

**Building Strong Families (BSF) Demonstration and Evaluation:  
Impact Study Second Follow-up**

**OMB Supporting Statement Part B**

*March 2009*

## B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

### B1. Respondent Universe and Sampling

The BSF programs target low-income, adult, unwed couples who are expecting a baby (or have had a baby within the past three months), who are romantically involved and volunteer for the program. The sample frame for the evaluation will be all individuals in the seven chosen sites who are interested in participating in a BSF program during the sample intake period, pass the eligibility criteria, complete a baseline information form, and give consent to participate in the study. The sample intake period will vary in each program. However, it will last until the desired sample size has been randomly assigned in each program or two years, whichever is shorter. Table 9 presents the expected number of couples to be enrolled in the study by site.

TABLE 9. EXPECTED NUMBER OF COUPLES ENROLLED IN STUDY, BY SITE

| Site  | Number of Couples |         |       |
|---|-------------------|---------|-------|
|   | Program           | Control | Total |
| Atlanta, Georgia                                  | 300               | 300     | 600   |
| Baltimore, Maryland                               | 288               | 286     | 575   |
| Baton Rouge, Louisiana                            | 200               | 200     | 400   |
| Florida (Orange and Broward Counties)             | 200               | 200     | 400   |
| Indiana (Allen, Marion, Miami, and Lake Counties) | 200               | 200     | 400   |
| Oklahoma  | 250               | 250     | 500   |
| Texas (San Angelo and Houston)                    | 250               | 250     | 500   |
| Total   | 1,688             | 1,687   | 3,375 |

### B2. Procedures for the Collection of Information

#### a. Statistical Methodology, Estimation, and Degree of Accuracy

The minimum detectable impacts were estimated for three key outcome variables: the percentage of BSF couples who are married, whether the father is present in the life of his biological child, and the score on the Child Behavior Checklist of Aggressive Behavior. Table

10 shows the minimum detectable impacts. The minimum detectable impacts for the first two outcomes (percent married and father presence) are for the 15-month survey. The minimum detectable impact for the Child Behavior Checklist is for the 36-month assessment.

It is important that the sample is large enough to be able to detect impacts of a size that we would expect given the intervention. Because BSF is a somewhat unique an intervention, it is difficult to predict the size of its expected impacts. However, we do know the following:

- The Minnesota Family Investment Program (MFIP)—a welfare reform program not specifically designed to increase marriage rates—increased the marriage rate 36 months after random assignment among unmarried, long-term welfare recipients by 4 percentage points (Miller et al. 2000). We would expect BSF to have a larger impact on marriage rates than MFIP.
- PREP, a relationship-skills program designed to improve couple relationships, increased the likelihood by 24 percentage points that couples were still married three years after the program (Markman et al. 1988). Unlike BSF, the couples were married before the intervention and typically not low-income. It does suggest, however, that large impacts on marriage are possible.
- Early Head Start—a program designed specifically to improve outcomes for children—decreased scores on the Child Behavior Checklist of Aggressive Behavior by 0.7 scale points (Love et al. 2002). An intervention such as BSF that affects the stability of the child’s family structure over a period of three years could have impacts at least as large as Early Head Start.

When pooled across sites, the expected sample with seven sites—3,375 couples—is sufficient to detect impacts within the expected size range. With the full sample, we will be able to detect an impact of 2.7 percentage points or more in the percent married, 3.8 percentage points in father presence, and an impact of 0.5 points in the measure of aggressive behavior in children. Impacts on scales are frequently presented as effect sizes, that is the impact on the scale as a percentage of the standard deviation of the scale. An impact of 0.5 points in the measure of aggressive behavior is equivalent to an effect size of 8 percent.

The pooled sample will also be sufficient to detect expected impacts for important subgroups. We can detect even quite small impacts with a 50 percent subsample. Subgroups

TABLE 10. MINIMUM IMPACTS DETECTABLE BY SAMPLE SIZE, FOR KEY OUTCOMES AT THE 36-MONTH FOLLOW-UP

| Sample Size<br>(Program/Control)                     | 15-Month Surveys         |  | 36-Month<br>Child Assessment                        |
|--|--------------------------|--|---|
|  | Percent<br>Married       | Percent of<br>Biological Fathers Present<br>in the Life of their Child | Child Behavior Checklist:<br>Aggressive<br>Behavior |
| <b>Expected Control Group<br/>Mean</b>               | <b>12.4%<sup>a</sup></b> | <b>71.0%<sup>a</sup></b>   | <b>11.3<sup>b</sup></b>                             |
| <b>Pooled Sample: 7 Sites</b><br>3,375 (1,688/1,688) | 2.7                      | 3.8  | 0.5 (ES = 8) <sup>c</sup>                           |
| <b>50% Subsample</b><br>1,688 (844/844)              | 3.9                      | 5.3  | 0.8 (ES = 12)                                       |
| <b>30% Subsample</b><br>1,013 (506/506)              | 5.0                      | 6.9  | 1.0 (ES = 15)                                       |
| <b>Site-Specific Analysis</b><br>500 (250/250)       | 7.1                      | 9.8  | 1.4 (ES = 21)                                       |

Note: Calculations assume: (1) an equal number of program and control members; (2) a 95 percent confidence level with an 80 percent level of power; (3) a one-tail test; (4) a reduction in the variance of 20 percent from the use of regression models; (5) the standard deviation of the Child Behavior Checklist of Aggressive Behavior is 6.5; and (6) response rates of 85 percent for the 15-month mothers and fathers surveys and 78 percent to the child assessments.

