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FAMILY PROCESS

ORIGINAL ARTICLE

The impact of responsible fatherhood programs on parenting, psychological well-being, and financial outcomes: A randomized controlled trial

Patricia L. Kohl[1] | **Melissa J. Krauss**[1] | **Courtney King**[1] | **Shih-Ying Cheng**[2] | **Patrick Fowler**[1] | **Destini N. Goodwin**[3] | **Cheri D. Tillis**[3] | **Halbert Sullivan**[3] | **Amy Sorg**[1] | **Nancy B. Mueller**[1]

[1]Brown School Evaluation Center at Washington University in St. Louis, St. Louis, Missouri, USA

[2]Jane Addams College of Social Work, University of Illinois at Chicago, Chicago, Illinois, USA

[3]Fathers and Families Support Center, St. Louis, Missouri, USA

Correspondence
Patricia L. Kohl, Brown School at Washington University in St. Louis, Campus Box 1196, One Brookings Drive, St. Louis, MO 63130, USA.
Email: pkohl@wustl.edu

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Abstract

The objective of this study was to examine differences in parenting, psychological well-being, and economic outcomes between fathers receiving two different programs offered by Fathers & Families Support Center for economically disadvantaged fathers: (a) Family Formation (FF), a 6-week/240-h program focused on economic stability/mobility, responsible fatherhood, and healthy relationships, with case management and legal services; (b) Economic Stability (ES), a 4-week/80-h program focused only on economic stability with limited case management and legal services. A randomized controlled trial (RCT) was used to compare fathers in FF (n = 350) vs. ES (n = 342). Surveys were administered at enrollment and 3- and 12-months postintervention. Linear and generalized linear mixed models were used to assess changes in program outcomes over time and across study groups. Four hundred and eighty-two fathers responded to either follow-up survey (251 FF, 231 ES). Nearly all (98%) were non-white (93% Black, 5% other/mixed race) and were on average 34 years old. Approximately 46% attended ≥75% of program sessions (FF 48% vs. ES 44%). Both FF and ES groups experienced improvements in parenting, psychological well-being, and financial outcomes after the programs, but changes in outcomes over time did not

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differ significantly by program. The lack of difference in outcomes between fathers in FF and ES groups could be due to a similar core focus on employment-related curriculum for both groups. Gaining financial stability could have contributed to positive improvements in other fatherhood domains. Implications for future research and practice are discussed herein.

KEYWORDS
economic stability, fathers, impact evaluation, parenting, randomized controlled trial, responsible fatherhood

INTRODUCTION

Fathers' emotional and financial contributions affect their children's physical and mental health, and social-emotional and cognitive development (Amato & Gilbreth, 1999; Cabrera et al., 2017; Carlson & Magnuson, 2011; Goncy & van Dulmen, 2010; Sarkadi et al., 2008; Yoder et al., 2016; Yogman et al., 2016). Hence, programs to support men in their role as fathers are important, regardless of whether they are currently living with their children or not. The need to support men in their fatherhood role is being addressed through the substantial growth in the number of responsible fatherhood programs in the United States. The proliferation of these programs can, at least in part, be attributed to the Administration for Children and Families' financial commitment to competitive grants supporting responsible fatherhood programs since 2006. However, much remains unknown about the benefits of these programs because rigorous research examining their effectiveness is scant (Holmes et al., 2020).

Fatherhood scholars have identified three categories of outcomes associated with fatherhood programs: economic, father involvement/parenting, and co-parenting (Fagan & Kaufman, 2015; Holmes et al., 2020). Economic outcomes include employment and the provision of child support by nonresident fathers. Father involvement/parenting outcomes include quantity and quality of time spent with their children, parenting satisfaction, and parenting skills. Co-parenting outcomes focus on the relationship between parents, particularly as it affects parenting. The psychological burden of poverty can take its toll on fathers and impact their capacity to support and engage with their children (Threlfall et al., 2013). Hence, services provided by responsible fatherhood programs should also target fathers' psychological well-being. Our current paper reports findings from a federally funded impact evaluation of a responsible fatherhood program (Family Formation, FF) that aims to improve father involvement/engagement, co-parenting, father's psychological well-being, and economic outcomes.

