

# *The* **BUILDING STRONG FAMILIES PROJECT**

**Strengthening  
Unmarried Parents'  
Relationships:  
The Early Impacts  
of Building Strong  
Families**



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## Executive Summary

Although most children raised by single parents fare well, on average, they are at greater risk of living in poverty and experiencing health, academic, and behavioral problems than children growing up with married biological parents. If interventions can improve the quality of unmarried parents' relationships and increase the likelihood that they remain together, these interventions might also improve the well-being of their children. One possible approach to improving child well-being is thus strengthening the relationships of low-income couples through relationship skills education.

The Building Strong Families (BSF) project, sponsored by the Administration for Children and Families (ACF), U.S. Department of Health and Human Services, has been evaluating this kind of approach. The project developed, implemented, and tested voluntary programs that offer relationship skills education and other support services to unwed couples who are expecting a child or who have just had a baby. Eight organizations volunteered to be part of a rigorous evaluation designed to test a new strategy to improve the lives of low-income families. These organizations implemented BSF programs around the country, complying with a set of research-based program guidelines.

Mathematica Policy Research conducted an experimental evaluation of the eight BSF programs. Over 5,000 interested couples were randomly assigned to either a BSF group that could participate in the program or a control group that could not. This report presents estimates of BSF's impacts on couples about 15 months after they applied for the program, focusing on the key outcomes BSF was designed to affect—the stability and quality of the couples' relationships. A later report will present findings on BSF impacts on outcomes about three years after the couples applied for BSF, including impacts on couples' children.

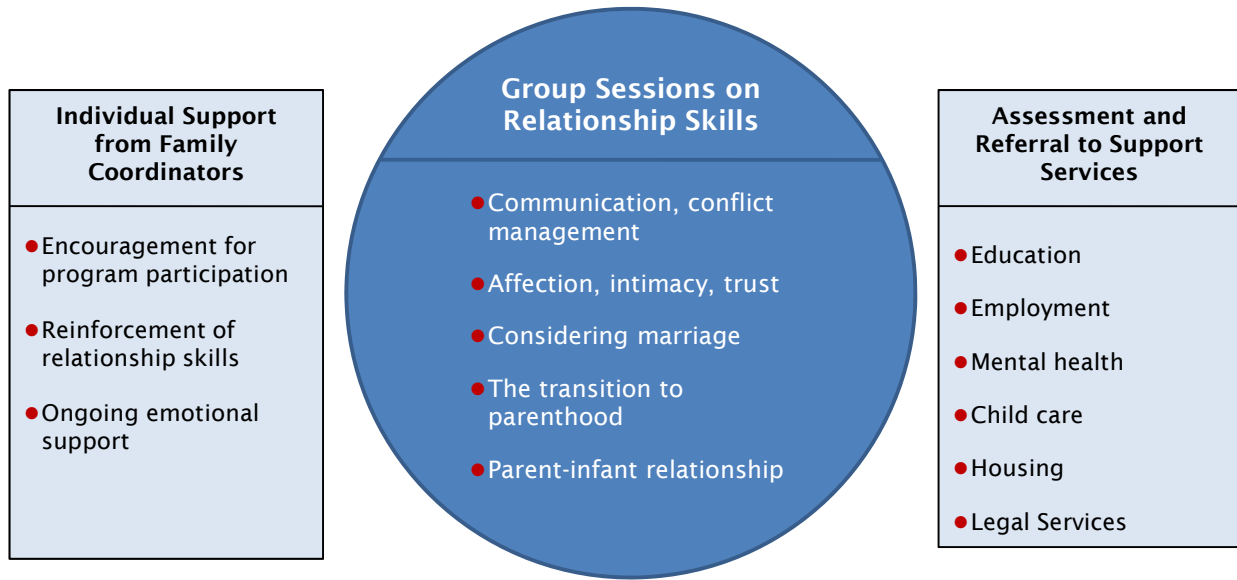
Location	Sponsor Organization	Number of Study Couples
Atlanta, Georgia	Georgia State University, Latin American Association	930
Baltimore, Maryland	Center for Urban Families	602
Baton Rouge, Louisiana	Family Road of Greater Baton Rouge	652
Florida: Orange and Broward counties	Healthy Families Florida	695
Houston, Texas	Healthy Family Initiatives	405
Indiana: Allen, Marion, and Lake counties	Healthy Families Indiana	466
Oklahoma City, Oklahoma	Public Strategies, Inc.	1,010
San Angelo, Texas	Healthy Families San Angelo	342
<b>All Programs</b>		<b>5,102</b>

### The BSF Program: Three Key Components

The BSF program was designed to serve unmarried, romantically-involved couples who were expecting or had recently had a baby. Before determining eligibility for BSF, program staff screened couples for intimate partner violence; if there was evidence of violence that could be aggravated by BSF participation, the couple was ineligible for BSF and was referred to other services.

BSF programs had three components: (1) group sessions on relationship skills, (2) individual support from family coordinators, and (3) assessment and referral to support services (Figure ES.1). The BSF model did not require a specific curriculum, but required programs to use a curriculum that covered key topics such as communication, conflict management, and marriage. The eight BSF programs chose one of three curricula developed for the study by experts who tailored their

**Figure ES.1. The BSF Program Model**



existing curricula for married couples to the needs of unmarried parents. The relationship skills education was designed to be intensive—involving 30 to 42 hours of group sessions. Under the program model, a family coordinator assigned to each couple was to reinforce relationship skills, provide emotional support, and encourage participation in the group sessions. The family coordinator also assessed family members’ needs and referred them for appropriate support services.

The BSF program was expected to increase exposure of couples to relationship skills services. All couples in the BSF group were offered BSF services, although they were not required to participate. Couples in the control group could seek relationship skills education from sources other than BSF. Among BSF couples, 61 percent reported attending a group session on relationship skills during the follow-up period. Among control group couples, only 17 percent reported attending a relationship skills group session. When asked about the number of hours they attended the groups, BSF couples reported attending 14 hours, on average, compared with an average of two hours of group relationship skills education for control group couples

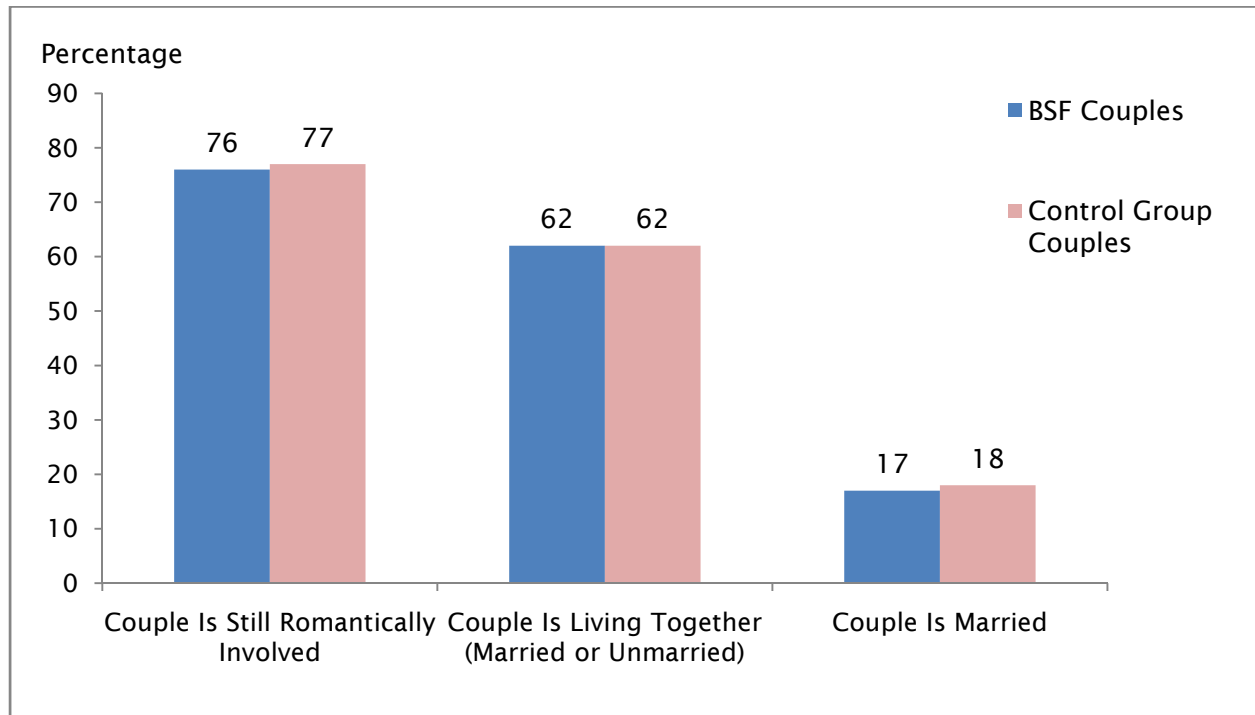
**The Short-Term Impacts of BSF**

The BSF 15-month impact analysis includes three kinds of estimates: (1) those that combine data from all eight BSF programs, (2) those that present impacts of each BSF program separately, and (3) those that examine effects on subgroups of participants. Results are summarized below.

- **When results are averaged across all programs, BSF did not make couples more likely to stay together or get married. In addition, it did not improve couples’ relationship quality.**

BSF had no effect on whether couples were still together 15 months after they had applied for the program, when data from the eight BSF programs are combined. At this point, 76 percent of BSF couples were still romantically involved, compared with 77 percent of control group couples (Figure ES.2). Similarly, BSF and control group couples were equally likely to be married to each other at that time (17 and 18 percent respectively) and to be living together, whether married or unmarried (62 percent for both research groups).

**Figure ES.2. Impact of BSF on Couples' Relationship Status at 15 Months**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: None of the differences between the research groups are statistically significant at the .10 level.

Fifteen months after they applied for the program, BSF and control group couples reported being equally happy in their romantic relationships, with average ratings of 8.4 and 8.3 respectively on a 0-to-10 relationship happiness scale. Similarly, BSF and control group couples gave very similar ratings of supportiveness and affection in their relationships, with average support and affection scale values of 3.5 on a 1-to-4 scale for couples in both research groups. In addition, BSF had no overall effect on how faithful couples were to each other.

When results are averaged across all eight programs, BSF did not improve couples' ability to manage their conflict. Couples in both research groups reported similar levels of use of constructive conflict behaviors, such as keeping a sense of humor and listening to the other partner's perspective during disagreements. Similarly, there was no difference between the research groups in the avoidance of destructive conflict behaviors, such as withdrawing when there is a disagreement or allowing small disagreements to escalate. In addition, when results are averaged across all programs, BSF had no effect on how likely couples were to experience intimate partner violence.

Similarly, when results are averaged across all programs, BSF did not improve co-parenting or increase father involvement. BSF and control group couples reported that their co-parenting relationships were of equally high quality. In addition, at the 15-month follow-up, couples in both research groups were equally likely to report that fathers were living with their children, spending substantial time with them, and providing them with substantial financial support.

- **Most BSF programs had little or no effect on relationships; however, there were two notable exceptions. The Oklahoma City program had a consistent pattern of positive effects, while the Baltimore program had a number of negative effects.**

The Oklahoma City BSF program had numerous positive effects on couples. It was the only program to have a positive impact on whether couples were still romantically involved at the 15-month follow-up (Table ES.1). In Oklahoma, 81 percent of BSF couples were still in a romantic relationship, compared with 76 percent of control group couples. The Oklahoma City program also improved relationship quality. At follow-up, Oklahoma BSF couples reported higher levels of relationship happiness, support and affection, and fidelity than control group couples did. BSF couples in Oklahoma City also reported better conflict management and higher quality co-parenting relationships than control group couples did. The Oklahoma BSF program also improved father involvement: BSF fathers were more likely than control group fathers to live with their children and provide substantial financial support. The program in Oklahoma did not, however, affect marriage rates. At the 15-month follow-up, 25 percent of both research groups were married.

**Table ES.1. Significant Impacts of BSF at 15 Months, by Local BSF Program**

	Atlanta	Baltimore	Baton Rouge	Florida Counties	Houston	Indiana Counties	Oklahoma City	San Angelo
<b>Relationship Status</b>								
Still Romantically Involved Living Together (Married or Unmarried)	o	---	o	o	o	o	+	o
Married	o	o	o	o	o	-	o	o
<b>Relationship Quality</b>								
Relationship happiness <sup>a</sup>	o	n/a	o	n/a	o	o	+++	o
Support and affection	o	--	o	o	o	o	++	o
Use of constructive conflict behaviors	++	o	o	o	o	o	+++	o
Avoidance of destructive conflict behaviors	o	o	o	o	o	o	++	o
Fidelity	o	o	o	o	o	o	+	o
<b>Avoidance of Intimate Partner Violence</b>								
Mother reports no severe physical assaults	o	-	o	o	o	o	o	o
Father reports no severe physical assaults	o	o	o	o	o	o	o	o
<b>Co-Parenting</b>								
Quality of co-parenting relationship	o	-	o	o	o	o	+	o
<b>Father Involvement</b>								
Lives with child	o	-	o	o	o	o	+	o
Spends substantial time with child daily	o	-	o	o	o	o	o	o
Provides substantial financial support	o	--	o	o	o	o	+++	o
<b>Sample Size</b>	<b>805</b>	<b>525</b>	<b>568</b>	<b>590</b>	<b>355</b>	<b>414</b>	<b>877</b>	<b>291</b>

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

<sup>a</sup>Relationship happiness is measured only for couples who were still romantically involved. In most cases, the initial characteristics of these couples in the two research groups were similar and comparing their outcomes was a valid measure of program impacts. "n/a" indicates that this analysis could not be conducted for this program because BSF and control group couples who were still romantically involved did not have similar characteristics at baseline.

o No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

--/-/--/- Statistically significant negative impact at the .01/.05/.10 level.



The Baltimore BSF program had negative effects on couples' relationships. BSF couples were less likely than control group couples to remain romantically involved, 59 percent versus 70 percent. Baltimore BSF couples reported being less supportive and affectionate toward each other than control group couples did. In addition, women in the Baltimore BSF program were more likely than women in the control group to report having been severely physically assaulted by a romantic partner in the past year, 15 percent compared with 9 percent. Baltimore BSF couples also rated the quality of their co-parenting relationship lower than control group couples did and reported that BSF fathers spent less time with their children and were less likely to provide them financial support than control group fathers were.

- **BSF improved the relationship quality of African American couples.**

BSF served a racially and ethnically diverse population. Across all the programs, just over half the couples were African American; 20 percent were Hispanic; and 12 percent were white. An additional 16 percent were couples in which the parents were from different racial or ethnic groups or in which both parents considered themselves neither white, African American, nor Hispanic.

Couples in which both members were African American were positively affected by BSF. For these couples, BSF led to an increase in the support and affection partners felt toward each other. It improved their ability to use constructive conflict management techniques and avoid the use of destructive conflict behaviors. In addition, BSF increased fidelity among African American couples and reduced the frequency with which the men experienced intimate partner violence. BSF also improved the quality of the co-parenting relationship among African American couples. BSF did not have an effect on the relationship status of African American couples, however. At the time of the 15-month follow-up survey, African American couples in both research groups had similar rates of romantic involvement, co-residence, and marriage.

BSF had no positive effects on relationship quality or status for couples in which at least one member was not African American. Among these couples, those offered BSF services and control group members reported similar levels of relationship happiness, support and affection, quality of conflict management, fidelity, and intimate partner violence. In addition, BSF reduced the likelihood that these couples remained romantically involved at the 15-month follow-up, from 82 percent to 77 percent.

## **Discussion**

These short-term results indicate that, when all the BSF programs are combined, BSF did not succeed in its primary objectives of improving relationship quality or making couples more likely to remain romantically involved or get married. Fifteen months after entering the program, the relationship outcomes of BSF couples were, on average, almost identical to those of couples in the control group.

The impacts of BSF varied substantially across the eight programs included in the evaluation. The BSF program in Oklahoma City had a consistent pattern of positive effects on relationship outcomes, while the Baltimore program had a number of negative effects. The other BSF programs generally had little or no effect on relationships. The BSF impact evaluation is not designed to provide a rigorous explanation of why one program was more successful than another. Nonetheless, given the wide variation in BSF program effects, it is useful to consider what is distinctive about the two programs with the strongest patterns of effects—Oklahoma City and Baltimore.

