study team asked for staff help with two tasks: (1) offering DadTime to fathers when they enrolled and (2) triggering DadTime notifications before sessions. Specifically, the study team asked staff members to tell fathers about DadTime at intake, add fathers' information to a web-based system created for DadTime, and help fathers download and activate the app.³ When scheduling Just Beginning sessions with

3 After a staff member added a father's information to the web-based system, the father would receive a text message with a link prompting him to download the app. The staff member was expected to verify the text message delivery and help the father download the app. Finally, the staff member gave the father an identification number required to activate the app. Activation was an essential step to match app usage to each father and his data collected from other data sources.

fathers (usually over the phone or in person), staff members usually entered the scheduled sessions in the preexisting management information system. For DadTime, they were asked to also schedule the sessions in the DadTime system to trigger push notifications and related pre-session app content and activities.

Several barriers to implementation and feasibility emerged.

The section below outlines the main implementation challenges that both program staff members and fathers faced.

■ Activation at Intake Was More Challenging Than Expected

Adding the DadTime component during program intake posed some challenges, as staff members were busy with other steps with this process. Figure 3.1 shows that staff members added most fathers who were randomly assigned to Just Beginning and had smartphones to the DadTime data system (91 percent), suggesting that this step was not cumbersome. However, the figure also shows a big drop in the number of fathers who activated the app, suggesting there were logistical or technological barriers to downloading and activating the app—or a lack of interest in doing so.

The study team heard from program staff members during regular study check-ins that adding and activating the app was typically slated to occur at the end of a lengthy Just Beginning intake process, by which time both staff and fathers were fatigued.

They would give us like a piece of, like a card or a piece of paper, and it would say “download the app for X, Y, and Z,” and that was about it.

—Just Beginning/DadTime participant

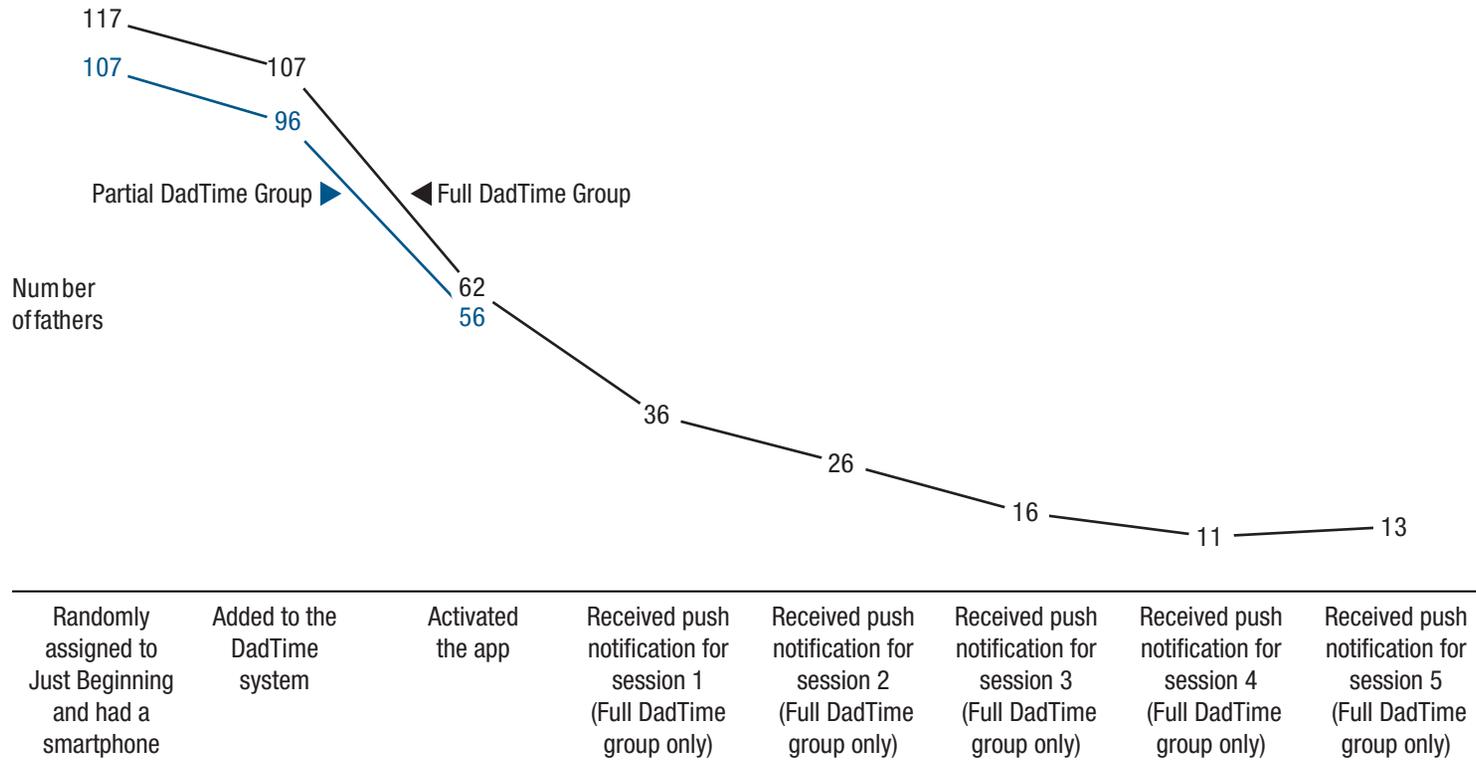
■ Fathers Needed More Than Just a Smartphone to Download DadTime