<sup>a</sup> Based on findings from the Fragile Families 12-month follow-up survey.

<sup>b</sup> Based on findings from the Early Head Start evaluation when the child was about 36 months old (Love et al. 2002.)

<sup>c</sup> ES = Effect Size

defined by the following characteristics are expected to make up 40 percent or more of the sample: whether the mother is African American, whether the mother is receiving public assistance, and whether the couple is cohabiting. If the impacts are large, we can also detect impacts for subgroups of 30 percent of the sample.

The sample is not large enough to detect impacts for an individual site, unless the impacts are large (such as a 7 percentage point increase in marriage). However, because BSF adheres to a set of detailed, specific guidelines in each site (Hershey et al. 2004), it is meaningful to estimate an impact of the program using pooled data from all seven sites.

Questions about the effects of the implementation of the programs across the sites can be addressed by examining the impacts of BSF on groups of sites. The sample size is large enough to examine impacts for groups of two to four sites. These groups of sites could be chosen for the similarities in how BSF is implemented in those sites or for the similarities in the communities in which the program is implemented. A subgroup of couples in sites operating BSF within Healthy Families programs, for example, would comprise about 50 percent of the sample.

**b. Unusual Problems Requiring Specialized Sampling Procedures**

There are no unusual problems requiring specialized sampling procedures.

**c. Periodic Cycles to Reduce Burden**

This OMB submission requests clearance for implementation analysis data collection protocols and the 15-month follow-up survey. A subsequent OMB submission will request clearance for the 36-month follow-up survey.

**B3. Methods to Maximize the Response Rate and to Deal with Nonresponse**

For the 15-month survey, our target response rate is 85 percent. Interviewing will take place at MPR's centralized telephone interviewing facility. Field locators will do on-site searching for sample members who could not be reached or located by telephone. They will also attempt refusal conversion of sample members who refuse to complete the interview over the telephone. Once the sample member is located or agrees to complete the interview, the field locator will contact the telephone center on an available land-line using a toll-free number or on an MPR-provided cellular telephone. The sample member will complete the interview with a telephone interviewer. This method is considered the most cost efficient and will give us the greatest flexibility to follow-up with sample members who are hard to reach.

The following additional approaches will be used to maximize the response rate.

- Telephone interviewers will be selected based on past experience and performance in comparable studies with demonstrated skills in communication and refusal conversion.
- The telephone interviewers will be supplemented by telephone locators with expertise in locating sample members by telephone.
- Experienced on-site staff will be hired from a pool of field data collectors with expertise in locating sample members and convincing them to participate in the study.
- Given that some sample members will require interviews in Spanish, we will hire qualified bilingual interviewers to complete interviews in Spanish.

Some nonresponse is inevitable. We will conduct an analysis of nonresponse to assess whether the survey sample is representative of the full sample of mothers and fathers. We will conduct statistical tests (chi-squared and t-tests) to gauge whether the program group members who responded to the interviews are representative of all the program group members, whether the control group members who responded to the interviews are representative of all the control group members, and whether there are differences in the baseline characteristics of the program and control group members who responded to the survey.

We will use two approaches to correct for potential nonresponse bias in the estimation of program impacts. First, the regression models described in section B.16 will adjust for any observed differences between the characteristics of program and control group respondents. Second, because this regression procedure will not correct for differences between respondents and nonrespondents in each research group, we will construct sample weights so that the weighted baseline characteristics of respondents in the program and control group in each site are similar to the full sample (respondents and nonrespondents). These weights will be constructed using data from the baseline information form.

#### **B4. Tests of Procedures and Methods to be Undertaken**

A pretest of the survey was conducted for two purposes: (1) to identify typical instrumentation problems such as question wording and incomplete or inappropriate response

categories, and (2) to measure the response burden. With respect to the latter, our goal was to develop a questionnaire that could be administered to respondents within 55 minutes.

The instrument was tested in two rounds with couples who had or were receiving BSF services and couples who did not receive these services. The interviews were audio taped and/or monitored to determine what questions the respondents had difficulty understanding, which additional response categories might be appropriate, and what wording changes might improve the clarity of the question intent. As a result of the pretest, we made changes to correct minor skip errors and improve the wording of the questions and their sequencing. In general, respondents did not have difficulty answering the questions. There was some respondent fatigue in Section RR on relationships. As a result, the length of the RR section was cut significantly. The average length of the pretest interviews was 66 minutes. However, when the administration is automated using CATI and the instrument shortened, we expect the interview to last no longer than 55 minutes.

#### **B5. Individuals Consulted on Statistical Aspects of the Design**

The following persons were consulted on statistical aspects of the study design:

- Irv Garfinkel, Columbia University School of Social Work, 212 854 8489
- John Gottman, Relationship Research Institute, University of Washington, 206 832 0305
- Barbara Devaney, Mathematica Policy Research, 609 275 2389
- Sheena McConnell, Mathematica Policy Research, 202 484 4518
- Robert Wood, Mathematica Policy Research, 609 936 2776
- Peter Schochet, Mathematica Policy Research, 609 936 2783
- David Myers, Mathematica Policy Research, 202 484 4523
- Elizabeth Stuart, Mathematica Policy Research, 202 484 4517

MPR will collect and analyze the data.

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