The Oklahoma City program delivered its relationship skills curriculum in a distinctive way. It was the only BSF program to use the *Becoming Parents* curriculum, which covered a mix of topics similar to those addressed in the other curricula, but prescribed groups twice as large as those recommended in the other two BSF curricula and covered the material in less time (30 rather than 42 hours). The Oklahoma program offered weekly group sessions in two formats, three or five hours long, while other BSF programs typically offered only two-hour weekly sessions. This difference, combined with Oklahoma's use of the shorter *Becoming Parents* curriculum, allowed couples to complete the curriculum in six or ten weeks, while couples in other programs needed about five months to finish. In addition, the Oklahoma program offered more financial incentives to encourage group attendance than other programs did. These factors may have played a role in Oklahoma's greater success at getting couples to complete the curriculum. In Oklahoma, 45 percent of BSF couples received at least 80 percent of the curriculum. In contrast, only 9 percent of couples in other BSF programs received at least 80 percent of the curriculum. Finally, although only unmarried parents were eligible for the BSF research sample, the Oklahoma City program also served low-income married parents and included both married and unmarried parents in the same group sessions. No other BSF program served parents who were married before their child was conceived. The presence of married couples may have influenced how the group sessions in Oklahoma City functioned, as well as how effective they were in improving the outcomes of the couples in the BSF research sample.

The most distinctive characteristic of the Baltimore BSF program is the population it served. In particular, Baltimore served couples with less committed and more tenuous relationships than other programs did. Only 38 percent of Baltimore couples consisted of two individuals who both considered marriage to their current partner likely, the lowest proportion of any BSF program, and considerably lower than the 61 percent of couples who considered marriage likely across all programs. The population served in Baltimore was more economically disadvantaged—particularly the men. Only 58 percent of Baltimore fathers were employed when they applied for the program, compared with 76 percent of fathers in other BSF programs. The fact that Baltimore groups consisted of a higher proportion of very disadvantaged couples in more tenuous relationships may have influenced how effective the sessions were. However, one can only hypothesize about which program or population characteristics contributed to the pattern of effects observed in Oklahoma City and Baltimore. The study design does not support definitive conclusions concerning the reasons for variation in impacts across the programs included in the evaluation.

BSF's effects also differed across racial groups. It improved the relationship quality of couples in which both members were African American, leading to more support and affection, better conflict management, increased fidelity, and reductions in intimate partner violence. In contrast, BSF did not affect the relationship quality of couples who were not African American and actually increased the rate at which these couples broke up.

This variation in impacts across the local BSF programs and across populations suggests that programs like BSF can have positive effects. However, the results also indicate that these programs can have negative effects on relationships in certain circumstances, including increasing the rate at which couples break up and experience intimate partner violence.

These are interim results. Results may be different at the time of the final follow-up, which will be conducted when the "focal child"—the child that made the couple eligible for BSF—is about

three years old. In addition to the outcomes examined in this report, the final follow-up will examine effects on child well-being. Since improving child well-being was a major goal of the BSF initiative, the picture of its full effects remains to be completed.



## Introduction

The well-being of children raised by single parents has long been a subject of concern. These children are on average at greater risk of living in poverty and experiencing health, academic, and behavioral problems than children growing up with married biological parents (McLanahan and Sandefur 1994; Brown 2004; Amato 2005). The steady increase in the proportion of U.S. children who are born to unmarried parents over the past three decades has led to increased attention to this issue among researchers and policymakers. In 2007, nearly four out of every ten children were born to unmarried parents (Ventura 2009).

Two strands of research have suggested opportunities to improve the status of children born to unmarried parents. First, findings from the 20-city Fragile Families and Child Wellbeing Study suggested that a window of opportunity for interventions to preserve unmarried parents' relationships occurs around the time of the child's birth (Carlson et al. 2005). The study found that just after their child was born, most unmarried parents were romantically involved, had supportive and affectionate relationships, and were hopeful about their futures together. Yet one year later, these hopes were unrealized for many of these couples: nearly one third of these parents were no longer in a romantic relationship and only 12 percent of them were married.

A second strand of research suggested possible interventions that could help unmarried parents stay together. Research on the predictors of relationship stability and quality led to the development of programs that aimed to improve couples' relationships by teaching relationship skills such as effective communication and conflict resolution (Gottman 1993). Evaluations of these programs found promising results (Markman et al. 1993). Although these programs were nearly all targeted to married or engaged middle class couples, their effectiveness suggested that similar interventions might benefit unmarried parents.

In response to the growing concern about children raised by single parents and the emergence of research suggesting potential interventions, in 2002 the Office of Planning, Research, and Evaluation, Administration for Children and Families (ACF), U.S. Department of Health and Human Services launched the Building Strong Families (BSF) project. The project developed, implemented, and tested voluntary programs designed to help unmarried new parents strengthen their couple relationships and thus create a stable and healthy home environment for their children. Mathematica Policy Research conducted the evaluation of BSF under contract to ACF.

Eight organizations implemented BSF programs around the country, complying with a set of research-based program guidelines (Hershey et al. 2004). As the objective of the evaluation was to determine whether a well-implemented BSF program could be effective, project and ACF staff carefully chose the organizations, provided them assistance in implementing their programs, and closely monitored them.

Mathematica conducted an experimental evaluation of the eight BSF programs. Over 5,000 couples who applied and were found eligible for BSF were randomly assigned to either a BSF group that could participate in BSF or a control group that could not. Follow-up telephone surveys collected data on how the couples in both groups and their families fared in the period after they applied for BSF. Mathematica estimated program effects by comparing the outcomes of the couples and families in the BSF group with the outcomes of those in the control group.

This report presents estimates of the impacts of BSF on couples about 15 months after they applied for the program and focuses on the key outcomes BSF was designed to affect—the stability

and quality of the couples' relationships. It also examines the effects of BSF on other aspects of the couples' lives, such as the quality of their parenting, the level of father involvement, their mental health, and their economic well-being. A later report will present findings on BSF's impacts on these outcomes about three years after the couples applied for BSF, as well as its impacts on the couples' children. Two earlier reports have documented the implementation of the eight local BSF programs (Dion et al. 2008; Dion et al. 2010). A technical supplement to this report presents additional detail on how the analysis was conducted, as well as additional impact results (Wood et al. 2010).

When data from all eight BSF programs are combined, the evaluation found that BSF had little or no effect on couples' relationships 15 months after they applied for the program. Couples in the BSF and control groups were equally likely to remain together or get married and had relationships of similar quality. However, this finding masks important variations in the effectiveness of the eight programs and the effectiveness of BSF for different populations. The BSF program in Oklahoma City was effective in improving couples' relationships, whereas the BSF program in Baltimore had a number of negative effects, including an increase in intimate partner violence. The other six programs had few or no effects on relationship outcomes. In addition, BSF improved the relationship quality of African American couples across the six BSF programs that served substantial numbers of African Americans, but had no positive effects on the relationships of couples who were not African American. Patterns of impacts were weaker and less consistent for other subgroups examined.

## **The BSF Program**

The BSF program was designed to serve unmarried, romantically-involved couples who were expecting or had recently had a baby. Specifically, couples were eligible for BSF if they met the following five main criteria:

1. Both members of the couple wanted to participate in the program
2. The couple was romantically involved
3. The couple was either expecting a baby together or had a baby that was less than three months old
4. The couple was unmarried at the time their baby was conceived
5. Both members of the couple were 18 years of age or older

BSF programs did not apply any income eligibility criteria. However, they targeted and typically served low-income parents.

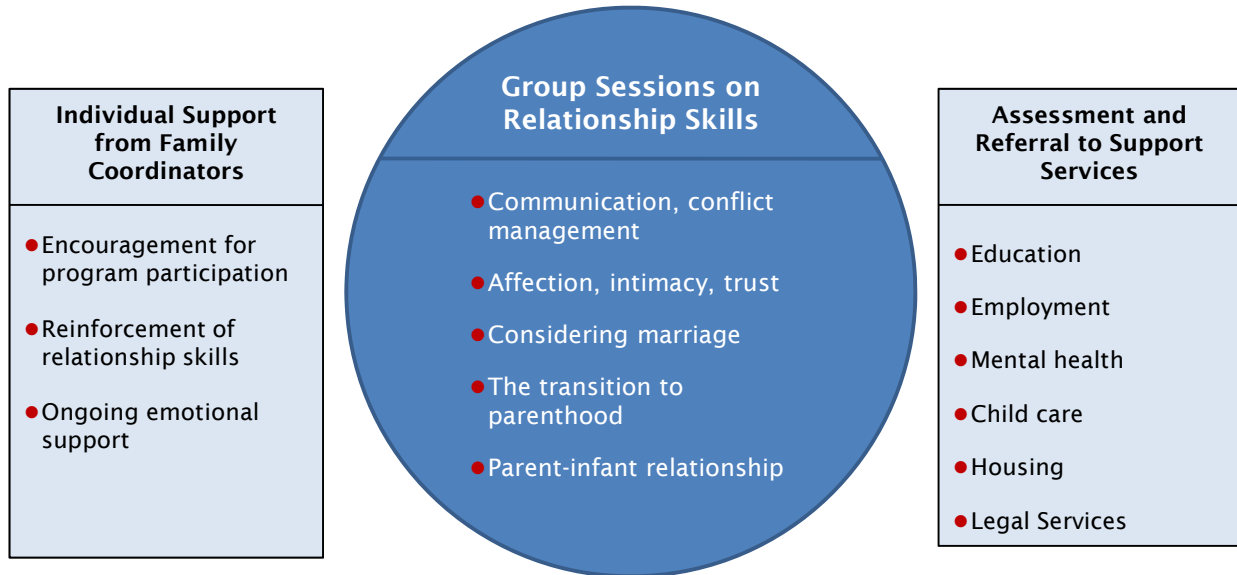
Before determining eligibility for BSF, program staff screened couples for intimate partner violence. Each local BSF program developed an intimate partner violence screen and protocol in collaboration with its local or state domestic violence coalition or national experts. If the local BSF program found evidence of violence that could be aggravated by BSF participation, the couple was ineligible for BSF and was referred to other services.<sup>1</sup> Each local program also had protocols for ongoing assessment of intimate partner violence among couples participating in BSF and protocols for how to respond if violence was detected.

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<sup>1</sup> For more information, see Dion et al. (2010).

All BSF programs had three components: (1) group sessions on relationship skills, (2) individual support from family coordinators, and (3) assessment and referral to support services (Figure 1). The programs were required to implement these components according to specified guidelines, but they could differ in how and where they recruited couples, the curriculum used in the group education on relationship skills, and how they provided the family coordinator and referral services.

**Figure 1. The BSF Program Model**



The core component of BSF was the curriculum-based *group education on relationship skills*. The BSF model did not require a specific curriculum, but did require programs to use a curriculum that covered key topics such as communication, conflict management, and marriage (see list of topics in Figure 1). Three curricula covering the specified topics were developed for the study by experts who tailored their existing curricula for married couples to the needs of unmarried parents (Table 1). All local BSF programs chose to use one of these curricula. The relationship skills education was designed to be intensive—involving 30 to 42 hours of instruction. These three curricula differed in several ways, including the group size they specified as ideal. One curriculum was designed for small groups of 4 to 6 couples, while another was designed for groups of 10 to 15 couples.

**Table 1. Curricula Used by BSF Programs**

Curriculum	Developers	Group Size	Total Hours of Group Sessions Offered
Loving Couples, Loving Children	John and Julie Gottman	4 to 6 couples	42
Love’s Cradle	Mary Ortwein and Bernard Guerney	6 to 8 couples	42
Becoming Parents for Low-Income, Low-Literacy Couples	Pamela Jordan	10 to 15 couples	30

Under the program model, the BSF *family coordinator* was to reinforce relationship skills, provide emotional support, and encourage participation in and completion of the group sessions. The family coordinator also assessed family members’ needs and referred them for appropriate support services. The *support services* could be provided by either the sponsoring organization or another provider in the community. They could include services to address family members’ housing problems, employment needs, or other issues.

The eight local BSF programs that participated in the evaluation were in diverse locations across the United States (Table 2). They were located in large metropolitan areas such as Atlanta, Georgia and Houston, Texas, as well as smaller towns and cities such as San Angelo, Texas and Baton Rouge, Louisiana. Most sponsor organizations developed BSF from the infrastructure of existing programs. Four local programs (those in Houston, San Angelo, Florida, and Indiana) added BSF

**Table 2. Characteristics of BSF Programs**

Location	Sponsor Organization	Primary Recruitment Source	Predominant Timing of Recruitment	Curriculum Used
Atlanta, Georgia	Georgia State University, Latin American Association	Public health clinics	Prenatal	Loving Couples, Loving Children
Baltimore, Maryland	Center for Urban Families	Hospitals, prenatal clinics	Pre- and postnatal	Loving Couples, Loving Children
Baton Rouge, Louisiana	Family Road of Greater Baton Rouge	Prenatal program	Prenatal	Loving Couples, Loving Children
Florida: Orange and Broward counties	Healthy Families Florida	Hospitals	Postnatal	Loving Couples, Loving Children
Houston, Texas	Healthy Family Initiatives	Public health clinics	Pre- and postnatal	Love’s Cradle
Indiana: Allen, Marion, and Lake counties	Healthy Families Indiana	Hospitals, WIC clinics	Pre- and postnatal	Loving Couples, Loving Children
Oklahoma City, Oklahoma	Public Strategies, Inc.	Hospitals, prenatal clinics, WIC clinics	Prenatal	Becoming Parents for Low-Income, Low-Literacy Couples
San Angelo, Texas	Healthy Families San Angelo	Hospitals	Postnatal	Love’s Cradle



services to their Healthy Families programs.<sup>2</sup> Healthy Families programs aim to promote positive parenting and child health and development and prevent child abuse and neglect via staff visiting and educating new and expectant parents in their homes. In the four Healthy Families programs that adopted BSF programs, home visitors were assigned to fill the BSF family coordinator role and continued providing Healthy Families services during home visits. In Baltimore, Maryland, BSF was developed by a community-based organization with extensive experience providing employment and responsible fatherhood services to low-income men. In Baton Rouge, BSF was developed by an agency that provided a variety of services for low-income families. In Atlanta, and Oklahoma City, the infrastructure for BSF was developed from the ground up specifically for BSF. Across the eight programs, key recruitment sources included hospital maternity wards, prenatal clinics, health clinics, and clinics for the Women, Infants, and Children (WIC) program.

The eight programs each chose one of three curricula developed as part of the evaluation (Table 2). The program in Oklahoma City chose the *Becoming Parents* curriculum and the San Angelo and Houston programs chose *Love's Cradle*. The other five programs chose *Loving Couples*, *Loving Children*.

### Evaluation Design<sup>3</sup>

A model of how BSF could affect couples and their families (Figure 2) guided the study design. BSF services were designed to directly strengthen parents' relationships and thereby improve family and child outcomes. However, family and child outcomes could also be directly affected by the receipt of support services, rather than indirectly via the improvement of the couple's relationship. The magnitude of the program impacts could also be influenced by contextual factors such as the demographic characteristics of the couples.

The evaluation addresses the following questions:

- Does BSF affect the couple relationship? Does it affect whether the couple is likely to remain romantically involved or get married, the quality of their relationship or their attitudes toward marriage?
- Does BSF affect family and child outcomes (such as the ones shown in Figure 2)? Child outcomes center on the “focal child”—the child that made the couple eligible for BSF.<sup>4</sup>
- Are some BSF programs more effective than others?
- Is BSF more effective for some subgroups of couples defined by their contextual factors (such as those shown in Figure 2) than others?