While the study team hoped that staff support at intake would facilitate the app activation process, the team learned that this assistance was not enough to encourage fathers to download and activate DadTime. Interviews with staff members involved in the intake process revealed additional barriers to downloading the app that were not uncovered during the early development and focus group stages. These interviews suggest that having a smartphone was not enough for fathers to be able to download the app. For example, some fathers did not have sufficient memory on their phone or data in their data plans, even though the memory requirement was minimal. Sometimes fathers said they had smartphones when in fact they had different types of phone or no phones at all, and sometimes fathers shared smartphones with other individuals (for example, family members). Box 3.1 discusses what it might take to help participants download and use an app.

■ Staff Members Did Not Always Schedule Just Beginning Sessions in the DadTime System

The team asked staff members to schedule sessions in the DadTime web-based data system, so that the app would send notifications to fathers one day before the sessions. This task was additional work. Also, the study team asked staff members to schedule sessions in the DadTime data system for half the fathers in Just Beginning (the Full DadTime group) but not for the other half (the Partial DadTime group). It may

FIGURE 3.1 DROP-OFF FROM RANDOM ASSIGNMENT TO DADTIME APP ACTIVATION TO SESSION SCHEDULING



SOURCES: MDRC calculations using management information system data and DadTime usage reports.

NOTE: Only fathers who activated the app are counted in "received push notification"; fathers who had this session scheduled without having activated the app are not included because they could not receive a push notification.

BOX 3.1. WHAT DOES IT TAKE FOR PROGRAMS TO HELP PARTICIPANTS DOWNLOAD AND USE AN APP?

CONSIDER INITIAL TECHNICAL, TRAINING, AND SUPPORT NEEDS

- Ensure Wi-Fi access for initial download and installation to limit participants' need for data use, either by giving them access to the program's Wi-Fi network or by providing a hotspot.
- Be sensitive to users' possible concerns about data security and privacy.
- Help fathers feel comfortable about reporting accurately their access to devices. In some cases, financial constraints, shared phones, and insufficient memory or data plans meant that fathers reported having smartphones when they did not have ones capable of running DadTime or receiving scheduled reminders.
- Make sure that staff members understand well what the app does and that they have positive perceptions of it, since they are the ones laying the groundwork for initial use.
- Build in dedicated setup time; activation and subsequent use are less likely to occur without staff involvement.

PROVIDE ONGOING SUPPORT

- Offer continued support and troubleshooting. In some cases, this assistance seemed to resolve barriers to download and use, especially if provided within approximately the first week following intake.
- Identify a central app champion to encourage the use of the app and answer users' questions.

ASSESS AND DOCUMENT USERS' RESPONSES

- Document the early user download and activation process and be open to changing and refining the process as needed. Such documentation requires staff commitment, as well as an easily accessible way to record the information; ideally, documentation would have been built into systems already used. The B3 team had more success in getting regular information regarding the activation progress and father receptivity to the app from one of the three fatherhood programs in the study. Notably, that program enrolled fathers in cohorts and installations were centralized, with one person managing the process from start to finish; that employee had a bird's-eye view of the activation progress for all program participants.

have been difficult for staff members to develop a routine scheduling process, and it probably would have been less complicated if they were asked to schedule sessions in the DadTime system for all Just Beginning program participants.

The result was that not all sessions were entered into the DadTime system for the Full DadTime group. Figure 3.1 shows that 36 fathers in the Full DadTime group (31 percent) received push notifications for their first Just Beginning sessions after downloading the app. However, data on Just Beginning attendance shows that 55 of them completed the first session (47 percent). These numbers mean that 19 fathers who activated the app did not receive session push notifications or reminders, because the staff either did not schedule the session in the DadTime system or scheduled it after the session occurred. Across the five sessions, this gap between scheduling and participation rates ranged from 16 percentage points to 22 percentage points.

DadTime Use by Fathers

4

As the previous chapter shows, installation and activation challenges limited fathers' ability to access and interact with DadTime. Only 62 of the 117 fathers randomly assigned to the Full DadTime group activated the app. This 53 percent activation rate meant that almost half of fathers never received any DadTime content, and they did not receive push notifications, session reminders, or in-app workflows. In addition, because staff members did not always schedule Just Beginning sessions on the DadTime system, not all fathers who activated the app received the DadTime reminders and planning tools before their scheduled sessions as intended.

Setting aside those fathers who did not activate the app, this chapter focuses on how fathers who did activate DadTime interacted with it. It draws on data collected from app usage reports to answer questions about how much fathers personalized the app, how often they used the app, and how often they received reminders about upcoming Just Beginning sessions, prompts for reflection after sessions, and ideas for weekend activities.

Key Findings:

- Most fathers set up their DadTime profiles, but used the additional features available to them infrequently.
- App usage was moderate at best for all users, and declined—along with session attendance—over their time in Just Beginning.