Responsible fatherhood programs

Responsible fatherhood programs can be categorized into distinct types of programs: parent training (Caldwell et al., 2010, 2014; Fagan, 2008; Fagan & Stevenson, 2002; Magill-Evans et al., 2007; Rienks et al., 2011; Wilson et al., 2016), economic/vocational training (Davis et al., 2014; Lippold et al., 2011), and programs that combine the two (Avellar et al., 2018; Kim & Jang, 2018; Sarfo, 2018). The vast majority of evidence on interventions with

fathers is of parenting programs. Over the last few decades, a number of studies have been conducted to compare the outcomes of parent training programs to control groups, which often are no treatment or minimal treatment control groups (Caldwell et al., 2010; Fagan & Iglesias, 1999; Kim & Jang, 2018; Lundahl et al., 2006; Rienks et al., 2011; Wilson et al., 2016). Overall, results have been promising. Fathers have reported improved parenting satisfaction (Caldwell et al., 2010; Kim & Jang, 2018), parenting behaviors (Wilson et al., 2016), and father engagement (Cowan et al., 2009).

A second type of program provides employment/vocational training to improve economic outcomes. A review of promising employment programs for fathers highlights both the availability of programs to help fathers obtain employment and the lack of documented evaluations of their effectiveness (Bronte-Tinkew et al., 2009).

The Family Process Model postulates that economic stress contributes to parental psychological well-being, increased relationship conflict between parents, and less involved parenting (Conger et al., 1992, 1994). Therefore, it is plausible that some fathers could benefit from both parent training and vocational training in order to improve economic, parenting, and co-parenting outcomes. However, the advantages of programs that combine parent and economic/vocational training are relatively unknown. For example, Robbers (2009) studied a parenting intervention that was provided to young fathers while they attended job training workshops. The participating fathers demonstrated improved father-child involvement; no economic outcomes were reported. Fathers participating in another study of a combined intervention obtained employment and increased the frequency of contact with their children (Barthelemy & Coakley, 2017). A study of Family Formation (FF, the six-week program tested in this study and described in the methods section) found that fathers participating in FF were more engaged in nurturing and age-appropriate activities with their children and achieved sustained employment at follow-up compared to fathers receiving no services (Avellar et al., 2018). While the results of these studies are promising, two of them used a pre/post-test design without a comparison group (Barthelemy & Coakley, 2017; Robbers, 2009) and the third used a no treatment comparison group (Avellar et al., 2018). While no treatment comparison groups are strong study designs, the lack of active control group studies limits our understanding of process factors, like specific program content, curriculum length, or modality, which may contribute to improvement in fatherhood programs.

Methodological challenges

There are some methodological challenges in previous studies assessing the effectiveness of fatherhood programs. For example, most studies of fatherhood programs relied upon a no treatment comparison group (e.g., Avellar et al., 2018; Caldwell et al., 2010; Kim & Jang, 2018; Wilson et al., 2016). A meta-analysis demonstrated that fatherhood programs compared to an untreated control condition had larger effects than those compared to a minimal treatment control group (Holmes et al., 2010). While study designs using a no treatment comparison group are essential to help establish the effectiveness of an intervention, comparative effectiveness research is also necessary to determine if one intervention performs better than another. This is particularly important when the implementation of one intervention is more costly and lengthy than the alternative. Therefore, it is important and timely to include active-treatment comparison groups to determine how fatherhood programs would fare when compared to an alternative intervention.

There is also variability in study samples. Most include either only resident fathers (e.g., Holmes et al., 2010) or only nonresident fathers (Holmes et al., 2020); notably fewer include both resident and nonresident fathers (Avellar et al., 2018). Additionally, the research to date

has examined short-term outcomes (i.e., pre/post test, 3-month follow-up). Longitudinal studies with longer follow-up are needed to determine if improvements are maintained over time.

Current study

This impact evaluation sought to quantify the added benefit of combining an economic stability training with father involvement/parenting training (FF) on parenting, economic, and father well-being outcomes. This study fills gaps in the current literature by including both resident and nonresident fathers in the sample, using a longitudinal, randomized control trial (RCT) research design, and using an active comparison group.

We sought to assess the relative impact of father involvement/parenting training to a program focused only on economic stability by examining the following research questions: What is the impact of combining father involvement/parenting training with economic stability training (FF program) compared to a program with only economic stability training (ES program) on fathers':

a. involvement/engagement with their children?
b. co-parenting relationship skills?
c. psychological well-being?
d. financial responsibility and stability?

We hypothesized that fathers in the FF program would experience greater improvements in outcomes than that in the ES program because members of the treatment group (FF) would receive a more comprehensive range of training and services. While fathers in the ES program received content only on economic stability and limited case management and employment-related legal services, fathers in the FF program received economic stability content as well as responsible parenting and healthy relationships content, case management and child-related legal services. In addition, the FF program was administered in 240 h over 6 weeks compared to 80 h over 4 weeks for the ES program. We believed the differences in content and dosage would lead to a greater impact on outcomes among fathers in the FF program.