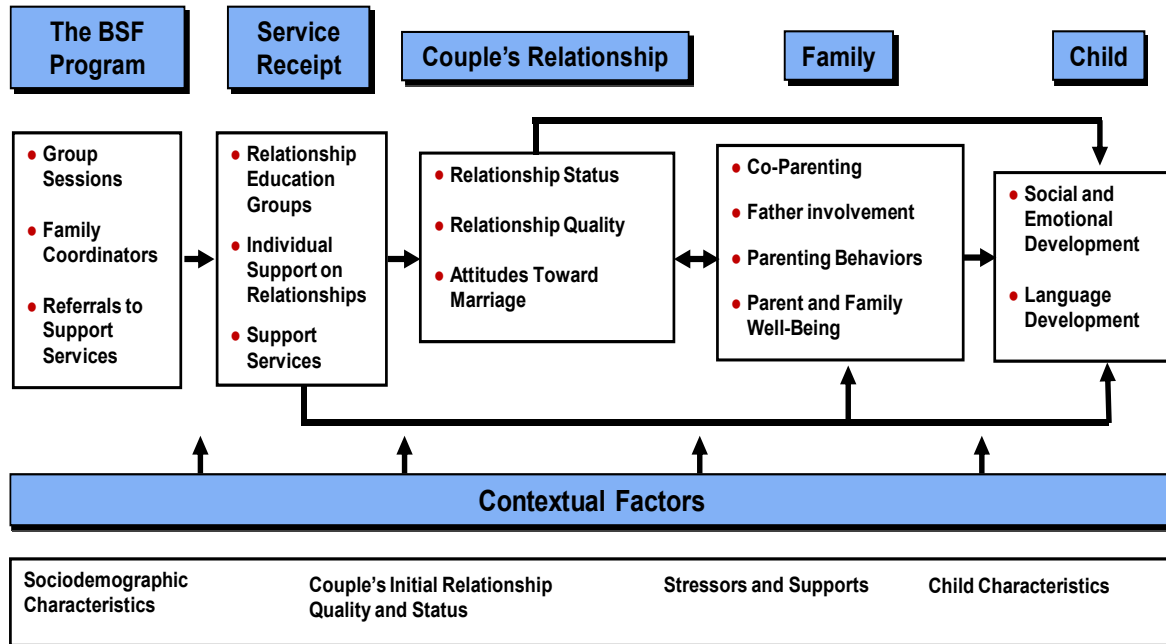
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<sup>2</sup> The Healthy Families programs in Florida and Indiana are affiliated with Healthy Families of America. The programs in Houston and San Angelo are not.

<sup>3</sup> More details of the evaluation design, the data used for the study, and the analysis approach are provided in the technical supplement to this report (Wood et al. 2010).

<sup>4</sup> Child outcomes will be examined as part of the 36-month analysis, which will be presented in a later report.

Figure 2. Model of BSF and Its Expected Impacts



Once couples were found eligible for BSF and consented to participate in the study, a computer program randomly assigned them to either the BSF group or the control group. Couples in the BSF group were offered BSF services. Control group couples could not participate in BSF and, in the BSF programs developed from Healthy Families’ programs, were also ineligible for Healthy Families’ services. The strength of random assignment is that it ensures that couples in the BSF group and the control group have similar characteristics and circumstances before they applied for the program. Hence, a statistically significant difference between outcomes of the couples in the BSF and control groups after random assignment can be attributed to BSF rather than to any differences in the pre-existing characteristics or circumstances of the couples in the two groups.

Over 5,000 couples were randomly assigned for the study between July 2005 and March 2008. Half the couples were assigned to the BSF group and half to the control group. The impacts of BSF were estimated as the difference in average outcomes between BSF and control group couples. To estimate the overall effect of BSF, impacts were first estimated for each of the eight programs. These eight estimates were then averaged together, with each program receiving equal weight. Program effects were estimated using statistical models that adjusted for small differences in the initial characteristics of the research groups that may have arisen by chance or because of survey nonresponse.

BSF Program	Number of Study Couples
Atlanta	930
Baltimore	602
Baton Rouge	652
Florida Counties	695
Houston	405
Indiana Counties	466
Oklahoma City	1,010
San Angelo	342
<b>Total</b>	<b>5,102</b>

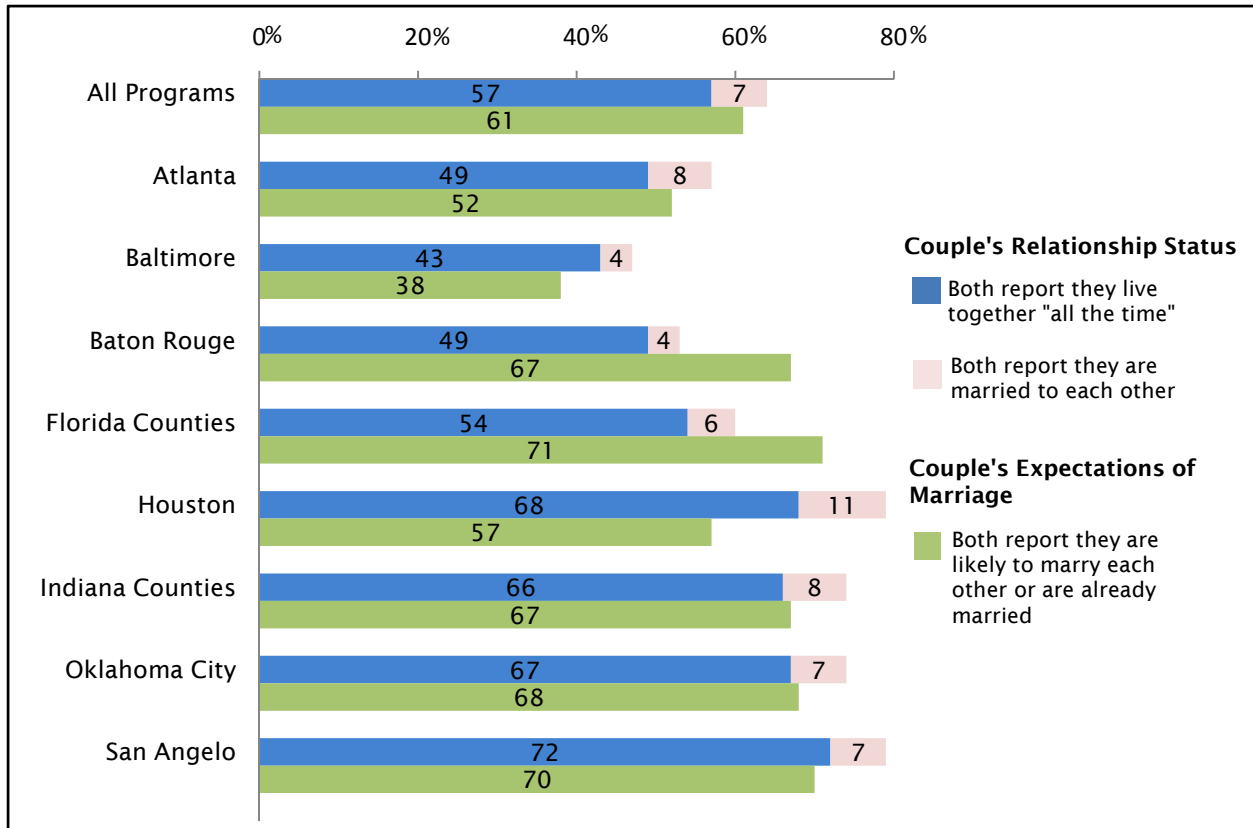
The analysis sample included all couples who applied for BSF irrespective of whether they actually participated in the program. Therefore, the impact estimates presented in this report represent the average effect on all program applicants of being *offered* BSF services. These “intent to treat” impact estimates are widely used in large-scale evaluations and preserve the integrity of the random assignment design. These estimates answer a policy-relevant question because they incorporate the fact that not everyone who enrolls in a program participates in all the available services.

This report is based on data collected from two sources: (1) a form completed by all parents when they applied to BSF and (2) a telephone survey conducted with mothers and fathers in the study about 15 months after they applied for the program. At least one parent responded in 4,425 couples (87 percent of all couples). Eighty-three percent of mothers and 72 percent of fathers responded to the survey.

### Characteristics of Couples Entering BSF

Most BSF couples were in stable relationships and aspired to marriage (Figure 3). Across all programs, 7 percent were married at program application, having wed after their baby was conceived but before applying for BSF. Another 57 percent of couples reported that they were living together “all of the time.” In addition, 61 percent of couples reported that they were already married to each other at BSF application or that they both thought there was either “a pretty good” or “an almost certain” chance that they would marry each other in the future.

**Figure 3. BSF Couples’ Initial Relationship Status and Marriage Expectations**



Source: BSF baseline information form.

The initial strength of the relationships of BSF couples differed by local program (Figure 3). Couples in Baltimore had the least committed relationships. Fewer than half the couples in Baltimore were married or living together full time when they applied for BSF, compared with 64 percent of couples across all the programs. In addition, only 38 percent of Baltimore couples thought that there was a good chance they would marry, compared with 61 percent across all the programs.

BSF served a racially and ethnically diverse population. Across all the programs, just over half the couples were African American; 20 percent were Hispanic; and 12 percent were white (Table 3). An additional 16 percent were couples in which the parents were from different racial or ethnic groups or in which both parents considered themselves neither white, African American, nor Hispanic. The programs in Atlanta, Baltimore, and Baton Rouge, and to a lesser extent Florida, served primarily African American couples. The programs in Houston and San Angelo served primarily Hispanic couples. The most racially and ethnically diverse BSF program was in Oklahoma City.

Although all BSF programs served both expectant parents and parents with new babies, some programs primarily enrolled parents before their baby was born, while others typically enrolled them after their child’s birth (Table 3). A large majority of couples in the Florida and San Angelo BSF programs had already had their baby when they applied for BSF; conversely, a large majority of couples in the Atlanta, Baton Rouge, and Oklahoma City programs were expecting when they applied for BSF. This variation across programs in the proportion of couples who had their babies

**Table 3. Demographic and Socioeconomic Characteristics of Couples Who Applied to BSF**

	All Programs	Atlanta	Baltimore	Baton Rouge	Florida Counties	Houston	Indiana Counties	Oklahoma City	San Angelo
<b>Race/Ethnicity<sup>a</sup></b>									
Both African American	52	80	92	75	59	5	41	24	2
Both White	12	0	2	14	6	1	26	29	16
Both Hispanic	20	13	0	0	12	89	10	20	61
Other	16	7	6	11	24	6	23	28	22
Baby born prior to BSF application (%)	38	12	28	12	99	39	55	21	85
Both partners have high school diplomas (%) <sup>b</sup>	37	32	31	39	45	30	43	40	37
Couples’ annual earnings (\$)	20,475	18,055	21,762	21,279	22,206	19,812	21,074	21,633	16,275
Either partner has psychological distress (%) <sup>c</sup>	39	40	23	45	33	31	44	45	45
Either partner has a child from a prior relationship (%)	47	53	58	44	42	41	48	44	48
Both partners age 21 or over (%)	58	53	58	55	56	72	62	61	51

Source: BSF baseline information form.

<sup>a</sup>Race/ethnicity categories are mutually exclusive.

<sup>b</sup>Does not include General Educational Development (GED).

<sup>c</sup>Psychological distress is assessed using the Kessler-6 scale, which sums the responses to six items rated on a 0 to 4 scale. A person is considered to have psychological distress if the sum is over 9.

prior to applying for the program, was mainly determined by the program’s recruitment sources. However, in the case of Oklahoma City, the focus on expectant parents was a deliberate one, because their relationship skills curriculum, *Becoming Parents*, focused on the transition to parenthood.

The couples that applied for BSF faced many stresses in their relationships. They were typically not well educated—only 37 percent of couples included two members with high school diplomas (Table 3). The couples’ earnings were generally low—averaging about \$20,500 in the year prior to BSF application.<sup>5</sup> Thirty-nine percent of couples had at least one member who suffered from psychological distress. In nearly half of all couples applying for BSF, at least one of the parents had a child from a prior relationship. In addition, the parents who applied for BSF were typically young; more than 40 percent of the couples had at least one member who was less than 21 years old.

### Services Received by BSF and Control Group Couples

Although BSF was designed to increase both the relationship education and support services available to couples, there was no guarantee that couples in BSF would actually receive more services than they would have in the absence of BSF. All couples in the BSF group were offered BSF services, but they were not required to participate in the relationship skills groups, meet with a family coordinator, or follow up on referrals for support services, and some did not. In addition, couples in the control group could seek relationship skills education and support services from sources other than BSF and some did.

#### **BSF couples received significantly more relationship skills education than couples in the control group.**

Among BSF couples, 61 percent reported that at least one parent attended a group session on relationship skills (Table 4). Among control group couples, only 17 percent reported attending a relationship skills group session. When asked about the number of hours they attended the groups, BSF couples reported attending on average 12 more hours than control group couples (Table 4).<sup>6</sup>

BSF couples’ contacts with their family coordinators could also involve relationship skills education. All couples, whether in BSF or not, may also receive relationship support similar to that provided by a family coordinator from other sources such as social workers, therapists, counselors, or clergy members. When asked about the receipt of individual support on relationships, parents in the BSF group reported receiving three hours on average while parents in the control group reported receiving only one hour on average.

BSF couples received more relationship skills education than control group couples did. On average, BSF couples reported 14 hours of group relationship skills education and 3 hours of individual relationship counseling during the follow-up period, compared with two hours of group sessions and one hour of individual counseling for control group couples (Table 4).

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<sup>5</sup> This figure represents the average of the combined earnings of the mother and father during the year prior to program application.

<sup>6</sup> Throughout this report, differences between the research groups are only noted if they are statistically significant.

**Table 4. Receipt of Relationship Skills Education**

Outcome	BSF Group	Control Group	Estimated Impact
<b>Group Sessions on Relationship Skills</b>			
Parent attended at least once (%)	61	17	44***
Hours attended <sup>a</sup>	14	2	12***
<b>Individual Support on Relationships</b>			
Received any individual support (%)	31	14	17***
Hours received <sup>a</sup>	3	1	2***
<b>Sample Size</b>	<b>2,217</b>	<b>2,207</b>	

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

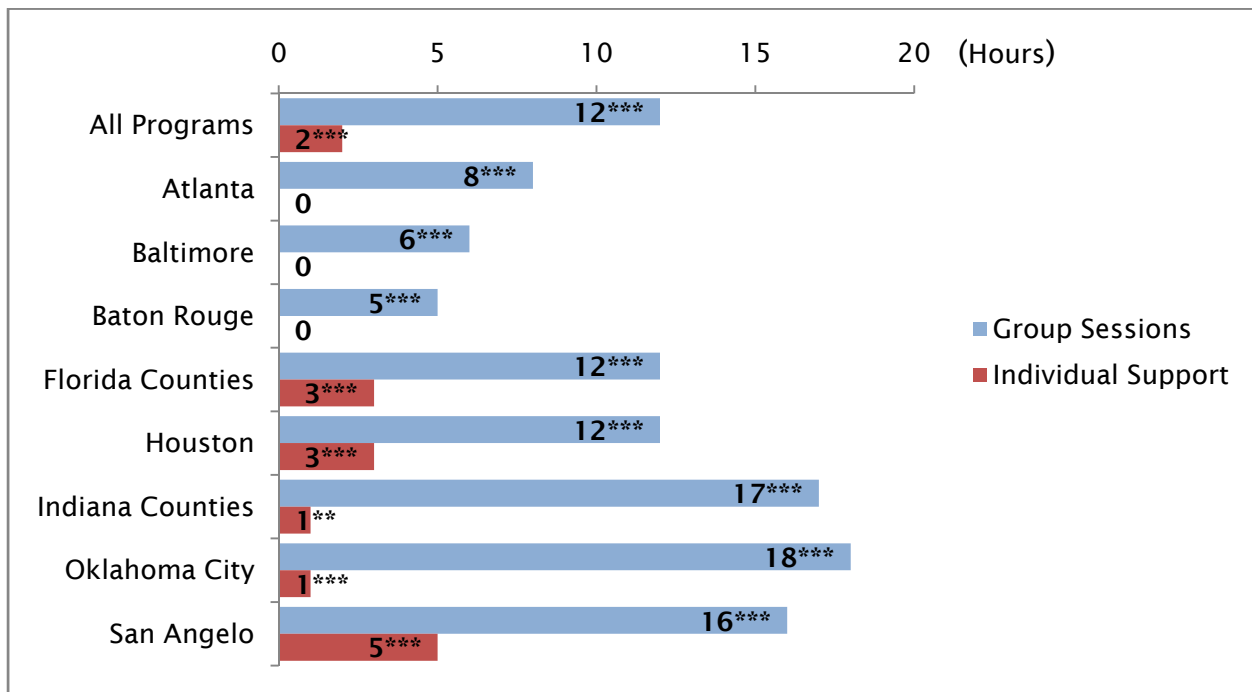
Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Includes zeroes for those who did not participate.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

Effects on the receipt of relationship skill education varied by program (Figure 4). In San Angelo, BSF couples received on average 21 hours more relationship skills education than control group couples—16 more hours of group education and 5 more hours of individual counseling. BSF couples in the Oklahoma City and Indiana programs also received substantially more relationship skills education than control group couples—19 and 18 additional hours respectively. In contrast, BSF couples in Baltimore and Baton Rouge reported receiving only 5 to 6 more hours of group relationship skills education and no more individual counseling than control group couples.