Most fathers who activated the app completed the app setup.

After activating the app at intake, fathers were prompted to set up their DadTime profiles and personalize their app experiences. Most of the fathers who activated the app (62 fathers) completed the app setup (54 fathers). All fathers who completed the app setup also selected a desired number of the app notifications per session (most fathers chose to receive two reminders, 24 hours and 2 hours before a session) and chose a preferred time during the day to receive the app notifications. Slightly over half (30 fathers) also used the optional feature to upload their children's photos, which meant their children's photos appeared along with content or session reminders, reminding them of their identity as fathers.

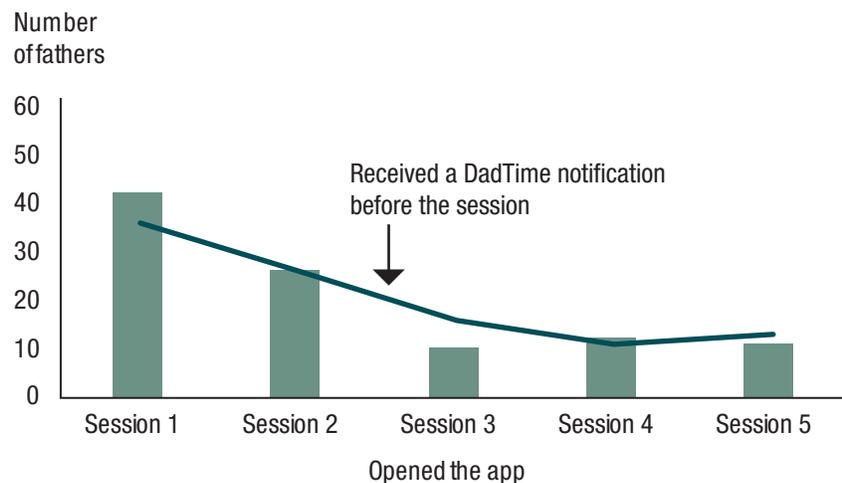
Fathers did not often personalize the app further.

DadTime offered additional features fathers could use to tailor the app to their circumstances and needs. For example, in addition to the opportunity to upload a photo of his child during the initial setup, a father could record voice reminders at various times during his interactions with the app. A Full DadTime user was also given the option, when planning for a session, to send a prewritten message to his child's coparent, or to the person responsible for bringing his child to the Just Beginning sessions, to remind that person about the appointment time and location. DadTime also allowed a father to notify his facilitator if he needed to reschedule a session. Although fathers said they liked these features during usability testing, and in some cases even specifically requested them, ultimately they did not use them much.

App use among activators was modest to low.

Figure 4.1 shows that most fathers who received DadTime reminders before Just Beginning sessions interacted with the app at least once while the content for that session was active.¹ As the number of fathers attending Just Beginning sessions decreased between session 1 and session 5, so did the number of DadTime notifications received and the number of fathers who used the app.²

FIGURE 4.1. APP INTERACTION DECLINES AS SCHEDULING OF SESSIONS (AND APP NOTIFICATIONS) DECLINE



SOURCE: MDRC calculations using DadTime usage reports.

NOTE: Fathers who received a DadTime notification could engage with the app content for the session. Only fathers who activated the app (62 fathers) are counted in this figure.

- 1 DadTime content for the first Just Beginning session began when the reminder notification was sent before the session and ended when the reminder was sent for the second session. The other Just Beginning session periods are demarcated similarly.
- 2 Note that staff members scheduled fewer sessions in the web-based DadTime system than were actually attended, meaning that fathers received fewer reminder notifications than they should have.

Fathers opened DadTime on average once per Just Beginning session. Interactions with the app decreased across sessions, from three interactions for the first Just Beginning session to less than one interaction for the fourth session. Fathers therefore were not exposed much to the three workflows—the sequence of activities offered before each session, after each session, and over the weekend—that together comprised the app content developed for a Just Beginning session. Indeed, fathers completed few DadTime workflows: On average they completed one of the three workflows offered for session 1, 0.5 workflows for session 2, and close to zero workflows for sessions 3 to 5. Appendix Table C.1 shows app usage for each session.

I really didn't look at the app ... to be honest with you, it was just at the end, like, it was just so much that I had to do, even though it was convenient.

—Just Beginning/DadTime participant

The Effects of the DadTime App on Program Attendance

5

This chapter describes the effects of the DadTime app on attendance at Just Beginning sessions. The study's analysis does not indicate that the app increased program attendance.

Key Findings

- The Full DadTime group (the group with access to DadTime during Just Beginning), was *less* likely than their Partial DadTime peers to complete the first Just Beginning session, and they completed fewer Just Beginning sessions on average. This result is not what the study team expected.
- However, neither the offer of DadTime content nor its use seems to be what affected participation in Just Beginning sessions. Among fathers who activated the app, differences between the Full and Partial DadTime groups in Just Beginning participation rates were modest. Instead, the lower participation rate for fathers in the Full DadTime group was concentrated among fathers who never activated the app and thus were never exposed to DadTime.