The outcomes were measured at three time points over approximately 1 year (baseline, 3-months postintervention, and 12-months postintervention) to examine the extent to which these outcomes changed over time and to what extent the changes in outcomes differed between fathers randomly assigned to the FF and ES programs.

METHODS

Study design

This study analyzed data from a multiyear RCT examining the relative effectiveness of the FF program to a program focused solely on Economic Stability (ES) for economically disadvantaged fathers. The study design and data collection plans were approved by Washington University in St. Louis Institutional Review Board (IRB). This study has been registered with the U.S. National Library of Medicine (ClinicalTrials.gov): # NCT03413709. For this trial, we targeted nearly 700 fathers for recruitment and projected a 10% attrition rate. Based on power calculations that accounted for repeated measures, calculations for the Minimum Detectable Effect assumed power to detect differences 80% of the time at a 95% statistical significance

level for fathers randomized evenly to the treatment and control interventions. Power calculations suggested sufficient power to identify small to medium intervention effects on outcomes (Cohen's $d = .25$).

Recruitment

The community partner, Fathers & Families Support Center located in a metropolitan area in St. Louis, MO, conducted outreach and utilized its referral network of community-based organizations to recruit fathers to this study (see Avellar et al., 2018). To be eligible to participate in this study, men had to: (a) be a father (biological or adoptive) with at least one child 16 years old or younger, (b) have no restraining order from any of his children or the mother(s) of his children, (c) not be currently incarcerated, (d) be currently unemployed or underemployed (e.g., working part-time but would prefer full-time, feel skills are underutilized in current position), (e) not self-identify as being homeless, and (f) be at least 18 years of age. A father who was on parole or living in transitional housing (e.g., a halfway house) was eligible to participate in the study.

A total of 14 cohorts of fathers were recruited to this study from 2016 to 2018. Either written (cohort 1) or verbal consent (cohorts 2–14) was obtained in-person or by phone from fathers before administering the baseline survey and conducting random assignment. The change from enrolling in-person to via phone was to facilitate a more efficient enrollment process. Fathers received incentives for their participation. Fathers received a gift-card for their program participation ($40–$60 per week) and received a gift-card for each survey they completed for the study (baseline survey, $10; 3-month survey, $25; 12-month survey, $25–$50). In addition, the relationships formed and ongoing communication between the male facilitators and the fathers encouraged participation.

Random assignment

Fathers were randomly assigned to either the FF program or the ES program after completing a baseline survey. Randomization was done using an SPSS computer-generated schedule with a one-to-one allocation ratio to ensure a near balance of the participants to the FF and ES arms throughout the study and that fathers assigned to the FF program were equivalent to those assigned to the ES program. Table 1 summarizes the contents of the FF and ES program. As shown, fathers assigned to FF received content on responsible parenting, healthy relationships, and economic stability/mobility as well as case management and child-related legal services (child support modification, visitation, custody). In comparison, fathers assigned to ES only received content on economic stability and limited case management and legal services (related to employment only). The programs differed substantially by dosage, the number of weeks and hours implemented (FF 6 weeks/240 h vs. ES 4 weeks/80 h).

Sample

Surveys were administered at enrollment and 3- and 12-months postintervention via telephone. Figure 1 shows the flow of the study participants from enrollment, allocation, to follow-up surveys. Out of the 931 fathers screened for the evaluation, 214 fathers did not meet eligibility criteria for one or more reasons. In addition, 25 of the screened individuals declined participation. The remaining 692 fathers completed the baseline survey and were randomly assigned to the FF program ($n = 350$) and the ES program ($n = 342$). Baseline data collection and random

TABLE 1 Descriptions of the FF and ES programs

Component	FF (Intervention)	ES (Comparison)
Curriculum and content	Economic Stability Legal Services[a] Case Management[b] Responsible Parenting Healthy Relationships	Economic Stability Limited legal Services[c] Limited case Management[d]
Dosage and schedule	6-week program, 240 h; sessions occur 5 days a week for 8 h per session	4-week program, 80 h; sessions occur 5 days a week for 4 h per session
Delivery	Group lessons provided at Fathers & Families Support Center's facilities by trained male facilitators	Group lessons provided at Fathers & Families Support Center's facilities by trained male facilitators
Target population	Low-income custodial and noncustodial fathers living in St. Louis, MO	Low-income custodial and noncustodial fathers living in St. Louis, MO

Note: ES, Economic Stability; FF, Family Formation.