**Figure 4. Impacts on Receipt of Hours of Relationships Skills Education by BSF Program**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

**BSF had modest effects on the receipt of support services.**

BSF fathers were more likely to receive support services than control group fathers were. Thirty-five percent of BSF fathers reported receiving at least one support service since applying for the program, compared with 31 percent of control group fathers (Table 5). BSF fathers were somewhat more likely than control group fathers to report receiving education, training, or employment services. They also were somewhat more likely to receive counseling on anger management, mental health, or substance use issues.

BSF had a smaller impact on the receipt of support services by mothers. The percentage of BSF mothers who reported receiving at least one support service was not statistically different from the percentage for control group mothers (Table 5). BSF mothers were no more likely to receive education, training, or employment services than mothers in the control group. BSF mothers were somewhat more likely than control group mothers to receive mental health counseling.

**The Couple’s Relationship**

The central aim of the BSF initiative was to improve the quality and stability of the relationships of participating couples. The BSF curricula covered topics designed to enhance relationship quality, such as communication and conflict management skills, building affection and emotional intimacy, and managing the effect of parenthood on couple relationships. The curricula also addressed specific topics that research suggests are of particular importance in the healthy development of relationships in low-income, unmarried-parent families. These topics included the development of mutual trust and commitment, the importance of fidelity to a successful romantic relationship, the consideration of marriage, management of complex family relationships that may include children from prior relationships, and working together as a financial team.

**Table 5. Receipt of Support Services**

Outcome	BSF Group	Control Group	Estimated Impact
<b>Service Receipt by Fathers (%)</b>			
Education, training, or employment service	31	28	3*
Mental health counseling <sup>a</sup>	8	6	2**
Any support service	35	31	5***
<b>Service Receipt by Mothers (%)</b>			
Education, training, or employment service	32	30	1
Mental health counseling <sup>a</sup>	7	6	2*
Any support service	35	34	2
<b>Sample Size</b>			
<b>Fathers</b>	<b>1,847</b>	<b>1,838</b>	
<b>Mothers</b>	<b>2,126</b>	<b>2,112</b>	

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Includes counseling on anger management, domestic violence, substance abuse, or other mental health problems.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

**When results are averaged across all programs, BSF did not make couples more likely to stay together or get married.**

BSF had no effect on whether couples were still together 15 months after they had applied for the program, when data from the eight BSF programs are combined. At this point, 76 percent of BSF couples were still romantically involved, compared with 77 percent of control group couples (Figure 5). Similarly, BSF and control group couples were equally likely to be living together either married or unmarried at the time of the 15-month follow-up survey (62 percent for both research groups) and were equally likely to be married to each other at this point (17 and 18 percent respectively).<sup>7</sup>

### Couple Relationship Measures

Measures of relationship status include:

- **Still Romantically Involved.** Indicates that both members of the couple reported being romantically involved at the time of the survey.
- **Living Together (Married or Unmarried).** Indicates that both members of the couple reported living together “all” or “most” of the time at the time of the survey.
- **Married.** Indicates that both members of the couple reported being married to each other at the time of the survey.

Relationship quality measures average the mother’s and father’s responses to a series of questions asked on the 15-month follow-up survey. Measures of relationship quality include:

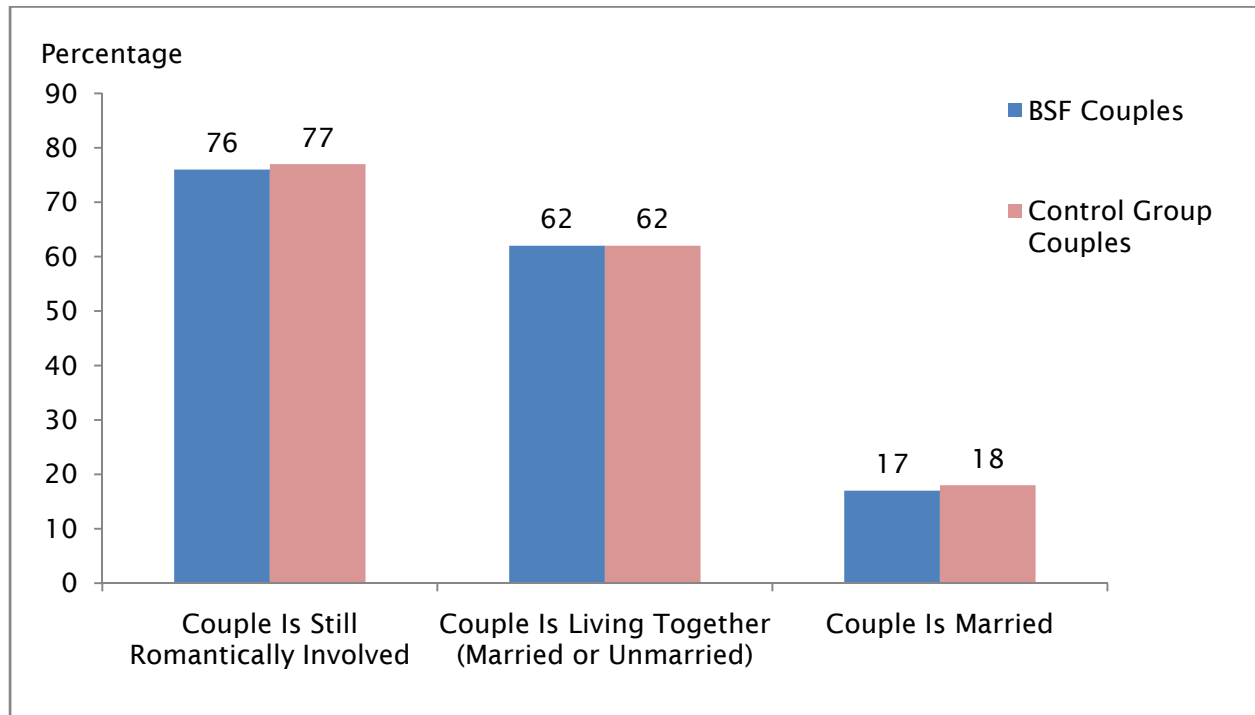
- **Relationship Happiness.** A single question asked respondents to rate their overall relationship happiness on a 0 to 10 scale, with 10 representing being completely happy with the relationship and 0 representing being completely unhappy.
- **Support and Affection.** Twelve questions asked respondents whether they agree with a series of statements about their relationship, such as: “My partner shows love and affection for me,” “My partner respects me,” and “My partner encourages or helps me do things that are important to me.” The scale ranges from 1 to 4, where 4 represents strongly agreeing with all 12 statements and 1 represents strongly disagreeing with all of them.
- **Use of Constructive Conflict Behaviors.** Eight survey questions asked respondents how frequently they used specific constructive behaviors for managing conflict with their partner, such as: “Even when arguing, we can keep a sense of humor;” “We are pretty good listeners, even when we have different positions on things;” and “My partner is good at calming me when I get upset.” The scale ranges from 1 to 4, where 4 corresponds to “often” exhibiting the behaviors and 1 corresponds to “never” exhibiting the behaviors.
- **Avoidance of Destructive Conflict Behaviors.** Nine survey questions asked respondents how frequently they engaged in destructive conflict management behaviors with their partner, such as: “When we argue, one of us withdraws and refuses to talk about it anymore;” “When we argue, I feel personally attacked by my partner;” and “Little arguments turn into ugly fights with accusations, criticisms, name calling or bringing up past hurts.” The scale ranges from 1 to 4 with higher numbers reflecting better conflict management (4 corresponds to “never” exhibiting these behaviors and 1 corresponds to “often” exhibiting these behaviors).

More information on how these measures were created is included in the technical supplement to this report (Wood et al. 2010).

<sup>7</sup> These relationship status measures are based on the responses of the 87 percent of couples in which at least one partner responded to the 15-month survey. These measures are based on the responses of both couples. When only one partner responded to the survey, the response of the other partner was imputed. This imputation process is described in the technical supplement to this report (Wood et al. 2010).



**Figure 5. Impact of BSF on Couples' Relationship Status at 15 Months**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: None of the differences between the research groups are statistically significant at the .10 level.

BSF led to a modest increase in positive attitudes toward marriage among women, but had no effect on men’s attitudes toward marriage (Table 6). The marriage attitudes scale is based on two survey items representing how strongly sample members agreed with two statements: “It is better for a couple to be married than to just live together” and “It is better for children if their parents are married.” Values on the scale run from 1 to 4, with 4 indicating that respondents strongly agree with both statements and 1 indicating that they strongly disagree with both statements. On average, BSF mothers had somewhat higher scores on this scale than mothers in the control group did—3.07 versus 3.02—a difference that is statistically significant (Table 6). In contrast, fathers in both the BSF and control groups had equally positive views of marriage, with average scores of 3.18 and 3.17 respectively.

**When results are averaged across all programs, BSF had no effect on the quality of couples’ relationships.**

Fifteen months after they applied for the program, BSF and control group couples reported being equally happy in their romantic relationships, with average ratings of 8.37 and 8.32

**Table 6. Impact of BSF on Attitudes Toward Marriage and Couples' Relationship Quality at 15-Month Follow-up**

Outcome	BSF Group	Control Group	Estimated Impact	Effect Size <sup>a</sup>
<b>Attitudes Toward Marriage</b>				
Mothers' marriage attitudes (range: 1 to 4)	3.07	3.02	0.05**	0.07
Fathers' marriage attitudes (range: 1 to 4)	3.18	3.17	0.01	0.01
<b>Overall Romantic Relationship Quality</b>				
Relationship happiness (range: 0 to 10)	8.37	8.32	0.06	0.04
Support and affection (range: 1 to 4)	3.46	3.45	0.01	0.03
<b>Conflict Management</b>				
Avoidance of destructive conflict behaviors (range: 1 to 4)	2.76	2.75	0.01	0.01
Use of constructive conflict behaviors (range: 1 to 4)	3.26	3.23	0.03	0.05
<b>Fidelity</b>				
Neither reports infidelity since applying for BSF (%)	75	73	2	0.06
<b>Sample Size</b>	<b>2,217</b>	<b>2,207</b>		

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding. At follow up, 77 percent of couples were still romantically involved. Only these couples were included in the analysis of relationship happiness and support and affection. At follow up, 91 percent of couples were still in regular contact, only these couples were included in the analysis of conflict management measures. Analyses indicated that the two research groups had similar initial characteristics for the samples used to estimate these impacts. See the technical supplement to this report (Wood et al. 2010) for more details. All couples were included in the analysis of fidelity and marriage attitudes.

<sup>a</sup>Information on how effect sizes were calculated is available in the technical supplement to the report.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

respectively on a 0-to-10 relationship happiness scale (Table 6)<sup>8</sup>. Similarly, couples in both research groups gave almost identical ratings of supportiveness and affection in their relationships, with average support and affection scale values of 3.46 for BSF couples and 3.45 for control group couples on a 1 to 4 scale (Table 6). These two relationship quality measures are defined only for couples who were romantically involved at the time of the 15-month follow-up survey. Analyses summarized in the technical supplement to this report indicate that, for the full research sample, among those who remained romantically involved at baseline, BSF and control group couples had similar initial characteristics. Therefore, comparing the mean scores of BSF and control group

<sup>8</sup> Relationship quality measures are created by averaging mothers' and fathers' responses to create a combined couple-level measure. In cases where only one member of the couple responded to the survey, the values for the non-responding partner were imputed using a multiple imputation technique. This method is described in the technical supplement to this report (Wood et al. 2010).

couples who were romantically involved at follow-up is a valid test of the program's effects on these outcomes.<sup>9</sup>

BSF had no overall effect on how faithful couples were to each other. At the time of the 15-month follow-up survey, 75 percent of BSF couples reported no instances of infidelity by either partner since applying for the program, compared with 73 percent of control group couples, a difference that was not statistically significant (Table 6).

When results are averaged across all eight programs, BSF did not improve couples' ability to manage their conflicts. The average scores for the 1 to 4 scale measuring the use of constructive conflict behaviors (such as keeping a sense of humor and listening to the other partner's perspective during disagreements) was 3.26 for BSF couples and 3.23 for control group couples, a difference that was not statistically significant (Table 6). These average values suggest that couples in both research groups typically reported that they used these constructive strategies for managing conflict, at least some of the time. Similarly, there was no difference between the research groups in the avoidance of destructive conflict behaviors, such as withdrawing when there is a disagreement or allowing small disagreements to escalate. The average scale scores were 2.76 for BSF couples and 2.75 for control group couples. These average values suggest that couples in both the BSF and control groups typically report that they sometimes engage in these destructive conflict behaviors.

When results are averaged across all programs, BSF had no effect on how likely couples were to experience intimate partner violence. In both research groups, 10 percent of mothers reported a severe physical assault by a romantic partner in the past year (Figure 6). Among fathers, 11 percent of those in the BSF group and 12 percent of those in the control group reported a severe physical assault by a romantic partner. These measures were constructed from a standard set of questions covering severe physical assaults (such as punching, choking, or kicking) drawn from the revised Conflict Tactics Scale (Strauss et al. 1996).

### **The Oklahoma City BSF program had a consistent pattern of positive effects on couples' relationships.**

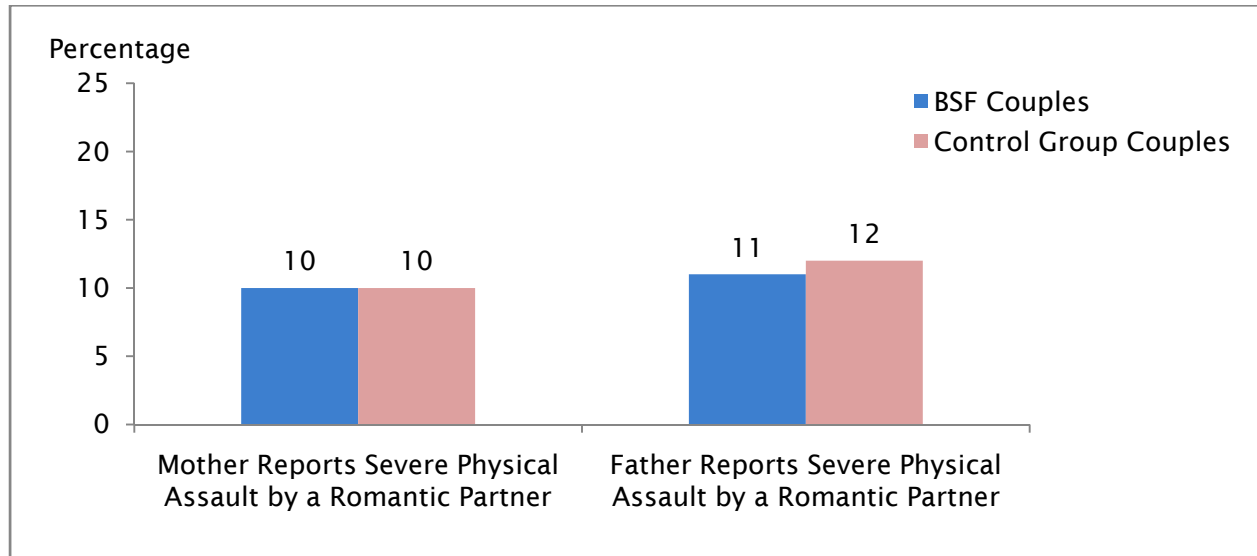
The impact of BSF varied across the eight programs included in the evaluation. The BSF program in Oklahoma City had positive effects on multiple relationship outcomes, a pattern not seen in any of the other programs (Table 7).<sup>10</sup> The Oklahoma City program was the only one to have a positive impact on whether couples were still romantically involved at the 15-month follow-up. In Oklahoma, 81 percent of BSF couples were still in a romantic relationship at the time of the survey, compared with 76 percent of control group couples (Table 8).