Just Beginning participation was significantly lower in the Full DadTime group than in the Partial DadTime group.

As shown in Table 5.1, contrary to expectations, a significantly lower percentage of fathers in the Full DadTime group participated in Just Beginning than did fathers in the Partial DadTime group. Those in the Full DadTime group were less likely to complete the first Just Beginning session than fathers in the Partial DadTime group (47 percent compared with 68 percent).¹ Fathers in the Full DadTime group also completed fewer Just Beginning sessions than fathers in the Partial DadTime group (1.8 compared with 2.4).

For the first two outcomes shown in Table 5.1, the sample size meant the study could detect an effect on attendance rates no smaller than 15 percentage points to 16 percentage points.² The difference in the per-

¹ As prespecified, effects were estimated among all fathers randomly assigned to the Full and Partial DadTime groups who had smartphones, whether or not they activated the app. The sample includes 224 fathers: 117 fathers in the Full DadTime Group (62 who activated the app and 55 who did not) and 107 fathers in the Partial DadTime Group (56 who activated the app and 51 who did not).

² These percentage point margins translate to effect sizes of 0.3 standard deviations for a binary outcome with

TABLE 5.1. UNEXPECTED NEGATIVE EFFECTS ON ATTENDANCE

Outcome	Full DadTime Group	Partial DadTime Group	Difference (Effect)	P-Value
Completed the first Just Beginning session (%)	46.7	67.7	-21.0***	0.001
Completed all five Just Beginning sessions (%)	27.6	36.2	-8.6	0.154
Number of Just Beginning sessions completed	1.8	2.4	-0.6**	0.027
Sample size	117	107		

SOURCE: MDRC calculations using management information system data. This table reflects services received no more than six months after random assignment.

NOTES: Rounding may cause slight discrepancies in sums and differences.

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

The p-value indicates the likelihood that the estimated effect (or larger) would have been generated by an intervention with zero true effect.

centages of the Full and Partial DadTime groups who completed the first Just Beginning session turned out to be larger than expected—21 percentage points—but in the opposite direction than intended. The difference between the groups in the percentage who completed all five Just Beginning sessions is 9 percentage points, an effect that turns out not to be statistically significant given the sample size.

App activation rates play a role in interpreting the results.

As noted earlier, 53 percent of fathers activated the app. To further investigate the unexpected results, the study team analyzed program participation separately for fathers who activated and fathers who did not activate the app. If DadTime *content* discouraged program participation, the study team could expect to see lower participation rates among fathers who activated the app than among fathers who did not and therefore never saw its content. The analysis focuses on the large negative effect on completing the first Just Beginning session. The other two outcomes were not examined in this analysis because they are contingent on attending the first session.

■ Differences in Just Beginning Participation Among Fathers Who Did and Did Not Activate the App

There is suggestive evidence that the app content itself did not seem to discourage program participation: The negative effect on participation was larger among those who did *not* activate DadTime (a reduction

80 percent statistical power, larger than initial power calculations because fewer fathers than expected enrolled in Just Beginning.

of 34 percentage points) than among fathers who activated the app (a reduction of 9 percentage points), as shown in Appendix Table D.1.³

■ **Characteristics of Fathers Who Activated and Did Not Activate the App**

Fathers who activated DadTime have somewhat different characteristics from those who did not, as shown in Appendix Table D.2.⁴ Before the study began, more fathers in the group who activated the app were employed than were fathers in the group who did not, and more had full-time jobs. Also, a larger proportion of fathers in the group who activated the app had court or legal restrictions that could have made it hard for each of them to spend time with his child. However, the study team did not find that these differences help explain why Just Beginning participation is lower among the fathers who did not activate the app.

■ **App Activation and Participation in Fatherhood Services Other Than Just Beginning**

The study team explored whether participation in the usual services offered by these fatherhood programs varied by app activation in the same way as did participation in Just Beginning. If they did, that result would suggest that fathers who did not activate the app were less engaged in any service provided by the three organizations.

Appendix Table D.3 shows that fathers who did not activate DadTime participated in these other services at a slightly lower rate than did fathers who activated the app. However, they participated in *parenting* services apart from Just Beginning at a higher rate. These results do not seem to suggest that fathers who did not activate DadTime were less engaged overall, and therefore do not help explain the unexpected results.

Organizations showed different participation rates, but no clear pattern relating variation in app activation to session attendance.

Because app activation rates vary across the three organizations,⁵ the team investigated whether the differences observed in Just Beginning participation also vary by organization. As shown in Appendix Table D.4, two of the organizations show the same pattern as is seen in the overall sample: lower participation rates are concentrated among Full DadTime fathers who did not activate the app. In contrast, the third organization shows lower Just Beginning participation rates concentrated among fathers in the Partial DadTime group who did not activate the app. These mixed results show that the overall results are not reflecting the pattern at just one organization. They also do not seem to suggest that differences in Just Beginning participation are related to differences in app activation.

3 Percentages and differences shown in the appendix table are not regression-adjusted. Also, the differences in Just Beginning participation between the research groups for these subgroups were not assessed with statistical tests.

