

**Strong Fathers, Stronger Families Healthy
Marriage and Responsible Fatherhood
Program Evaluation**

Statistical Analysis Plan

Clinicaltrials.gov ID: NCT06907719

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1. Data Analysis

Briefly describe the planned approach for data analysis. If an impact analysis is proposed, name the key dependent and independent variables, and describe any methods to minimize Type I error (i.e., finding positive impacts by chance) such as limiting the number of impacts to be analyzed and/or multiple comparison correction. Describe proposed approach(es) for addressing missing data.

Identify study sample

The study sample includes participants who: 1) gave recorded informed consent to be part of the study, and 2) took both an entrance and exit survey. The CONSORT diagram in Appendix B shows exclusion criteria and the anticipated size of the overall study sample. The analytic sample for particular outcome measures will vary based on missing data.

Defining analysis measures

For each outcome construct, we have identified the relevant measures from nFORM that are theoretically aligned with that construct. We will generate a correlation matrix between items in a given construct to ensure that theoretically related items are also empirically related in our data set. Items that are not strongly correlated with other items in a construct will be removed as necessary. Factor analysis will be used to ensure that all construct items hang together (using an alpha of 0.7 or higher as the threshold).

Once we are confident that all of the items align with a given construct, we will create a composite measure by taking an average of the scores on each non-missing item in the construct. The measure definition matrix below provides information on each proposed outcome. For composite measures, a change score will be calculated between a participant's pre-program composite score and post-program composite score. For standalone survey items, a change score will be calculated between a participant's pre-survey and post-survey responses.

For the sake of consistency and simplicity, parenting and co-parenting analyses will use a participant's youngest child as the focal child.

Measure	Sample	Variable Type	Data source(s)	Variable Name	Definition
Co-parenting relationship behaviors	Has at least one child age 24 or younger	Continuous (range from 1 to 5 where 1 is strongly disagree and 5 is strongly agree)	nFORM entrance, nFORM exit	Copar_Beh	Average of five survey items that relate to positive interactions with the mother of participant's youngest child

Parenting relationship behaviors	Has at least one child age 24 or younger, saw child within past month	Continuous (range from 1 to 5 where 1 is never and 5 is every day or almost every day)	nFORM entrance, nFORM exit	Par_Beh	Average of 10 to 11 survey items (depending on child age) that relate to frequency of positive interactions with participant's youngest child
Daily hours spent with child	Has at least one child age 24 or younger, saw child within past month	Continuous (range from 1 to 24)	nFORM entrance, nFORM exit	Hours_Spent	Reported number of hours per day (excluding sleeping) that parent usually spent with their youngest child
Frequency of contact	Has at least one child age 24 or younger	Categorical (range from 1 to 4 where 1 is every day or almost every day and 4 is never)	nFORM entrance, nFORM exit	Reach_Out	Reported frequency of reaching out to youngest child in the past month
Economic stability – checking account	Participants who came into the program without a checking account	Dichotomous (0/1)	nFORM entrance, nFORM exit	Check_Acct	Binary measure of having opened a checking account by the end of the program
Economic stability – savings account	Participants who came into the program without a savings account	Dichotomous (0/1)	nFORM entrance, nFORM exit	Savings_Acct	Binary measure of having opened a savings account by the end of the program
Economic stability – difficulty paying bills	All study participants	Categorical (range from 1 to 4 where 1 is never and 4 is very often)	nFORM entrance, nFORM exit	Diff_Bills	Reported frequency of difficulty paying bills

Handling missing data

Outcomes

When creating the composite measures for co-parenting and parenting relationships, we will create a composite score by taking the average of multiple individual items. For these measures, our current plan is to use 20% as a threshold for allowable missing items, based on guidance from evaluation technical assistance resources. This plan is contingent on the final distribution of missing data in our data set. With a 20% threshold, if a respondent is missing more than 1 item used for creating the co-parenting construct or more than 2 items for creating the parenting construct, the respondent will be assigned a missing value for that construct. We will not be imputing truly missing values for outcomes. To create a construct score, the average will divide by the number of non-missing values in the construct.

Participants who have not seen their child within the past month will have their parenting behavior responses set to “Never” (1) and will be included in the analytic sample for that outcome.

For outcomes that use single survey items, participants who do not respond to the item on either the pre- or post-survey will be excluded from the analytic sample for that outcome.

Missing data for the implementation outcomes could happen as a result of programmatic data entry issues. For the sake of this evaluation, we assume that any primary or support services received by a participant are being accurately logged into nFORM, so a lack of documented attendance, service contacts, referrals, etc. is indicative of lack of services (i.e., a participant not receiving the program components as intended).

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Assessing non-response bias

We will conduct response rate analysis for each primary outcome of interest to assess non-response bias and adjust for threats to internal validity. Using data from the Applicant Characteristics Survey, we will look at demographics (race, ethnicity, age, education level) and primary reason for joining the program among participants who fall into each of the following categories: 1) non-respondents who answered no surveys after the ACS, 2) respondents who completed the pre-survey only, 3) respondents who completed the post-survey only, and 4) respondents who completed both the pre- and post-survey (complete case).

Analytic approach

The main goal of this descriptive study is to assess pre-post change scores in the outcomes listed above among program participants before and after primary workshops. We will use paired sample t-tests to assess the magnitude and significance of changes among program participants in the analytic sample for each outcome. For binary economic stability outcomes, we will descriptively report the percent of participants who opened a checking or savings account during the course of the

program. We will adjust our p-values for multiple hypothesis testing and report the adjusted p-values in the appendix of the final report.

For the implementation analysis, program fidelity will be descriptively reported by the percentage of enrolled participants who receive: 1) any primary workshops, 2) employment supports, 3) substantive service contacts, 4) referrals. The program aims to provide all participants each of these four program components, so the percentage of participants who receive each of these will be compared to the 100% benchmark. Number of substantive service contacts per participant will also be compared to the benchmark of 8 SSCs set by OFA for FIRE grantees.

Dosage will be measured by percent of target primary workshops participants attend on average (using 90% as a benchmark), and categories of attendance (initial, halfway, 90%, 100%) will be reported and compared to targets established by the program and reported on page 3 above. Exploratory analysis will examine how dosage varies by workshop characteristics (e.g., timing and length of sessions) and participant characteristics (e.g., age, employment status, relationship status)?