[a]Legal Services: Legal visitation, child custody, child support payment modifications, warrant recalls, background check, and driver's license status.

[b]Case Management: Fathers meet with the Social Service and Employment Case Managers a minimum of once a week during the 6 weeks. They receive follow-up after completing the curriculum for up to 1 year, meeting biweekly.

[c]Limited Legal Services: Warrant recalls, background check, and driver's license status.

[d]Limited Case Management: Fathers meet with only the Employment Case Manager a minimum of once a week during the 4 weeks. They receive 1 year of follow-up after completing the curriculum until training or employment is obtained. This case management pertains to employment activities only.

assignment occurred between June 2016 and September 2018. This study analyzed data of participating fathers who answered surveys at 3- or 12-months postintervention for at least one of the outcomes in the analytic sample, resulting in an analytic sample of 482 fathers (FF: $n = 251$; ES: $n = 231$). Fathers with follow-up data were slightly older (mean 34.1 years, SD 8.8) than fathers without follow-up data (mean 32.2 years, SD 8.4; $p = .010$). In addition, fathers with follow-up data had slightly lower scores for co-parenting relationships at baseline (mean 3.39, SD 1.21) than fathers without follow-up data (mean 3.60, SD 1.26; $p = .049$). Fathers with and without follow-up data did not significantly differ on any other baseline demographic characteristics or outcomes of interest.

Among the 482 fathers who responded to the 3-month and/or 12-month follow-up surveys, almost all (98%) of these fathers were under-represented minority (93% Black, 5% other/mixed race). Table 2 presents demographic characteristics of fathers randomized to the FF and ES programs that were assessed for baseline equivalence. Fathers were on average about 34 years old with two children. The average age of the father's youngest child was approximately 6 years old. Over two-thirds of the fathers had never been married, and almost three-quarters had a high school diploma or above. Over one-third of the fathers lived with their youngest child, and over 40% had a child support order for their youngest child. Approximately, 14% had a substance use problem (e.g., alcohol, drugs). Results of the bivariate analysis showed no significant differences in baseline characteristics between fathers in the FF and ES programs. Therefore, none of the confounders were included in the mixed effects regression models. In addition, there were no baseline differences in the outcome variables between the two groups.

Measures

Outcome measures of this study included father involvement/engagement, co-parenting, psychological well-being, and financial responsibility and stability. All outcome measures