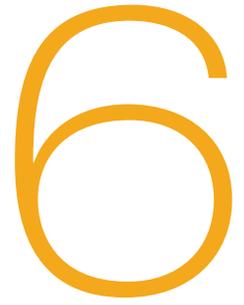
4 A logistic regression was run using baseline variables to predict DadTime app activation, and a statistical test indicated that the baseline characteristics of those who activated the app were significantly different from the characteristics of those who did not (with a p-value of 0.002).

5 DadTime activation rates at the three Just Beginning organizations were 27 percent (Children's Institute), 60 percent (People for People), and 68 percent (Seedco).

What do the results mean?

The main analysis reflects the effect of the offer of DadTime (the intent-to-treat effect), not the effect of its use among those who activated and used it. These results could be a statistical coincidence, given the small sample size and large numbers of fathers who did not activate the app at all. In addition, the outcomes among those who did activate the app are not uniformly better or worse across the three organizations for Full versus Partial DadTime fathers. The results presented in Chapters 3, 4, and 5 taken together suggest that the app was not delivered as intended and the findings on attendance may not reflect the effect of the app content itself. These results do not provide sufficient evidence to determine whether a program should or should not implement an app such as the DadTime app. Still, programs considering implementing such an app should be aware that doing so requires a substantial investment of time and resources.

A Learning Framework for Future Studies



This study offers important insights about designing and implementing a smartphone app to promote father engagement, but does not provide conclusive evidence on whether smartphone apps are beneficial in social services or parenting programs. If designed or implemented differently, the features incorporated in DadTime could deliver different results. The study team is hopeful that others will continue to build on this work and explore variations.

In addition, the findings of this exploratory study should be taken together with the results of more recent rigorous smartphone app evaluations being conducted at the time of this report writing, including those noted in Chapter 1. A scan of such evaluations could identify common implementation issues, develop benchmarks for reasonable app download and usage rates in the context of service-delivery programs, and shed light on which program attendance measures (initial attendance, cumulative attendance rates, or others) an app is likely to show effects. As has been seen in text message campaigns, app intervention effects may be related to choices about content, timing, and sender, rather than responding to the use of automation itself or to the choice of an app as the means of automating engagement. For example, if DadTime had been introduced a few weeks before Just Beginning sessions started, fathers may have had more time to use the app and explore its content, which could have affected their attendance at the Just Beginning sessions later on. However, an app designed to boost father-child interactions rather than program attendance (like the Partial DadTime content on its own) may have highlighted entirely different implementation issues and potential for effects.

Fathers' participation in Just Beginning and use of DadTime was completed before the COVID-19 pandemic began; in-person attendance and connections with a program were still the norm when the study was underway. However, at the time this report was written, it had become clear that smartphones were playing a much greater role in people's lives, and that programs and fathers might want or at least be open to more mobile content. Whether in response to COVID-19 or simply as a way to sidestep transportation barriers, fatherhood programs may be moving more to hybrid service formats and looking for ways to use text message campaigns, smartphone apps, and online software to deliver services. This exploratory study highlights some specific design choices that other researchers and programs could consider if they pursue app-based interventions, presented below. One contribution of the study is to make these choices explicit for future testing.

Design Choices

If programs intend to implement an app, they may consider the following issues and questions.

INTERVENTION DESIGN

I Determine the purpose and role of the app.

- **Is interacting with the app a behavior change in itself for fathers?** It may be that one needs to encourage fathers to make an app focused on parenting part of their routines—just as using a meditation app or fitness-tracking app needs to be built into a routine. It could be that after app use becomes routine, one can test the effect of the app content on attendance or other outcomes.
- **Is the app designed to promote knowledge or to shift program participation?** If an app focuses exclusively on building knowledge, it may have greater potential to show short-term effects because it can offer short, repeatable occasions for learning. If the app is focused on participation and building a new routine or habit of program attendance, then the developers may need to stress its integration into the program curriculum, along with case tracking and other monitoring systems.
- **Is the app designed for specific types or moments of use?** If the app is intended to be used at the beginning of a program to convey information, it may require different setup and content than if it is designed to be used throughout, as a marker of progress. An app designed for daily use, as health apps often are, requires different organization than one designed for use during a session only. The app probably needs to be built while the curriculum is designed, rather than added on later.

2 Integrate the app into existing programs and processes.

- **When should fathers install and activate the app?** If introducing an app at intake takes too long, are there points in the program to set aside time for app installation and activation? Making the app activation occur at or be associated with a specific, fun occasion may be worth pilot testing.
- **What is the best way to include the program's staff in implementation?** Fathers may be more likely to install the app if program staff members are there to guide them than they would be if left to complete installation on their own. Can staff members incorporate app installation into their scheduling or advising routine? App-related tasks such as activation may need to be integrated into all outreach efforts, and staff members may need a corresponding level of training and support.

RESEARCH DESIGN AND OUTCOMES

3 Ask research questions that can identify critical features or content for app interventions and that are matched to outcomes.

- **Are apps better suited for information, encouragement, or planning related to a program?** DadTime incorporated all these components. With sufficient sample size, studies could explore which components resonate with and are used by fathers—if they can solve the implementation and activation challenges described above.