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<sup>9</sup> However, for two of the eight BSF programs—Baltimore and Florida—BSF and control group couples who were still romantically involved at follow-up did not have similar initial characteristics. Therefore, the relationship happiness measure was dropped from the analysis of effects of these two BSF programs, because the measure is only available for intact couples. In addition, an alternative version of the 12-item support and affection scale was used for these two programs that is based on a subset of the scale items available for all couples. This alternate measure is described in the technical supplement to this report (Wood et al. 2010). Estimated impacts on this alternate support and affection measure for all programs combined and for each of the eight programs are included in the technical supplement.

<sup>10</sup> Detailed results for the local BSF programs are included in Appendix A. In Table 7 and in the appendix tables, the severe physical assault measure was reverse coded to represent the absence of a severe physical assault in the past year. This change was made so that, for all relationship outcomes included in these summary tables, positive impacts would indicate a favorable outcome of the program.

**Figure 6: Impact of BSF on Intimate Partner Violence at 15 Months**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: None of the differences between BSF and control group couples are statistically significant at the .10 level. The measure refers to incidents during the year prior to the survey and is based on responses to the physical assault subscale of the revised Conflict Tactics Scale (Strauss et al. 1996).

**Table 7. Significant Impacts of BSF on Relationship Outcomes at 15 Months, by Local BSF Program**

	Atlanta	Baltimore	Baton Rouge	Florida Counties	Houston	Indiana Counties	Oklahoma City	San Angelo
<b>Relationship Status</b>								
Still Romantically Involved Living Together (Married or Unmarried)	o	---	o	o	o	o	+	o
Married	o	o	o	o	o	-	o	o
<b>Relationship Quality</b>								
Relationship happiness <sup>a</sup>	o	n/a	o	n/a	o	o	+++	o
Support and affection	o	--	o	o	o	o	++	o
Use of constructive conflict behaviors	++	o	o	o	o	o	+++	o
Avoidance of destructive conflict behaviors	o	o	o	o	o	o	++	o
Fidelity	o	o	o	o	o	o	+	o
<b>Avoidance of Intimate Partner Violence</b>								
Mother reports no severe physical assaults	o	-	o	o	o	o	o	o
Father reports no severe physical assaults	o	o	o	o	o	o	o	o
<b>Sample Size</b>	<b>805</b>	<b>525</b>	<b>568</b>	<b>590</b>	<b>355</b>	<b>414</b>	<b>877</b>	<b>291</b>

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

<sup>a</sup>Relationship happiness is measured only for couples who were still romantically involved. In most cases, the initial characteristics of these couples in the two research groups were similar and comparing their outcomes was a valid measure of program impacts. "n/a" indicates that this analysis could not be conducted for this program because BSF and control group couples who were still romantically involved did not have similar characteristics at baseline. See the technical supplement to this report for more details (Wood et al. 2010).

- +++/+ +/+ Statistically significant positive impact at the .01/.05/.10 level.
- /--/- Statistically significant negative impact at the .01/.05/.10 level.
- o No statistically significant impact.

The Oklahoma City program also improved the relationship quality of BSF couples. Fifteen months after applying for the program, BSF couples in Oklahoma City reported higher levels of relationship happiness and higher levels of support and affection toward each other than control group couples did (Table 8). The Oklahoma City program also improved couples’ conflict management. BSF couples reported that they were more likely than control group couples to use constructive techniques to manage conflict and were more likely to avoid destructive conflict behaviors. BSF couples also reported higher levels of fidelity. At the time of the 15-month follow-up, 82 percent of BSF couples in Oklahoma City reported no instances of infidelity since applying for the program, compared with 77 percent of control group couples (Table 8). Despite the consistent pattern of positive effects on relationship quality in Oklahoma City, the program did not affect marriage rates. At the 15-month follow-up, 25 percent of both research groups were married (Table 8).

**The Baltimore BSF program had a number of negative effects on couples’ relationships.**

In Baltimore, BSF couples were substantially less likely than control group couples to remain romantically involved. At the time of the 15-month follow-up survey, 59 percent of BSF couples in Baltimore were still romantically involved, compared with 70 percent of control group couples

**Table 8. Impact of the Oklahoma City BSF Program on Relationship Outcomes**

Outcome	BSF Group	Control Group	Estimated Impact	Effect Size <sup>a</sup>
<b>Relationship Status</b>				
Still romantically involved (%)	81	76	5*	0.19
Living together, married or unmarried (%)	70	66	5	0.13
Married (%)	25	25	0	-0.01
<b>Relationship Quality</b>				
Relationship happiness	8.49	8.18	0.31***	0.21
Support and affection	3.50	3.43	0.06**	0.16
Use of constructive conflict behaviors	3.33	3.22	0.11***	0.19
Avoidance of destructive conflict behaviors	2.80	2.71	0.09**	0.14
Neither reports infidelity (%)	82	77	5*	0.18
<b>Intimate Partner Violence</b>				
Mother reports no severe assaults (%)	90	88	2	0.16
Father reports no severe assaults (%)	92	92	0	0.00
<b>Sample Size</b>	<b>435</b>	<b>442</b>		

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Information on how effect sizes were calculated is available in the technical supplement for this report.

\*\*\*/\*\*/\* Significantly different at the .01/.05/.10 level.

**Table 9. Impact of the Baltimore BSF Program on Relationship Outcomes**

Outcome	BSF Group	Control Group	Estimated Impact	Effect Size <sup>a</sup>
<b>Relationship Status</b>				
Still romantically involved (%)	59	70	-11***	-0.29
Living together, married or unmarried (%)	42	46	-4	-0.10
Married (%)	8	7	1	0.06
<b>Relationship Quality</b>				
Relationship happiness	n/a	n/a	n/a	n/a
Support and affection <sup>b</sup>	3.01	3.12	-0.11**	-0.19
Use of constructive conflict behaviors	3.14	3.18	-0.04	-0.08
Avoidance of destructive conflict behaviors	2.62	2.62	0.01	0.01
Neither reports infidelity (%)	58	59	0	-0.01
<b>Intimate Partner Violence</b>				
Mother reports no severe assaults (%)	85	91	-5*	-0.31
Father reports no severe assaults (%)	79	79	-0	-0.01
<b>Sample Size</b>	<b>263</b>	<b>262</b>		

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Information on how effect sizes were calculated is available in the technical supplemental to this report.

<sup>b</sup>This outcome represents an alternate measure of the support and affection scale based on a subset of items available for all couples, including those no longer romantically involved. This alternate measure was used in Baltimore because intact couples in the two research groups did not have similar initial characteristics. More information on this alternate measure and the assessment of the initial similarity of other research groups is available in the technical supplement to this report (Wood et al. 2010).

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

n/a = not available. Relationship happiness is only defined for couples who were still together at follow-up. In Baltimore, intact couples in the two research groups did not have similar initial characteristics and thus an impact on this measure could not be calculated. See the technical supplement to this report for more details.

(Table 9). BSF couples in Baltimore also reported being less supportive and affectionate toward each other than control group couples did. In addition, women in the BSF program in Baltimore were more likely than women in the control group to report having been severely physically assaulted by a romantic partner in the past year, 15 percent compared with 9 percent.<sup>11</sup> The BSF program in Baltimore had no effects on fidelity, conflict management, or the intimate partner violence experienced by men.

<sup>11</sup> In response to these findings, ACF funded a safety assessment of the Baltimore program that was led by a national domestic violence expert. It also suspended enrollment into the program until the assessment was complete. Additional analysis of the Baltimore data indicated that BSF only had an adverse effect on intimate partner violence for couples in which at least one partner described the relationship as “on-again-off-again” at program application. Data from other BSF programs did not reveal this pattern. For this reason, program eligibility rules were modified in Baltimore so that only when both partners described themselves as in a “steady romantic relationship” were they eligible for enrollment.

### **Other BSF programs had few or no effects on couples' relationships.**

For most other programs, BSF had little impact on measures of relationship status or quality. The Atlanta program had a positive effect on the use of constructive conflict behaviors, but had no effect on other relationship measures. In Indiana, BSF couples were less likely than control group couples to be married at the 15-month follow-up survey, 15 percent compared with 21 percent (Table 10). They were also less likely than control group couples to live together married or unmarried, 59 percent compared with 67 percent.<sup>12</sup> The other four BSF programs—those in Baton Rouge, Florida, Houston, and San Angelo—had no statistically significant effects on relationship outcomes.

### **Parenting and Father Involvement**

In addition to their central goal of improving the romantic relationships of participating couples, BSF programs also aimed to improve parenting and increase father involvement. For example, it was hoped that by enhancing couples' relationship and communication skills and increasing the likelihood of their being in committed romantic relationships, the programs would also improve couples' ability to work together in their shared parenting roles. Similarly, BSF aimed to increase father involvement by increasing the likelihood of fathers being in committed romantic relationships with the mothers of their children and by emphasizing the importance of both parents in the child's life. It was also theorized that by improving relationship quality, BSF could improve parenting, if better relationship quality enabled these new parents to be more patient and generous with their children. In addition, four of the eight local BSF programs (those in Florida; Indiana; and Houston and San Angelo, Texas) provided home visits to families that focused on promoting positive parenting behaviors.

### **When results are averaged across all programs, BSF did not improve co-parenting or increase father involvement.**

BSF and control group couples reported that their co-parenting relationships were of similarly high quality. When results are averaged across all programs, the average co-parenting scale score was 4.37 for both research groups (Table 10). The maximum value for this scale (5) indicates that both the mother and father strongly agreed with the 10 positive statements about the co-parenting relationship used to create the scale. Examples of these statements include “(other parent) and I communicate well about (our child),” “(other parent) makes my job of being a parent easier,” and “(other parent) and I are a good team.” The average score of 4.37 indicates that, in both research groups, couples typically agreed or strongly agreed with these statements.

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<sup>12</sup> In addition, 91 percent of women in the BSF program in Indiana reported no severe physical assaults by a romantic partner in the past year, compared with 96 percent of control group women. This difference is not statistically significant but is similar in magnitude to the difference in this measure in Baltimore. Therefore, ACF funded a safety assessment of the Indiana program, similar to the assessment conducted in Baltimore. As in Baltimore, ACF suspended enrollment into the program until the assessment was complete. The Indiana BSF program lost state funding due to general budget reductions, and the program was ended before the assessment was completed.

When results are averaged across all programs, fathers in the BSF group were no more likely to spend time with their children or provide financial support for them than fathers in the control group were. At the 15 month follow-up, 64 percent of BSF fathers lived with the focal child, compared with 63 percent of fathers in the control group (Figure 7). Similarly, 66 percent of BSF fathers had spent an hour or more with the focal child on a daily basis during the previous month, compared with 69 percent of control group fathers, a difference that was not statistically significant. Finally, according to mothers, 75 percent of BSF fathers and 76 percent of control group fathers covered at least half the costs of raising the child.

## **Co-parenting, Father Involvement, and Parenting Behavior Measures**

### **Co-parenting**

- **Quality of Co-parenting Relationship.** Ten questions drawn from the Parenting Alliance Inventory asked respondents whether they agreed with a series of statements about their shared role as parents, such as: “(other parent) and I communicate well about (our child),” “(other parent) makes my job of being a parent easier,” and “(other parent) and I are a good team.” The scale ranges from 1 to 5, where 1 represents both parents strongly disagreeing with all 10 statements and 5 represents both parents strongly agreeing with all of them (Abidin and Brunner 1995).

### **Father Involvement**

- **Father Lives with Focal Child.** Indicates that both members of the couple reported that the father lived with the focal child at the time of the survey.
- **Father Spends Time with Focal Child on Daily Basis.** Indicates that both members of the couple reported that during the month prior to the survey the father spent an hour or more with the child “every day or almost every day.”
- **Father Provides Focal Child with Substantial Financial Support.** Indicates that the mother reported that at the time of the survey the father was covering at least half of the cost of raising the child.

### **Parenting Behaviors**

- **Engagement in Cognitive and Social Play Activities.** Five survey questions asked respondents how frequently during the past month they engaged in activities that support children’s language and cognitive development, such as: playing “peek-a-boo” or “gotcha,” singing songs, and reading or looking at books. The scale ranges from 1 to 6, where 6 corresponds to engaging in all five activities “more than once a day” and 1 corresponds to not engaging in any of these activities at all during the past month.
- **Frequent Spanking.** Indicates that the respondent reported spanking the focal child at least a few times per week during the month prior to the survey.
- **Parenting Stress and Aggravation.** Four questions asked respondents how frequently they experienced feeling stressed and aggravated by their children and their parenting responsibilities. Scale items include: “you felt your child is much harder to care for than most,” “you felt your child does things that really bother you,” “you felt you are giving up more of your life to meet your child’s needs than you ever expected,” and “you felt angry at your child.” The scale ranges from 1 to 4, where 4 corresponds to “often” having all of these feelings and 1 corresponds to “never” having any of these feelings.

More information on how these measures were created is included in the technical supplement to this report (Wood et al. 2010).



**Table 10. Impact of BSF on Co-Parenting Quality and on Parenting Behaviors at 15-Month Follow-up**

Outcome	BSF Group	Control Group	Estimated Impact	Effect Size <sup>a</sup>
<b>Co-Parenting</b>				
Quality of co-parenting relationship (range: 1 to 5)	4.37	4.37	0.00	0.00
<b>Mothers' Parenting Behavior</b>				
Engagement in cognitive and social play (range: 1 to 6)	5.16	5.12	0.04	0.05
Frequently spanked focal child in previous month (%)	12.9	15.4	-2.5**	-0.12
Parenting stress and aggravation (range: 1 to 4)	1.56	1.59	-0.03*	-0.06
<b>Fathers' Parenting Behavior</b>				
Engagement in cognitive and social play (range: 1 to 6)	4.63	4.67	-0.04	-0.04
Frequently spanked focal child in previous month (%)	12.0	11.8	0.2	0.01
Parenting stress and aggravation (range: 1 to 4)	1.53	1.56	-0.03	-0.06
<b>Sample Size</b>				
<b>Couples</b>	<b>2,217</b>	<b>2,207</b>		
<b>Mothers</b>	<b>2,126</b>	<b>2,112</b>		
<b>Fathers</b>	<b>1,847</b>	<b>1,838</b>		

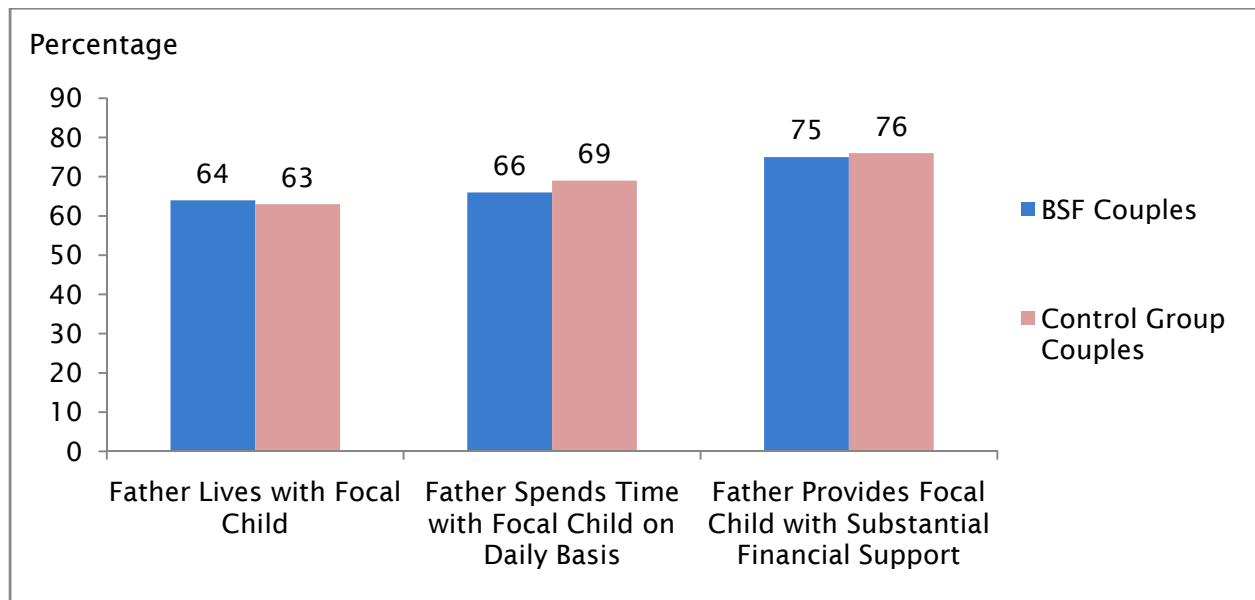
Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Information on how effect sizes were calculated is available in the technical supplemental to this report.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

**Figure 7: Impact of BSF on Father Involvement at 15 Months**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: None of the differences between BSF and control group couples are statistically significant at the .10 level.

