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Statistical Analysis Plan

Official title of the study: Intervention to Improve Outcomes for Foster Children Reunited with Their Birth Families

Brief title: Families Together: Intervention for Reunified Families

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Analysis Plan

Analyses of condition differences were intention-to-treat, analyzing 240 cases as randomly assigned to the PFR and R&R conditions, regardless of intervention completion. We used multiple linear regression to assess condition differences on study outcomes at post-intervention and 6-month post-intervention time points. Covariates for these models included child age at enrollment, time between baseline and the given outcome assessment point, whether the family was enrolled prior to the pandemic, and the baseline measure of the given outcome. These models are equivalent to ACOVA models, and the unstandardized effect estimates for being assigned to the PFR condition are mean condition differences adjusted for baseline score and other model covariates. We calculated standardized effect sizes (d s) based on the unstandardized effect coefficient for assignment to the PFR condition divided by the pooled standard deviation of the measure at baseline. The sign of the standardized effect was coded so that positive d would reflect a desired beneficial effect of PFR. To assess intervention effects on child welfare system removals of children from the birth parent homes, we used continuous time survival models. These models assessed the effect of PFR on the probability of the child being removed from the home from baseline through 18 months post-enrollment (approximately one year after intervention completion for those completing the intervention on schedule). For children who were not removed from the home after 18 months, survival model data were right-censored. The survival model included child age at baseline and whether the family was enrolled in the study prior to the pandemic as covariates.

We used Mplus Version 8.9 (Muthén & Muthén, 1998-2023) to run the linear regression models using the maximum likelihood estimator. In these models, covariate missingness was modeled to allow for inclusion of all 240 cases, including cases with partially missing data

(Muthén, et al., 2016; Muthén & Muthén, 1998-2023). Cox regression models and descriptive statistics were examined with IBM SPSS Statistics version 29.

Analysis Population Description

The analysis population was all 240 cases with baseline data, analyzed by Mplus. The *n*'s for sample size in the outcome table reflect some missing outcome data at the two follow up timepoints, due to noncompletion of assessments at these time points. There was some additional missingness on observational measures at follow-up due to the assessments taking place online (via Zoom) during the Covid-19 pandemic.

References

- Muthén, B. O., & Muthén, L. K. (1998-2015). *Mplus user's guide* (7th ed.). Muthén & Muthén.
- Muthén, B. O., Muthén, L. K., & Asparouhov, T. (2016). *Regression and mediation analysis using Mplus*. Muthén & Muthén.