- **How can programs use apps to promote goal setting and follow-through?** A tenet of psychology and behavior change is to close the gap between forming an intention to do something and acting on that intention. Because the intention-action gap and low follow-through are common problems, even when people are motivated or committed to action,¹ DadTime, like other apps, included planning exercises. If a new study could achieve high activation rates, it could explore questions related to goal-setting exercises, both within a fatherhood program and separate from a program.
- **How can apps create more accountability for program attendance and other goals?** Creating a two-way dynamic using chatbots or real-time virtual meetings with staff members could build on curriculum concepts and potentially engage fathers differently. In addition, apps that connect fathers with peers could test the role of peer advising and accountability.

By describing the design and potential impact of a mobile application as a new method of encouraging fatherhood program attendance, this study brings together multiple bodies of previously unlinked knowledge. The questions asked in this study lay a foundation for how to think about those intersections in terms of program operations and research. While it may be difficult for one app or one program to address all these considerations, having a framework like this in mind can help researchers build systematic evidence about the conditions in which a smartphone app can change program-related behavior.

¹ Rogers, Milkman, John, and Norton (2015).

APPENDIX

A

Data Sources
for the
DadTime
Study



The DadTime study team used a variety of data sources for the implementation and impact analyses. The study team used participation data collected by each organization through the nFORM management information system for both the implementation and impact analyses. The implementation analysis also drew on the DadTime usage data reports and in-depth interviews with staff members and fathers. All data sources used for the DadTime study are described in Appendix Table A.1.

APPENDIX TABLE A.1. DATA SOURCES

DATA SOURCE	SAMPLE	TIMING	STUDY	
			IMPLEMENTATION	IMPACT
Qualitative				
Semistructured interviews with staff members	Program staff members at all three organizations	During site visits in 2017 and 2018	x	
Focus groups and interviews with fathers	23 fathers randomly assigned to the Full DadTime group	During site visits in 2017 and 2018	x	
Document review	Documents including email correspondence and records from the B3 technical assistance team	Throughout the study	x	
Quantitative				
Baseline survey	Fathers in the Full and Partial DadTime groups	During enrollment, before random assignment		x
nFORM management information system ^a	Fathers in the Full and Partial DadTime groups	Throughout the study	x	x
DadTime usage reports	Fathers in the Full and Partial DadTime groups	Throughout the study	x	

NOTE: ^aFederally funded Responsible Fatherhood grantees are required to use the nFORM management information system to collect and report performance measure data.

APPENDIX

B

Baseline
Characteristics



APPENDIX TABLE B.1. BASELINE CHARACTERISTICS OF FATHERS IN THE FULL AND PARTIAL DADTIME GROUPS

Characteristic (%)	Overall	Full DadTime Group	Partial DadTime Group	P-Value
Relationship status				0.336
Married	11.7	14.3	8.8	
Engaged	6.5	7.1	5.9	
In a relationship, living with partner ^a	27.1	21.4	33.3	
In a relationship, not living with partner ^b	17.8	18.8	16.7	
Not in a relationship	36.9	38.4	35.3	
Average age	29.5	29.8	29.2	0.575
Age (years)				0.572
Under 25	26.8	23.9	29.9	
25 to 34	50.9	53.0	48.6	
35 to 44	17.9	19.7	15.9	
45 or more	4.5	3.4	5.6	
Race/ethnicity				[] 0.764
Hispanic	30.4	30.8	29.9	
White/non-Hispanic	1.8	1.7	1.9	
Black/non-Hispanic	62.5	60.7	64.5	
Other/multiracial	5.4	6.8	3.7	
Number of biological or adopted children under 18				[] 0.577
1	36.6	36.8	36.4	
2 or more	62.9	63.2	62.6	
Father lives with the focal child all or most of the time ^c	50.9	57.3	43.9	** 0.046
Currently working ^d	39.4	40.9	37.7	0.636
Working full time ^e	18.1	17.4	18.9	0.777
Quality of relationship with the focal child, according to the father ^c				[] 0.934
Not too good	2.2	2.6	1.9	
Somewhat good	17.5	17.2	17.8	
Very good	80.3	80.2	80.4	
In-person contact with the focal child in the past month, according to the father ^c				[] 0.145
Not at all	1.8	1.7	1.9	
Once	4.9	4.3	5.6	
2 or 3 times	3.6	5.1	1.9	
1 or 2 times per week	12.1	6.8	17.8	
3 or 4 times per week	12.1	13.7	10.3	
Every day or almost every day ^f	65.6	68.4	62.6	

(continued)

APPENDIX TABLE B.1 (CONTINUED)

Characteristic (%)	Overall	Full DadTime Group	Partial DadTime Group	P-Value
Challenges that made it hard to spend time with the focal child in the past month, among nonresident fathers ^g				
Work or school schedule	14.5	16.0	13.3	0.696
Car problems or lack of transportation	13.6	14.0	13.3	0.920
Not having a stable place to live	24.5	34.0	16.7	** 0.036
Resistance from the coparent's spouse or partner	10.9	15.2	7.3	0.206
A court order or legal restriction	15.5	20.0	11.7	0.232
Site				0.953
Children's Institute	30.8	31.6	29.9	
People for People	39.3	38.5	40.2	
Seedco	29.9	29.9	29.9	
Sample size	224	117	107	

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

NOTES: Distributions may not add to 100 percent because of rounding.