**Some local BSF programs had effects on co-parenting and father involvement.**

As with the romantic relationship outcomes, the effects on co-parenting and father involvement varied across the eight BSF programs (Table 11). Moreover, the pattern of effects across programs was similar to the pattern for romantic relationship outcomes. In Oklahoma City, BSF improved the co-parenting relationships of couples as well as the romantic relationships (Table A.8). Fathers participating in the BSF program in Oklahoma City were more likely than fathers in the control group to be living with the focal child at the 15-month follow-up. They were also more likely than control group fathers to provide substantial financial support for their children. Conversely, the Baltimore BSF program, which had negative effects on romantic relationship outcomes, also reduced the quality of the couples’ co-parenting relationships (Table A.3). The Baltimore program also reduced the amount of time fathers spent with their children and the financial support they provided to them.

**BSF led to modest reductions in mothers’ parental stress and use of frequent spanking. It did not affect other parenting behaviors.**

The children in the research sample were on average 15 months old at the time of the follow-up, and ranged in age from 8 to 22 months old. When results are averaged across all programs, BSF had no effect on the frequency with which either parent engaged in cognitive and social play with

**Table 11. Significant Impacts of BSF on Parenting and Father Involvement at 15 Months, by Local BSF Program**

	Atlanta	Baltimore	Baton Rouge	Florida Counties	Houston	Indiana Counties	Oklahoma City	San Angelo
<b>Co-Parenting</b>								
Quality of co-parenting relationship	o	—	o	o	o	o	+	o
<b>Father Involvement</b>								
Lives with child	o	—	o	o	o	o	+	o
Spends substantial time with child daily	o	—	o	o	o	o	o	o
Provides substantial financial support	o	---	o	o	o	o	+++	o
<b>Mothers’ Parenting Behavior</b>								
Engagement in cognitive and social play	o	o	o	o	o	o	o	o
Avoidance of frequent spanking	o	o	o	o	++	o	o	o
Absence of parental stress	o	o	o	o	++	o	o	o
<b>Fathers’ Parenting Behavior</b>								
Engagement in cognitive and social play	o	---	o	o	o	o	o	o
Avoidance of frequent spanking	o	o	o	o	o	o	o	o
Absence of parental stress	o	o	++	o	o	o	o	o
<b>Sample Size</b>	<b>805</b>	<b>525</b>	<b>568</b>	<b>589</b>	<b>355</b>	<b>414</b>	<b>877</b>	<b>291</b>

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

++ +/+ +/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.  
 o No statistically significant impact.

their children, such as singing, playing games, telling stories, and reading books (Table 10). In general, mothers in both research groups indicated that they engaged in each of the cognitive and social play activities included in the scale a little more often than once a day, on average, whereas fathers in both research groups indicated that they engaged in these activities a little less often than once a day, on average.

BSF led to a reduction in the use of frequent spanking by mothers. At the time of the 15-month follow-up survey, 12.9 percent of BSF mothers reported having spanked the focal child a few times a week or more during the previous month, compared with 15.4 percent of control group mothers (Table 10). In contrast, fathers in both research groups were equally likely to report having frequently spanked the focal child in the previous month (about 12 percent in both research groups). Across all programs, BSF also led to a small reduction in the degree to which mothers felt stress and aggravation in their roles as parents. The average score on the parental stress and aggravation scale was 1.56 for BSF mothers, compared with 1.59 for control group mothers, a difference that was statistically significant. There was a similar difference across research groups in this scale for fathers; however, this difference was not statistically significant.

The effects on mothers' parental stress and mothers' use of frequent spanking were particularly large for the Houston BSF program. In Houston, 5 percent of BSF mothers reported having frequently spanked their child during the previous month, compared with 16 percent of control group mothers (Table A.6). In addition, the program substantially reduced mothers' parental stress, with a reduction in the maternal stress scale that was more than four times the size of the reduction for all programs combined (Tables A.1 and A.6).<sup>13</sup> The effects of BSF on frequent spanking and maternal stress were much smaller and statistically insignificant in the other BSF programs.

## Parent and Family Well-Being

BSF services focused most directly on improving couples' relationship quality. However, it was thought that BSF's efforts to strengthen the couple relationship could provide benefits that might carry over into other aspects of participants' lives, if a better relationship led to improvements in mental health for example. In addition, attendance in group sessions with other couples in similar circumstances might have effects on BSF couples beyond their relationship. Moreover, the support services provided directly by program staff or to which staff referred couples may have had effects on the well-being of participants and their families beyond the couple relationship.<sup>14</sup>

### **BSF reduced symptoms of depression for both mothers and fathers.**

Couples who were offered BSF services experienced fewer depressive symptoms than control group couples as measured by the 12-item Center for Epidemiologic Studies Depression Scale

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<sup>13</sup> In Table 12 and in the appendix tables, the measure of frequent spanking was reversed, so that it represents the avoidance of frequent spanking. Similarly, the parental stress measure was reverse coded so that it represents the absence of parental stress. These measures were transformed in this way so that, for all parenting outcomes included in these summary tables, positive impacts would indicate a favorable effect of the program.

<sup>14</sup> BSF's effects on several other aspects of parent well-being were also examined, including level of substance use, frequency of arrests, and the size of social support networks. The program had no effects on these measures. These results are included in the technical supplement to this report (Wood et al. 2010).

(CES-D). The CES-D represents the frequency with which sample members experienced a set of 12 specific depressive symptoms, such as having a poor appetite; having difficulty concentrating or sleeping; and feeling fearful, sad, or lonely. Values of the summary scale range from 0, indicating that the respondent never or rarely experienced any of the symptoms, to 36, indicating that the respondent experienced all 12 symptoms most or all of the time. At the time of the 15-month follow-up, BSF mothers had an average CES-D scale score of 4.8, compared to an average of 5.5 for control group mothers (Table 12). Similarly, BSF fathers had an average CES-D scale score of 4.1 compared with 4.7 for control group fathers. The range of average responses in both research groups suggests that sample members typically reported that they either rarely or only sometimes experienced depressive symptoms.

### **BSF did not affect economic outcomes.**

BSF had no effect on how likely mothers or fathers were to work or how much they earned. At the time of the 15-month follow-up, 50 percent of mothers in both research groups had worked for pay in the previous month (Table 12). Similarly, 78 percent of BSF fathers and 77 percent of control group fathers reported paid employment during the previous month, a difference that was not statistically significant. In addition, there was no statistically significant difference in the annual earnings of BSF and control group parents (Table 12). Mothers in both research groups earned on average between \$6,000 and \$7,000 dollars in the year prior to the survey, while fathers earned between \$16,000 and \$17,000 on average.

## **Parent and Family Well-Being Measures**

### **Mental Health**

- **Prevalence of Depressive Symptoms.** Based on the 12-item Center for Epidemiologic Studies Depression Scale (CES-D). Items ask respondents the frequency with which they experienced 12 specific depressive symptoms during the past week, such as having a poor appetite; having difficulty concentrating or sleeping; and feeling fearful, sad, or lonely. Values of the summary scale range from 0, indicating that the respondent never or rarely experienced any of the symptoms, to 36, indicating that the respondent experienced all 12 symptoms most or all of the time.

### **Parental Employment**

- **Employed in Past Month.** Indicates that the parent worked for pay during the month prior to the survey.
- **Earnings in Past Year.** Parent's income from paid employment during the 12 months prior to the survey.

### **Family Economic Well-Being**

All family economic well-being measures are based on the family in which the focal child resides. Measures include:

- **Family Income Below Poverty.** Indicates whether the family's monthly income at the time of the survey was below the poverty threshold.
- **Family Had Difficulty Meeting Housing Costs in Past Year.** Indicates that the family reported experiencing one of the following three hardships in the year prior to the survey: (1) being unable to pay rent or mortgage, (2) having utilities cut off, or (3) being evicted.
- **Family Receiving TANF or Food Stamps.** Indicates that the family reported receiving Temporary Assistance for Needy Families (TANF) or food stamps in the month prior to the survey.

**Table 12. Impact of BSF on Depressive Symptoms, Employment, and Earnings at 15-Month Follow-up**

Outcome	BSF Group	Control Group	Estimated Impact	Effect Size <sup>a</sup>
<b>Depressive Symptoms</b>				
Mothers' CES-D score	4.80	5.48	-0.68***	-0.10
Fathers' CES-D score	4.09	4.69	-0.61***	-0.10
<b>Employment in Past Month (%)</b>				
Mother employed	50	50	0	-0.00
Father employed	78	77	1	0.04
<b>Earnings in Past Year (\$)</b>				
Mothers' earnings	6,673	6,499	174	0.02
Fathers' earnings	16,648	16,141	507	0.04
<b>Sample Size</b>				
Mothers	2,126	2,112		
Fathers	1,847	1,838		

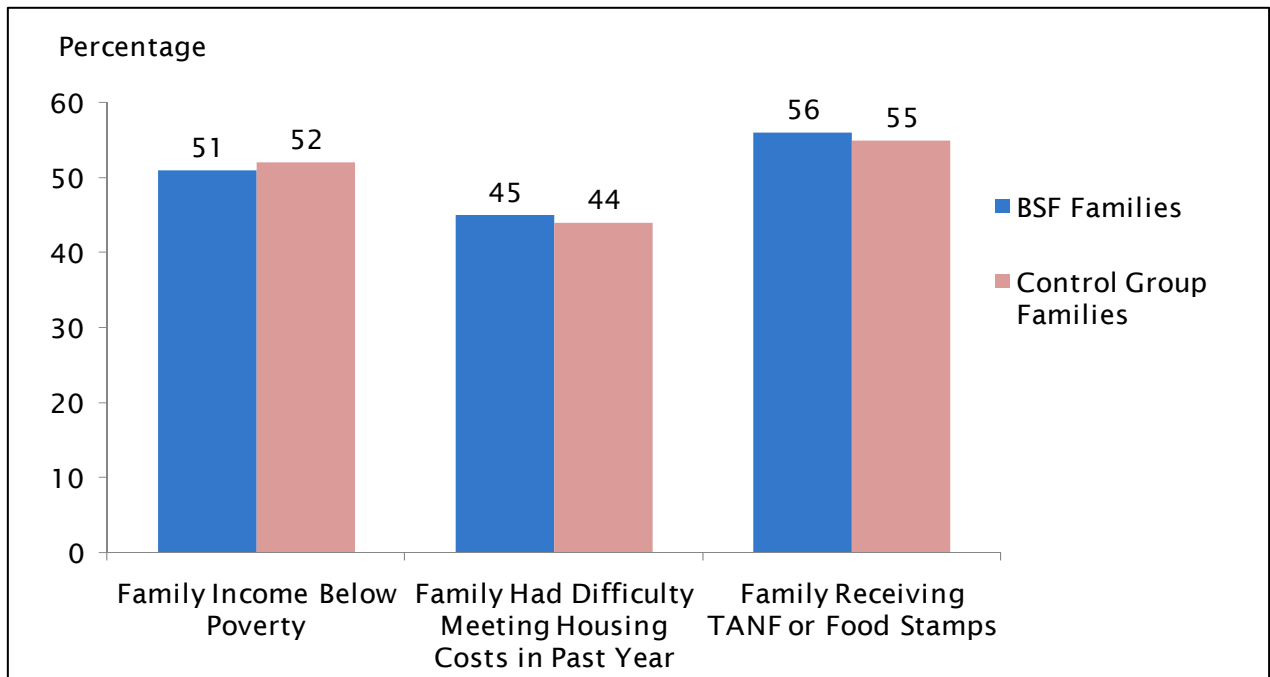
Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: The Center for Epidemiologic Studies Depression Scale (CES-D) scores range from 0 to 36. The difference between the BSF and control group means may not equal the estimated impact due to rounding.

<sup>a</sup>Information on how effect sizes were calculated is available in the technical supplement to this report.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

**Figure 8: Impact of BSF on Family Economic Well-Being at 15 Months**



Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Note: None of the differences between BSF and control group couples are statistically significant at the .10 level. For these analyses, the family refers to the family in which the focal child resides.

BSF also had no effect on family economic well-being. At the time of the survey, 51 percent of focal children in BSF families lived in poverty, compared with 52 percent of focal children in control group families, a difference that is not statistically significant (Figure 8). Similarly, 45 percent of BSF focal children lived in a family that had difficulty meeting housing expenses during the previous year, compared with 44 percent of focal children in the control group. In addition, similar percentages of BSF and control group families were receiving TANF or food stamp benefits at follow-up, 56 and 55 percent respectively.

## **Impacts on African American Couples**

As part of the analysis of BSF's effects, the evaluation team examined the program's impact on numerous subgroups. These subgroups were selected before the data analysis began and were defined based on the following initial characteristics: relationship quality, relationship status, whether either member of the couple had a child by another partner, the timing of the couple's BSF application relative to their child's birth, earnings, educational attainment, whether either partner was under 21 years of age, whether either partner demonstrated signs of psychological distress, race/ethnicity, attitudes toward marriage, and whether the couple attended religious services regularly.

The full set of subgroup results is available in the technical supplement to this report (Wood et al. 2010). This section highlights the set of subgroup results with the strongest and most striking findings—the comparison of BSF's effects for African American and non-African American couples. “African American couples” are defined as those in which both the mother and the father report that they are African American and not Hispanic. These couples comprise just over half of the couples in the study. This analysis is based on data from only six of the eight BSF programs. Houston and San Angelo were not included in the analysis because they served few African American couples.

### **BSF improved the relationship quality of African American couples.**

For couples in which both members were African American, BSF led to a statistically significant increase in the level of support and affection partners felt toward each other (Table 13). It also improved their ability to use constructive conflict management techniques and avoid the use of destructive conflict behaviors. In addition, BSF increased fidelity among African American couples and reduced the frequency with which the men experienced intimate partner violence. BSF also improved the quality of the co-parenting relationship among African American couples. BSF did not have an effect on the relationship status of African American couples, however (Table 13). At the time of the 15-month follow-up survey, African American couples in both research groups had similar rates of romantic involvement, co-residence, and marriage.

BSF had no positive effects on relationship quality or status for couples in which at least one member was not African American. Among these couples, those offered BSF services and control group members reported similar levels of relationship happiness, support and affection, quality of conflict management, fidelity, and intimate partner violence (Table 13). In addition, BSF reduced the likelihood that these couples remained romantically involved at the time of the 15-month follow-up survey, from 82 percent to 77 percent.

**Table 13. Impact of BSF on Key Outcomes at 15-Month Follow-up, by Whether Both Members of the Couple are African American**

Outcome	Couples in Which Both Partners Are African American			All Other Couples			
	BSF Group	Control Group	Impact	BSF Group	Control Group	Impact	
<b>Relationship Status</b>							
Romantically involved (%)	††	72	69	2	77	82	-6*
Living together, married or unmarried (%)		49	47	2	66	71	-4
Married (%)		12	12	0	20	24	-4
<b>Relationship Quality</b>							
Relationship happiness scale		8.19	8.09	0.10	8.42	8.40	0.03
Support and affection scale	††	3.44	3.40	0.04*	3.46	3.50	-0.04
Avoidance of destructive conflict behaviors scale	††	2.73	2.65	0.07**	2.76	2.79	-0.04
Use of constructive conflict behaviors scale		3.22	3.14	0.08***	3.28	3.28	0.01
Neither unfaithful since random assignment (%)		67	63	5**	79	79	1
<b>Intimate Partner Violence</b>							
Mother reports no severe physical assault in the past year (%)		90	89	1	89	92	-3
Father reports no severe physical assault in the past year (%)	††	88	83	5**	86	89	-4
<b>Co-parenting and Father Involvement</b>							
Quality of co-parenting relationship scale		4.38	4.33	0.05*	4.40	4.41	-0.01
Father regularly spends time with child (%)		61	61	0	68	72	-4
<b>Sample Size</b>		<b>1,176</b>	<b>1,144</b>		<b>711</b>	<b>747</b>	

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: These figures do not include the Houston and San Angelo programs, because these programs served a very small number of African American couples. The difference between the BSF and control group means may not equal the estimated impact due to rounding.

