Gentle Warriors Academy Healthy Marriage and Responsible Fatherhood Program Evaluation

4/22/2024

Clinicaltrials.gov ID: NCT06899100

Statistical Analysis Plan

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.

Analytic 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 analytic sample for particular outcome measure will vary based on missing data.

Outcome measures

For each outcome construct, we have identified the relevant measures from nFORM and the OLLE survey 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 follow-up composite score. For standalone survey items, a change score will be calculated between a participant's pre-survey and follow-up 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.

Construct	Sample	**Measure**	**Data source(s)**	**Variable Name**
Parenting Attitudes (toward children)	Has at least one child age 24 or younger	7 items: frequency of key attitudes (categories, 5-point scale)	nFORM entrance, OLLE follow-up	Copar_Att

Parenting Behaviors (interaction with children)	Has at least one child age 24 or younger, saw child within past month	Continuous (1 item: hours spent w/children in last 30 days (interval); 1 item: frequency reach out to children (categories, 5-point scale); 7 items: frequency engage in key behaviors (categories, 5-point scale)	nFORM entrance, OLLE follow-up	Par_Beh
Co-parenting behavior	Has at least one child age 24 or younger, saw child within past month	11 items: frequency of agreement with key co-parenting behaviors (interval, 5-point scale	nFORM entrance, OLLE follow-up	CoPar_Beh
Healthy Partner Behavior(Well-being as a parent)	Has at least one child age 24 or younger	1 item: feelings of being overwhelmed as parent (categories, 4 point scale)	nFORM entrance and exit	Well_being

Data preparation

We plan to clean each individual raw data file before merging nFORM and local evaluation surveys together for analysis in R using nFORM Client ID as the linking variable. Quality checks will include checks for duplicate surveys, incorrectly entered nFORM IDs, missing data, and outliers. We will look at descriptive statistics for our variables of interest to look for missing and outlying data.

Approaches to address 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 follow-up survey will be excluded from the analytic sample for that outcome.

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 follow-up survey (complete case).

Subgroup Analyses

We plan to compare data across two sets of subgroups. These are participants (fathers) whose ages range from 18-29 and those over the age of 30. We also plan to compare data across incarcerated participants and community participants.

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. The changes will be assessed from program enrollment to one year after the enrollment (follow-up survey). 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. We will adjust our p-values for multiple hypothesis testing and report the adjusted p-values in the appendix of the final report.