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

To assess differences between the research groups, chi-square tests were used for categorical variables and two-tailed t-tests were used for continuous or dichotomous variables.

Brackets in statistical significance levels indicate the possibility of a small number of individuals in a category, which reduces statistical power.

^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.”

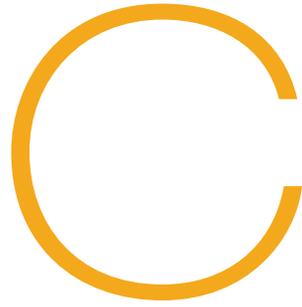
^cThe “focal child” is the one the father brought to Just Beginning sessions.

^d“Currently working” includes sample members who were working full time or part time, were employed with hours that change from week to week, or were temporary/occasional/seasonal employees.

^e“Working full time” includes sample members who were working 35 hours per week or more.

Fathers who reported living with their focal children all or most of the time were coded as “every day or almost every day” and were not asked this survey question.

^gThese measures include 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 asked of fathers who reported not living with their focal children all or most of the time (that is, nonresident fathers).



Indicators of DadTime Use



APPENDIX TABLE C.1. INDICATORS OF DADTIME USE AMONG FATHERS IN THE FULL DADTIME GROUP WHO ACTIVATED THE APP

Measure	Full DadTime Group Members Who Activated the App
Interaction with the app and frequency of use	
Activated the app (%)	100.0
Completed app setup (%)	87.1
Opened the app at least once between sessions 1 and 5 (%)	71.0
Average number of app openings ^a	6.4
Session 1	
Received a notification before session 1 ^b (%)	58.1
Opened the app at least once in session 1 ^c (%)	67.7
Average number of app openings	2.8
Average number of app activities completed ^d	0.8
Session 2	
Received a notification before session 2 (%)	41.9
Opened the app at least once in session 2 (%)	41.9
Average number of app openings	1.5
Average number of app activities completed	0.5
Session 3	
Received a notification before session 3 (%)	25.8
Opened the app at least once in session 3 (%)	16.1
Average number of app openings	0.6
Average number of app activities completed	0.2
Session 4	
Received a notification before session 4 (%)	17.7
Opened the app at least once in session 4 (%)	19.4
Average number of app openings	0.5
Average number of app activities completed	0.1
Session 5	
Received a notification before session 5 (%)	21.0
Opened the app at least once in session 5 (%)	17.7
Average number of app openings	0.9
Average number of app activities completed	0.2
Timing of use	
Average number of days between the first and last app openings ^e	15.5
Sample size	62

(continued)

APPENDIX TABLE C.1 (CONTINUED)

SOURCE: MDRC calculations based on DadTime data usage reports. This table includes fathers randomly assigned to the Full DadTime group who had smartphones at enrollment and activated the app.

NOTES: ^aThis measure includes all fathers who activated the app. Fathers who did not open the app at all between sessions 1 and 5 have a value of zero for this measure.

^b“Received a notification before session [number]” means that the user had the chance to engage with the presession app content for this session. Users are only counted in this row if they had also activated the app; users who had this session scheduled without having activated the app are not counted here because it is not possible to receive a push notification without activating the app first.

^cApp users could still open the app during a given session period even if a notification was not sent before the session. When a session was scheduled, the session period allowed for up to three notifications total, so even if a user did not receive the first notification, he could still receive one or two other notifications that allowed him to see additional content.

^dUsers could complete up to three app activities per session, so this measure has a value of 0 to 3

^eThis measure is inclusive of the dates of the first and last app openings. Fathers who did not open the app at all have a value of zero for this measure.

APPENDIX

D

Additional
Analyses



**APPENDIX TABLE D.1. DIFFERENCES BETWEEN THE FULL AND PARTIAL DADTIME GROUPS
IN COMPLETING THE FIRST JUST BEGINNING SESSION, BY APP ACTIVATION**

Measure (%)	App Activated			App Not Activated		
	Full DadTime Group	Partial DadTime Group	Difference	Full DadTime Group	Partial DadTime Group	Difference
Completed the first Just Beginning session	64.5	73.2	-8.7	27.3	60.8	-33.5
Sample size	62	56		55	51	

SOURCES: MDRC calculations using management information system data and DadTime data usage reports. This table reflects services received no more than six months after random assignment.

NOTES: Rounding may cause slight discrepancies in sums and differences.

Percentages and differences shown in the table are not regression-adjusted. Also, the differences in Just Beginning participation between the research groups for these subgroups were not assessed with statistical tests.