\*\*\*/\*\*/\* Statistically significant at the .01/.05/.10 level.

†††/††/† Difference between impact estimates for the two subgroups is statistically significant at the .01/.05/.10 level.

## Discussion

These short-term results indicate that, when all the programs included in the evaluation are combined, BSF did not succeed in its primary objective of improving couples’ relationship quality and making them more likely to remain romantically involved or get married. Fifteen months after entering the program, the relationship outcomes of BSF couples were, on average, almost identical to those of couples in the control group.

It was also hypothesized that BSF might have effects on other aspects of the lives of participating families. However, when all programs are combined, BSF had few effects on any outcomes examined by the evaluation. One exception was the program’s effect on the prevalence of depressive symptoms. For both mothers and fathers, BSF significantly reduced symptoms of depression 15 months after program application. BSF group sessions typically ran for two to five

months. These effects suggest that BSF was significantly reducing depressive symptoms, several months after most couples had stopped attending group sessions. BSF also led to a modest reduction in frequent spanking and parental stress for mothers, an effect that was particularly concentrated in the Houston BSF program. BSF had no effects on most other outcomes examined, such as father involvement, co-parenting, and economic well-being.

The impacts of BSF varied substantially across the eight programs included in the evaluation. The BSF program in Oklahoma City had a consistent pattern of positive effects on relationship outcomes. It increased the likelihood that couples remained romantically involved and improved the five dimensions of relationship quality examined by the study. It also had positive effects on co-parenting and father involvement. In contrast, the Baltimore BSF program had a number of negative effects on relationships, including increasing the likelihood that women experienced intimate partner violence. The Baltimore program also had negative effects on father involvement and co-parenting. The other BSF programs generally had little or no effect on relationship outcomes. The BSF impact evaluation is not designed to explain in any systematic way why one program was more successful than another. Nonetheless, given the wide variation in the effects of BSF across the programs included in the evaluation, it is useful to consider what is distinctive about the two programs with the strongest patterns of effects—Oklahoma City and Baltimore.

The Oklahoma City program delivered its relationship skills curriculum in a distinctive way. It was the only BSF program to use the *Becoming Parents* curriculum, which covered a mix of topics similar to those addressed in the other curricula, but prescribed groups twice as large as those recommended in the other two BSF curricula and covered the material in less time (30 rather than 42 hours). The Oklahoma program also offered weekly group sessions in two formats, three or five hours long, while other BSF programs typically offered only two-hour weekly sessions (Dion et al. 2010). This difference, combined with Oklahoma's use of the shorter *Becoming Parents* curriculum, allowed Oklahoma couples to complete the curriculum in six or ten weeks, while couples in other programs needed about five months to finish. In addition, the Oklahoma program offered more financial incentives to encourage group attendance than other programs did. These factors may have played a role in Oklahoma's greater success at getting couples to complete the curriculum. In Oklahoma, 45 percent of BSF couples received at least 80 percent of the curriculum, compared with only 9 percent of couples in other BSF programs (Dion et al. 2010). Finally, although only unmarried parents were eligible for the BSF research sample, the Oklahoma City program also served low-income married parents and included both married and unmarried parents in the same group sessions.<sup>15</sup> No other BSF program served parents who were married before their child was conceived. The presence of married couples may have influenced how the group sessions in Oklahoma City functioned, as well as how effective they were in improving the outcomes of the couples in the BSF research sample.

The most distinctive characteristic of the Baltimore BSF program is the population it served. In particular, Baltimore served couples with less committed and more tenuous relationships than other programs did. For example, only 38 percent of Baltimore couples consisted of two individuals who

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<sup>15</sup> The married parents served by the Oklahoma City program are included in the Supporting Healthy Marriage study, another large-scale evaluation sponsored by ACF. Results from that evaluation will provide evidence on how effective the Oklahoma program was for the married parents it served.



both considered marriage to their current partner likely, the lowest proportion of any BSF program, and considerably lower than the 61 percent of couples who considered marriage likely across all programs (Figure 3). In addition, the population served in the Baltimore program was more economically disadvantaged—particularly the men. Only 58 percent of Baltimore fathers were employed when they applied for the program, compared with 76 percent of fathers in other BSF programs. The fact that Baltimore groups consisted of a higher proportion of very disadvantaged couples in more tenuous relationships may have influenced how effective the sessions were. However, one can only hypothesize about which program or population characteristics contributed to the pattern of effects observed in Oklahoma City and Baltimore. The study design does not support definitive conclusions concerning the reasons for variation in impacts across the programs included in the evaluation.

BSF's effects also differed across racial groups. It improved the relationship quality of couples in which both members were African American, leading to more support and affection, better conflict management, increased fidelity, and reductions in intimate partner violence. In contrast, BSF did not affect the relationship quality of couples who were not African American and increased the rate at which these couples broke up. Patterns of impacts were weaker and less consistent for other subgroups examined.

This variation in impacts across the local BSF programs and across populations suggests that programs like BSF can have positive effects. However, the results also indicate that these programs can have negative effects on relationships in certain circumstances, including increasing the rate at which couples break up and experience intimate partner violence.

It is important to keep in mind that these are interim results. Results may be different at the time of the final follow-up, which will be conducted when the focal child is about three years old. In addition to the outcomes examined in this report, the final follow-up will examine BSF's effects on child well-being. Improving child well-being was a major goal of the BSF initiative. Therefore, it will be important to examine impacts on these outcomes to have a complete picture of BSF's effects.



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**APPENDIX A**

**ADDITIONAL IMPACT TABLES**



**Table A.1 Initial 15-Month Follow-up Impact Estimates: Pooled Across All Programs**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%)	76.0	77.1	-1.1	0.418	-0.038
Living together, married or unmarried (%)	61.5	61.5	0.0	0.998	0.001
Married (%)	16.5	17.9	-1.3	0.201	-0.057
<b>Relationship Quality</b>					
Relationship happiness <sup>a</sup>	8.37	8.32	0.06	0.257	0.040
Support and affection <sup>b</sup>	3.46	3.45	0.01	0.398	0.029
Use of constructive conflict behaviors <sup>c</sup>	3.26	3.23	0.03	0.137	0.048
Avoidance of destructive conflict behaviors <sup>d</sup>	2.76	2.75	0.01	0.765	0.010
Neither reports infidelity (%)	74.8	73.0	1.8	0.215	0.056
Mother reports no severe assaults (%) <sup>e</sup>	90.1	89.9	0.2	0.856	0.013
Father reports no severe assaults (%) <sup>e</sup>	88.8	87.8	1.0	0.423	0.060
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>f</sup>	4.37	4.37	0.00	0.963	0.001
Father parenting and involvement					
Lives with child (%) <sup>g</sup>	64.0	63.1	0.9	0.550	0.024
Spends substantial time with child daily (%) <sup>h</sup>	66.1	68.6	-2.5	0.105	-0.068
Provides substantial financial support (%) <sup>i</sup>	75.5	76.3	-0.8	0.578	-0.026
Level of cognitive and social play	4.63	4.67	-0.04	0.289	-0.039
Absence of parenting stress <sup>j</sup>	3.47	3.44	0.03	0.105	0.057
Avoidance of frequent spanking (%) <sup>k</sup>	88.0	88.2	-0.2	0.885	-0.011
Mother parenting					
Level of cognitive and social play	5.16	5.12	0.04	0.128	0.053
Absence of parenting stress <sup>j</sup>	3.44	3.41	0.03*	0.078	0.059
Avoidance of frequent spanking (%) <sup>k</sup>	87.1	84.6	2.5**	0.050	0.123
<b>Parent Well-Being</b>					
Mother scale of depressive symptoms	4.80	5.48	-0.68***	0.001	-0.103
Father scale of depressive symptoms	4.09	4.69	-0.60***	0.003	-0.101
<b>Sample Size</b>					
All couples	2,217	2,207			
Intact couples	1,702	1,693			
Mothers	2,126	2,112			
Fathers	1,847	1,838			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a pooled regression controlling for the couple's baseline relationship and demographic characteristics. Baseline characteristics controlled for in the analysis include whether both members of the couple responded to the survey, number of months since random assignment, whether either member of the couple was younger than 21 at baseline, race/ethnicity, couple's high school graduate status, couple's earnings category, religiosity, whether both speak English, whether either has moderate or high levels of psychological distress, baseline cohabitation status, baseline reported chance of getting married, whether both agree that children are better off when their parents are married, pregnancy intendedness, whether the couple has multiple children together, whether either member has a child with another partner, and whether the couple had known each other less than a year at baseline. Pooled overall impact estimates are calculated based on a weighted average of program-level impacts in which all programs are weighted equally. In addition, impact estimates are calculated using nonresponse weights that adjust for survey nonresponse. See the technical supplement to this report for more details (Wood et al. 2010).

<sup>a</sup>“Relationship happiness” is measured on a 0-to-10 scale, where “10” corresponds with being completely happy with the relationship and “0” corresponds with being not at all happy with it. This measure is defined only for couples who remained romantically involved at followup. For two programs in which BSF and control group couples who were still romantically involved did not have similar baseline characteristics (Baltimore and Florida), analysis of relationship happiness could not be conducted.

<sup>b</sup>“Support and affection” is based on 12 survey items and is measured on a 1-to-4 strongly-disagree-to-strongly-agree scale. The 12-item version of this measure is available only for couples who were still romantically involved. For the programs in which intact BSF and control group couples did not have similar baseline characteristics (Baltimore and Florida), an abbreviated six-item support and affection scale is used, that is based on the subset of items from the 12-item scale that is asked of all couples, including those who are no longer romantically involved.

<sup>c</sup>The use of constructive conflict behavior scale is measured on a 1-to-4 strongly-disagree-to-strongly-agree scale. This measure is defined for all intact couples, as well as those who are no longer in a romantic relationship but are still in regular contact with each other (talking to each other at least a few times a month).

<sup>d</sup>The avoidance of destructive conflict behavior scale is measured on a 1-to-4 strongly-agree-to-strongly-disagree scale. This measure is defined for all intact couples, as well as those who are no longer in a romantic relationship but are still in regular contact with each other (talking to each other at least a few times a month). This scale is coded such that positive impacts correspond to the BSF group having less destructive conflict behavior.

<sup>e</sup>Physical assault is measured by the 12 items on the physical assault subscale of the revised Conflict Tactics Scale (CTS2). The measure includes violence from any romantic partner during the past year and is based on the respondent’s report of partner’s behavior. The severity of violence is based on classifications developed by the creators of the CTS2 (Straus et al. 1996). The developers designated five items as “minor” acts and seven as “severe.”

<sup>f</sup>The coparenting scale is measured on a 1-to-5 strongly-disagree-to-strongly-agree scale and is based on 10 items drawn from the Parenting Alliance Inventory.

<sup>g</sup>Fathers are defined as living with the child if both the mother and father report that the father lived with the child at the time of the survey.

<sup>h</sup>Fathers are defined as having spent substantial time with the child if both the mother and father report that during the past month the father spent one hour or more with the child on a daily basis.

<sup>i</sup>Fathers are recorded as having provided substantial financial support if the mother reports that the father covered at least half of the costs of raising the BSF child.

<sup>j</sup>The parenting stress scale is measured on a 1-to-4 none-of-the-time-to-all-of-the-time scale and is based on own reports to four items from the Aggravation in Parenting Scale.

<sup>k</sup>Frequent spanking is defined as spanking a few times a week or more and is based on self reports.

\* / \*\* / \*\*\* Statistically significant at the .10 / .05 / .01 level, two-tailed test.

“Support and affection” is based on 12 survey items and is measured on a 1-to-4 strongly-disagree-to-strongly-agree scale. The 12-item version of this measure is available only for couples who were still romantically involved. For the programs in which intact BSF and control group couples did not have similar baseline characteristics (Baltimore and Florida), an abbreviated six-item support and affection scale is used, that is based on half the subset of items from the 12-item scale that are asked of all couples, including those who are no longer romantically involved.



**Table A.2 Initial 15-Month Follow-up Impact Estimates: Atlanta**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	75.4	76.4	-1.0	0.746	-0.032
Living together, married or unmarried (%) <sup>a</sup>	55.3	54.6	0.7	0.826	0.017
Married (%) <sup>a</sup>	14.9	14.1	0.8	0.719	0.040
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.33	8.15	0.18	0.114	0.121
Support and affection <sup>c</sup>	3.41	3.38	0.02	0.434	0.058
Use of constructive conflict behaviors <sup>d</sup>	3.23	3.15	0.08**	0.048	0.143
Avoidance of destructive conflict behaviors <sup>e</sup>	2.70	2.73	-0.03	0.514	-0.047
Neither reports infidelity (%)	68.1	63.5	4.6	0.169	0.123
Mother reports no severe assaults (%) <sup>f</sup>	86.0	88.0	-2.0	0.384	-0.108
Father reports no severe assaults (%) <sup>f</sup>	82.8	79.5	3.3	0.283	0.131
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.37	4.37	0.00	0.989	0.001
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	60.1	57.4	2.7	0.422	0.068
Spends substantial time with child daily (%) <sup>i</sup>	61.5	65.1	-3.6	0.289	-0.094
Provides substantial financial support (%) <sup>j</sup>	73.2	73.9	-0.7	0.816	-0.023
Level of cognitive and social play	4.55	4.62	-0.07	0.427	-0.069
Absence of parenting stress <sup>k</sup>	3.43	3.41	0.02	0.595	0.043
Avoidance of frequent spanking (%) <sup>l</sup>	86.5	85.6	1.0	0.771	0.048
Mother parenting					
Level of cognitive and social play	5.12	5.10	0.02	0.689	0.031
Absence of parenting stress <sup>k</sup>	3.39	3.38	0.02	0.696	0.029
Avoidance of frequent spanking (%) <sup>l</sup>	85.1	84.9	0.2	0.944	0.010
<b>Parent Well-Being</b>					
Mother scale of depressive symptoms	5.50	5.63	-0.13	0.772	-0.019
Father scale of depressive symptoms	4.77	5.44	-0.67	0.126	-0.111
<b>Sample Size</b>					
<b>All couples</b>	<b>405</b>	<b>400</b>			
<b>Intact couples</b>	<b>309</b>	<b>303</b>			
<b>Mothers</b>	<b>392</b>	<b>384</b>			
<b>Fathers</b>	<b>345</b>	<b>324</b>			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

**Table A.3 Initial 15-Month Follow-up Impact Estimates: Baltimore**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	59.4	70.3	-10.9***	0.004	-0.292
Living together, married or unmarried (%) <sup>a</sup>	41.6	45.7	-4.0	0.329	-0.100
Married (%) <sup>a</sup>	7.5	6.8	0.7	0.809	0.063
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	n/a	n/a			
Support and affection <sup>c</sup>	3.01	3.12	-0.11**	0.029	-0.190
Use of constructive conflict behaviors <sup>d</sup>	3.14	3.18	-0.04	0.388	-0.078
Avoidance of destructive conflict behaviors <sup>e</sup>	2.62	2.62	0.01	0.896	0.012
Neither reports infidelity (%)	58.3	58.6	-0.3	0.933	-0.008
Mother reports no severe assaults (%) <sup>f</sup>	85.3	90.7	-5.3*	0.069	-0.311
Father reports no severe assaults (%) <sup>f</sup>	79.0	79.4	-0.4	0.925	-0.013
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.23	4.32	-0.09*	0.089	-0.144
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	43.8	51.2	-7.4*	0.081	-0.180
Spends substantial time with child daily (%) <sup>i</sup>	53.1	60.5	-7.3*	0.087	-0.182
Provides substantial financial support (%) <sup>j</sup>	61.2	70.5	-9.3**	0.020	-0.251
Level of cognitive and social play	4.40	4.64	-0.24**	0.039	-0.233
Absence of parenting stress <sup>k</sup>	3.38	3.37	0.02	0.769	0.029
Avoidance of frequent spanking (%) <sup>l</sup>	90.5	85.5	4.9	0.230	0.287
Mother parenting					
Level of cognitive and social play	5.19	5.15	0.05	0.514	0.063
Avoidance of parenting stress <sup>k</sup>	3.42	3.41	0.01	0.802	0.023
Absence of frequent spanking (%) <sup>l</sup>	85.3	87.0	-1.7	0.631	-0.087
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	6.01	6.17	-0.16	0.775	-0.024
Father CES-D scale of depressive symptoms	5.60	6.38	-0.79	0.154	-0.131
<b>Sample Size</b>					
All couples	263	262			
Intact couples	164	183			
Mothers	258	252			
Fathers	202	218			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple’s baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1. Analysis of relationship happiness, which is measured only for couples who were still romantically involved, could not be conducted for this program because the Baltimore BSF and control group couples who were still romantically involved did not have similar characteristics at baseline. For the same reason, analysis of support and affection for this program is based on the abbreviated scale, which is measured for all couples, rather than the full scale used for other programs, which is measured for intact couples only. See the technical supplement to this report for more information (Wood et al. 2010)

\*/\*\*/\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

n/a = not available. Baltimore BSF and control group couples that were still romantically involved did not have similar initial characteristics. Therefore, this impact could not be calculated. See the technical supplement to this report for more details.