APPENDIX TABLE D.2. BASELINE CHARACTERISTICS OF FATHERS, BY APP ACTIVATION GROUP

Characteristic (%)	App Activated	App Not Activated	P-Value
Relationship status			0.900
Married	11.7	11.7	
Engaged	6.3	6.8	
In a relationship, living with partner ^a	29.7	24.3	
In a relationship, not living with partner ^b	18.0	17.5	
Not in a relationship	34.2	39.8	
Average age	30.1	28.8	0.208
Age (years)		*	0.091
Under 25	23.7	30.2	
25 to 34	50.8	50.9	
35 to 44	22.9	12.3	
45 or more	2.5	6.6	
Race/ethnicity		[***]	0.010
Hispanic	22.0	39.6	
White/non-Hispanic	3.4	0.0	
Black/non-Hispanic	67.8	56.6	
Other/multiracial	6.8	3.8	
Number of biological or adopted children under 18		[]	0.345
1	39.8	33.0	
2 or more	59.3	67.0	
Father lives with the focal child all or most of the time ^c	48.3	53.8	0.416
Currently working ^d	45.3	32.7*	0.056
Working full time ^e	24.8	10.6***	0.006
Quality of relationship with the focal child, according to the father ^c		[]	0.417
Not too good	3.4	1.0	
Okay	16.1	19.0	
Very good	80.5	80.0	
In-person contact with the focal child in the past month, according to the father ^c		[]	0.230
Not at all	1.7	1.9	
Once	5.1	4.7	
2 or 3 times	0.8	6.6	
1 or 2 times per week	14.4	9.4	
3 or 4 times per week	13.6	10.4	
Every day or almost every day ^f	64.4	67.0	

(continued)

APPENDIX TABLE D.2 (CONTINUED)

Characteristic (%)	App Activated	App Not Activated	P-Value
Challenges that made it hard to spend time with the focal child in the past month, among nonresident fathers ⁹			
Work or school schedule	13.1	16.3	0.639
Car problems or lack of transportation	11.5	16.3	0.466
Not having a stable place to live	23.0	26.5	0.668
Resistance from the coparent's spouse or partner	9.4	12.5	0.625
A court order or legal restriction	21.3	8.2*	0.059
Grantee		***	0.000
Children's Institute	39.8	20.8	
People for People	44.9	33.0	
Seedco	15.3	46.2	
Sample size (total = 224)	118	106	

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

NOTES: Distributions may not add to 100 percent because of rounding.

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

To assess differences between the research groups, chi-square tests were used for categorical variables and two-tailed t-tests were used for continuous or dichotomous variables.

Brackets in statistical significance levels indicate the possibility of a small sample of individuals in a category, which reduces statistical power.

^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.”

^cThe “focal child” is the one the father brought to Just Beginning sessions.

^d“Currently working” includes sample members who were working full time or part time, were employed with hours that changed from week to week, or were temporary/occasional/seasonal employees.

^e“Working full time” includes sample members who were working 35 hours per week or more.

^fFathers who reported living with their focal children all or most of the time were coded as “every day or almost every day” and were not asked this survey question.

⁹These measures include 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 asked of fathers who reported not living with their focal children all or most of the time (that is, nonresident fathers).

**APPENDIX TABLE D.3. DIFFERENCES BETWEEN THE FULL AND PARTIAL DADTIME GROUPS
IN ATTENDING OTHER SERVICES, BY APP ACTIVATION**

Measure (%)	App Activated				App Not Activated			
	Full DadTime Group	Partial DadTime Group	Difference	P-Value	Full DadTime Group	Partial DadTime Group	Difference	P-Value
Ever participated in any service	87.1	100.0	-12.9***	0.005	81.8	96.1	-14.3**	0.020
Ever participated in any non-Just Beginning parenting service	12.9	10.7	2.2	0.716	30.9	37.3	-6.3	0.495
Sample size	62	56			55	51		

SOURCES: MDRC calculations using management information system data and DadTime data usage reports. This table reflects services received no more than six months after random assignment.

NOTES: Distributions may not add to 100 percent because of rounding.

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

The p-value indicates the likelihood that the estimated effect (or larger) would have been generated by an intervention with zero true effect.

To assess differences between the research groups, chi-square tests were used for categorical variables and two-tailed t-tests were used for continuous variables.

The management information system captures in-person services provided, including in-person, one-on-one services that were 15 minutes or longer and all group workshops.

APPENDIX TABLE D.4. DIFFERENCES BETWEEN FULL AND PARTIAL DADTIME GROUPS AT EACH ORGANIZATION IN COMPLETING THE FIRST JUST BEGINNING SESSION, BY APP ACTIVATION

Measure (%)	App Activated			App Not Activated		
	Full DadTime Group	Partial DadTime Group	Difference	Full DadTime Group	Partial DadTime Group	Difference
Children's Institute						
Completed the first Just Beginning session	47.8	54.2	-6.3	50.0	37.5	12.5
Sample size	23	24		14	8	
People for People						
Completed the first Just Beginning session	80.8	88.9	-8.1	15.8	75.0	-59.2
Sample size	26	27		19	16	
Seedco						
Completed the first Just Beginning session	61.5	80.0	-18.5	22.7	59.3	-36.5
Sample size	13	5		22	27	
Sample size (total)	62	56		55	51	

SOURCES: MDRC calculations using management information system data and DadTime data usage reports. This table reflects services received no more than six months after random assignment.

NOTES: Rounding may cause slight discrepancies in sums and differences.

Percentages and differences shown in table are not regression-adjusted. Also, the differences in Just Beginning participation between the research groups for these subgroups were not assessed with statistical tests.

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