**Table A.4 Initial 15-Month Follow-up Impact Estimates: Baton Rouge**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	76.0	75.8	0.3	0.940	0.009
Living together, married or unmarried (%) <sup>a</sup>	57.6	55.4	2.2	0.568	0.054
Married (%) <sup>a</sup>	18.5	17.4	1.1	0.686	0.046
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.15	8.13	0.02	0.892	0.014
Support and affection <sup>c</sup>	3.49	3.43	0.06	0.112	0.148
Use of constructive conflict behaviors <sup>d</sup>	3.23	3.17	0.06	0.221	0.102
Avoidance of destructive conflict behaviors <sup>e</sup>	2.71	2.70	0.01	0.866	0.015
Neither reports infidelity (%)	71.2	67.2	4.1	0.289	0.116
Mother reports no severe assaults (%) <sup>f</sup>	88.5	84.9	3.6	0.199	0.190
Father reports no severe assaults (%) <sup>f</sup>	87.3	87.4	-0.1	0.970	-0.008
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.41	4.38	0.03	0.559	0.047
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	60.4	57.8	2.6	0.504	0.066
Spends substantial time with child daily (%) <sup>i</sup>	63.8	63.4	0.5	0.903	0.013
Provides substantial financial support (%) <sup>j</sup>	76.1	74.0	2.0	0.587	0.066
Level of cognitive and social play	4.55	4.54	0.01	0.957	0.006
Absence of parenting stress <sup>k</sup>	3.57	3.46	0.11**	0.030	0.205
Avoidance of frequent spanking (%) <sup>l</sup>	85.7	86.0	-0.3	0.936	-0.016
Mother parenting					
Level of cognitive and social play	5.12	5.14	-0.01	0.879	-0.014
Absence of parenting stress <sup>k</sup>	3.51	3.47	0.04	0.440	0.068
Avoidance of frequent spanking (%) <sup>l</sup>	88.5	84.7	3.8	0.270	0.202
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	4.98	6.03	-1.05*	0.051	-0.157
Father CES-D scale of depressive symptoms	4.16	5.55	-1.40***	0.008	-0.232
<b>Sample Size</b>					
All couples	286	282			
Intact couples	221	214			
Mothers	270	267			
Fathers	232	236			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

**Table A.5 Initial 15-Month Follow-up Impact Estimates: Florida Counties**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	73.7	75.4	-1.7	0.643	-0.055
Living together, married or unmarried (%) <sup>a</sup>	56.2	57.9	-1.6	0.674	-0.040
Married (%) <sup>a</sup>	11.9	13.5	-1.6	0.542	-0.090
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	n/a	n/a			
Support and affection, abbreviated scale <sup>c</sup>	3.22	3.24	-0.02	0.628	-0.038
Use of constructive conflict behaviors <sup>d</sup>	3.25	3.27	-0.03	0.575	-0.046
Avoidance of destructive conflict behaviors <sup>e</sup>	2.81	2.81	0.00	0.980	-0.002
Neither reports infidelity (%)	78.2	73.5	4.7	0.203	0.156
Mother reports no severe assaults (%) <sup>f</sup>	95.0	93.3	1.7	0.533	0.188
Father reports no severe assaults (%) <sup>f</sup>	90.5	91.3	-0.8	0.826	-0.058
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.43	4.43	-0.01	0.875	-0.012
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	59.2	58.8	0.5	0.904	0.012
Spends substantial time with child daily (%) <sup>i</sup>	65.1	69.7	-4.6	0.230	-0.128
Provides substantial financial support (%) <sup>j</sup>	75.9	76.6	-0.7	0.841	-0.024
Level of cognitive and social play	4.71	4.84	-0.13	0.185	-0.128
Absence of parenting stress <sup>k</sup>	3.44	3.40	0.04	0.423	0.073
Avoidance of frequent spanking (%) <sup>l</sup>	88.5	89.9	-1.4	0.714	-0.085
Mother parenting					
Level of cognitive and social play	5.17	5.18	-0.01	0.903	-0.011
Absence of parenting stress <sup>k</sup>	3.46	3.46	0.00	0.983	-0.002
Avoidance of frequent spanking (%) <sup>l</sup>	85.5	82.9	2.6	0.410	0.118
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	4.34	5.07	-0.73	0.163	-0.110
Father CES-D scale of depressive symptoms	4.26	4.45	-0.18	0.721	-0.031
<b>Sample Size</b>					
<b>All couples</b>	<b>290</b>	<b>299</b>			
<b>Intact couples</b>	<b>216</b>	<b>230</b>			
<b>Mothers</b>	<b>273</b>	<b>287</b>			
<b>Fathers</b>	<b>241</b>	<b>243</b>			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1. Analysis of relationship happiness, which is measured only for couples who were still romantically involved, could not be conducted for this program because the Florida Counties BSF and control group couples who were still romantically involved did not have similar characteristics at baseline. For the same reason, analysis of support and affection for this program is based on the abbreviated scale, which is measured for all couples, rather than the full scale used for other programs, which is measured for intact couples only. See the technical supplement to this report for more information (Wood et al. 2010)

\*/\*\*/\*\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

n/a = not available. Florida BSF and control group couples that were still romantically involved did not have similar initial characteristics. Therefore, this impact could not be calculated. See the technical supplement to this report for more details.

**Table A.6 Initial 15-Month Follow-up Impact Estimates: Houston**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	88.2	87.4	0.8	0.865	0.044
Living together, married or unmarried (%) <sup>a</sup>	83.1	81.4	1.7	0.731	0.072
Married (%) <sup>a</sup>	20.5	25.5	-5.0	0.158	-0.171
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.86	8.73	0.13	0.393	0.092
Support and affection <sup>c</sup>	3.46	3.46	0.00	0.940	0.008
Use of constructive conflict behaviors <sup>d</sup>	3.39	3.34	0.04	0.446	0.080
Avoidance of destructive conflict behaviors <sup>e</sup>	2.95	2.95	0.00	0.967	-0.004
Neither reports infidelity (%)	89.1	87.7	1.4	0.764	0.084
Mother reports no severe assaults (%) <sup>f</sup>	95.4	91.6	3.8	0.287	0.394
Father reports no severe assaults (%) <sup>f</sup>	95.5	93.9	1.6	0.741	0.191
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.37	4.34	0.03	0.654	0.047
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	84.6	82.7	1.9	0.700	0.086
Spends substantial time with child daily (%) <sup>i</sup>	78.5	79.3	-0.9	0.861	-0.032
Provides substantial financial support (%) <sup>j</sup>	89.6	89.5	0.1	0.985	0.006
Level of cognitive and social play	4.66	4.58	0.08	0.524	0.079
Absence of parenting stress <sup>k</sup>	3.38	3.32	0.06	0.364	0.109
Avoidance of frequent spanking (%) <sup>l</sup>	90.7	96.2	-5.4	0.264	-0.571
Mother parenting					
Level of cognitive and social play	5.05	4.93	0.12	0.181	0.153
Absence of parenting stress <sup>k</sup>	3.36	3.22	0.14**	0.014	0.274
Avoidance of frequent spanking (%) <sup>l</sup>	95.2	84.5	10.7***	0.010	0.780
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	3.21	4.11	-0.90	0.189	-0.136
Father CES-D scale of depressive symptoms	2.28	2.99	-0.70	0.299	-0.117
<b>Sample Size</b>					
All couples	181	174			
Intact couples	162	152			
Mothers	178	171			
Fathers	161	149			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

**Table A.7 Initial 15-Month Follow-up Impact Estimates: Indiana Counties**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	75.4	75.9	-0.4	0.919	-0.014
Living together, married or unmarried (%) <sup>a</sup>	59.2	67.2	-8.0*	0.095	-0.209
Married (%) <sup>a</sup>	15.4	21.0	-5.7*	0.092	-0.232
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.37	8.41	-0.05	0.782	-0.032
Support and affection <sup>c</sup>	3.48	3.53	-0.04	0.373	-0.103
Use of constructive conflict behaviors <sup>d</sup>	3.28	3.27	0.01	0.831	0.022
Avoidance of destructive conflict behaviors <sup>e</sup>	2.76	2.79	-0.03	0.676	-0.042
Neither reports infidelity (%)	76.7	75.1	1.7	0.715	0.055
Mother reports no severe assaults (%) <sup>f</sup>	91.1	95.9	-4.8	0.159	-0.505
Father reports no severe assaults (%) <sup>f</sup>	91.0	88.6	2.4	0.593	0.162
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.36	4.38	-0.02	0.752	-0.031
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	61.8	68.5	-6.6	0.170	-0.177
Spends substantial time with child daily (%) <sup>i</sup>	67.8	73.1	-5.3	0.271	-0.154
Provides substantial financial support (%) <sup>j</sup>	70.3	75.6	-5.3	0.236	-0.164
Level of cognitive and social play	4.72	4.73	-0.01	0.947	-0.008
Absence of parenting stress <sup>k</sup>	3.51	3.45	0.06	0.305	0.118
Avoidance of frequent spanking (%) <sup>l</sup>	86.4	81.6	4.9	0.298	0.221
Mother parenting					
Level of cognitive and social play	5.32	5.20	0.12	0.146	0.165
Absence of parenting stress <sup>k</sup>	3.45	3.47	-0.02	0.683	-0.043
Avoidance of frequent spanking (%) <sup>l</sup>	82.9	85.4	-2.4	0.559	-0.110
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	5.30	4.86	0.44	0.501	0.066
Father CES-D scale of depressive symptoms	4.29	4.02	0.28	0.671	0.046
<b>Sample Size</b>					
All couples	208	206			
Intact couples	155	158			
Mothers	202	201			
Fathers	188	185			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

**Table A.8 Initial 15-Month Follow-up Impact Estimates: Oklahoma City**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	81.5	76.4	5.1*	0.081	0.187
Living together, married or unmarried (%) <sup>a</sup>	70.2	65.6	4.6	0.146	0.129
Married (%) <sup>a</sup>	24.8	25.1	-0.3	0.908	-0.008
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.49	8.18	0.31***	0.007	0.210
Support and affection <sup>c</sup>	3.50	3.43	0.06**	0.032	0.157
Use of constructive conflict behaviors <sup>d</sup>	3.33	3.22	0.11***	0.004	0.190
Avoidance of destructive conflict behaviors <sup>e</sup>	2.80	2.71	0.09**	0.036	0.141
Neither reports infidelity (%)	82.0	77.2	4.9*	0.100	0.182
Mother reports no severe assaults (%) <sup>f</sup>	90.2	87.7	2.5	0.257	0.157
Father reports no severe assaults (%) <sup>f</sup>	92.0	92.0	0.0	1.000	0.000
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.43	4.36	0.08*	0.062	0.121
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	71.2	65.7	5.5*	0.080	0.155
Spends substantial time with child daily (%) <sup>i</sup>	69.0	68.5	0.5	0.870	0.015
Provides substantial financial support (%) <sup>j</sup>	80.0	72.0	8.0***	0.007	0.267
Level of cognitive and social play	4.70	4.68	0.03	0.752	0.025
Absence of parenting stress <sup>k</sup>	3.52	3.54	-0.02	0.631	-0.037
Avoidance of frequent spanking (%) <sup>l</sup>	90.4	91.4	-1.0	0.741	-0.074
Mother parenting					
Level of cognitive and social play	5.10	5.05	0.05	0.354	0.072
Absence of parenting stress <sup>k</sup>	3.53	3.49	0.04	0.276	0.075
Avoidance of frequent spanking (%) <sup>l</sup>	88.9	88.6	0.4	0.893	0.021
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	4.52	5.95	-1.43***	0.001	-0.215
Father CES-D scale of depressive symptoms	4.01	3.99	0.01	0.980	0.002
<b>Sample Size</b>					
All couples	435	442			
Intact couples	357	341			
Mothers	411	413			
Fathers	362	373			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.

**Table A.9 Initial 15-Month Follow-up Impact Estimates: San Angelo**

Outcome	BSF Group	Control Group	Estimated Impact	p-Value	Effect Size
<b>Relationship Status</b>					
Still romantically involved (%) <sup>a</sup>	78.1	79.2	-1.1	0.830	-0.039
Living together, married or unmarried (%) <sup>a</sup>	68.8	64.3	4.4	0.420	0.121
Married (%) <sup>a</sup>	19.0	19.8	-0.8	0.829	-0.032
<b>Relationship Quality</b>					
Relationship happiness <sup>b</sup>	8.49	8.39	0.10	0.584	0.068
Support and affection <sup>c</sup>	3.51	3.49	0.02	0.673	0.055
Use of constructive conflict behaviors <sup>d</sup>	3.26	3.28	-0.02	0.787	-0.034
Avoidance of destructive conflict behaviors <sup>e</sup>	2.71	2.70	0.01	0.928	0.011
Neither reports infidelity (%)	74.8	81.6	-6.8	0.193	-0.242
Mother reports no severe assaults (%) <sup>f</sup>	89.3	87.3	2.0	0.603	0.119
Father reports no severe assaults (%) <sup>f</sup>	92.3	90.0	2.2	0.672	0.169
<b>Parenting and Father Involvement</b>					
Quality of coparenting relationship <sup>g</sup>	4.40	4.41	-0.01	0.885	-0.017
Father parenting and involvement					
Lives with child (%) <sup>h</sup>	71.0	63.0	8.0	0.140	0.220
Spends substantial time with child daily (%) <sup>i</sup>	70.3	69.5	0.8	0.883	0.023
Provides substantial financial support (%) <sup>j</sup>	77.8	78.2	-0.4	0.939	-0.014
Level of cognitive and social play	4.75	4.74	0.01	0.937	0.011
Absence of parenting stress <sup>k</sup>	3.51	3.56	-0.04	0.576	-0.075
Avoidance of frequent spanking (%) <sup>l</sup>	85.4	89.7	-4.2	0.447	-0.238
Mother parenting					
Level of cognitive and social play	5.20	5.23	-0.03	0.755	-0.039
Absence of parenting stress <sup>k</sup>	3.42	3.39	0.02	0.695	0.047
Avoidance of frequent spanking (%) <sup>l</sup>	85.1	79.0	6.1	0.178	0.255
<b>Parent Well-Being</b>					
Mother CES-D scale of depressive symptoms	4.50	6.02	-1.52**	0.042	-0.229
Father CES-D scale of depressive symptoms	3.36	4.74	-1.39*	0.066	-0.231
<b>Sample Size</b>					
All couples	149	142			
Intact couples	118	112			
Mothers	142	137			
Fathers	116	110			

Source: BSF 15-month follow-up survey, conducted by Mathematica Policy Research.

Notes: Impacts are adjusted using a program-specific regression controlling for the couple's baseline relationship and demographic characteristics. Footnotes refer to those provided following Table A.1.

\*/\*\*/\*\* Statistically significant at the .10/.05/.01 level, two-tailed test.





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