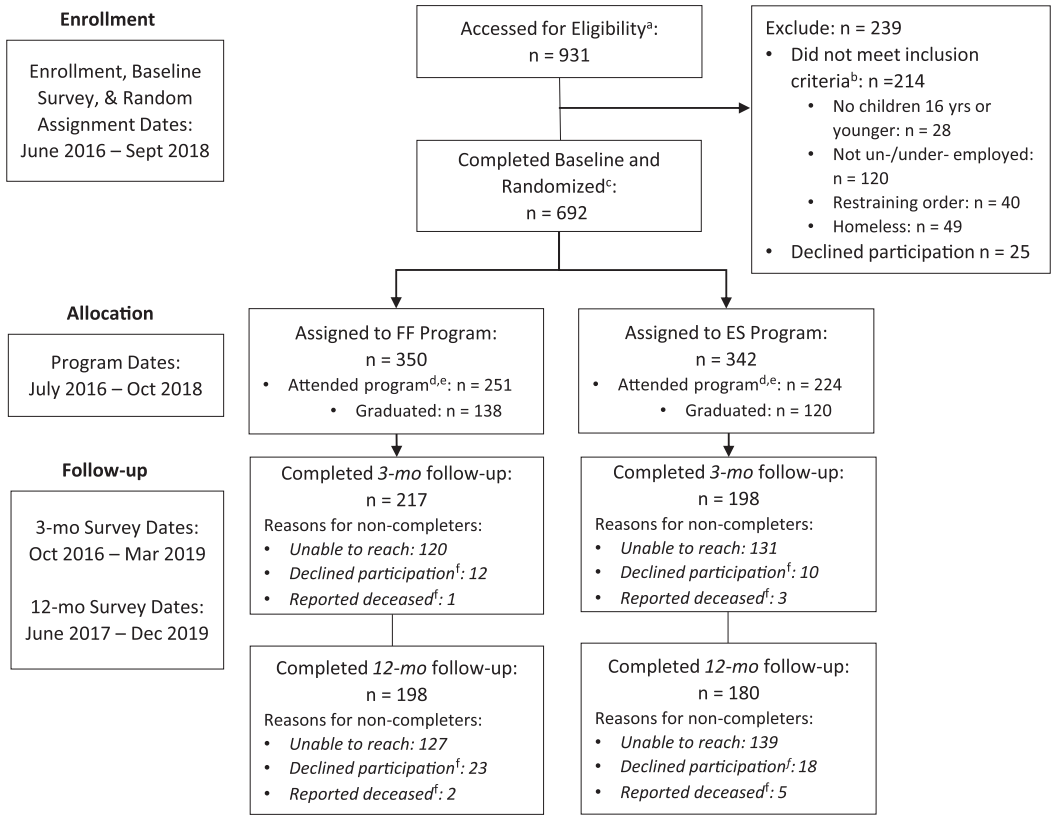

FIGURE 1 Consort flow diagram. *Note*. FF = Family Formation. ES = Economic Stability. [a]Eligibility to participate included: (a) being a father with at least one child 16 years old or younger, (b) no presence of a restraining order, (c) not currently incarcerated, (d) currently unemployed or underemployed, (e) not self-identifying as being homeless, and (f) being at least 18 years of age. [b]Individuals may be ineligible due to multiple reasons. [c]One ineligible participant was inadvertently randomized and enrolled into FF program. This father was excluded in the analytic sample in this study. [d]Attended program was defined as having attended at least one class. [e]Two participants were assigned to ES program but attended FF program. The participants were analyzed according to the program assigned (ES). [f]Cumulative number for entire follow-up period

pertaining to children (father involvement/engagement, co-parenting relationship, and child support payment) were assessed in relation to the father's youngest child.

Father Involvement/Engagement

Father Involvement/Engagement was assessed using the Father Research & Practice Network (FRPN) caregiving/play subscale. This validated FRPN Scale is designed to assess fathers' engagement with children at different ages (Dyer et al., 2015, 2018). The caregiving/play sub-scale items assessed to what extent fathers engage in caregiving activities (e.g., "How often have you praised [name of child]?") and were scored on a scale of 0 to 4, 0 indicating "never" and 4 indicating "every day or almost every day." Age-specific scores were summed and then standardized into *z*-scores so that scores could be combined across child ages and compared over time. The caregiving/play sub-scales was found to have good reliability with the analytic sample (α for all age groups ≥ 0.95).

TABLE 2 Baseline characteristics by treatment group (FF and ES)

	Total (N = 482)		Intervention (FF, N = 251)		Comparison (ES, N = 231)			
Baseline characteristic	N	**Mean (SD) or n (%)**	N	**Mean (SD) or n (%)**	N	**Mean (SD) or n (%)**	**Mean difference or difference in proportions (95% CI)**	p
Father's age (years)	482	34.1 (8.8)	251	34.0 (9.1)	231	34.2 (8.4)	−0.2 (−1.8, 1.4)	.824
Number of children	482	2.4 (1.5)	251	2.3 (1.5)	231	2.4 (1.6)	−0.2 (−0.4, 0.1)	.248
Child's age (years)[a]	482	5.7 (4.5)	251	5.7 (4.6)	231	5.7 (4.5)	0.0 (−0.8, 0.8)	.986
Never married	470	318 (67.7%)	245	163 (66.5%)	225	155 (68.9%)	−2.4% (−10.9%, 6.1%)	.585
≥High school diploma/GED	453	337 (74.4%)	234	175 (74.8%)	219	162 (74.0%)	0.8% (−7.2%, 8.8%)	.843
Child support order[a]	475	209 (44.0%)	247	103 (41.7%)	228	106 (46.5%)	−4.8% (−13.7%, 4.1%)	.293
Lives with child[a]	479	174 (36.3%)	248	85 (34.3%)	231	89 (38.5%)	−4.2% (−12.8%, 4.4%)	.333
Alcohol or drug problem (moderate to high)	464	65 (14.0%)	241	35 (14.5%)	223	30 (13.5%)	1.0% (−5.3%, 7.3%)	.740
FRPN Father Engagement caregiving/play subscale (standardized—Z scores)	478	−0.01 (0.99)	249	−0.03 (0.98)	229	0.03 (1.00)	−0.06 (−0.24, 0.12)	.511
FRPN Co-parenting Alliance subscale (Range 1–5)	445	3.42 (1.20)	238	3.41 (1.19)	207	3.42 (1.22)	−0.01 (−0.24, 0.21)	.921
Mental Health Composite Scale score (MCS) (Range 0–100)	470	47.9 (11.4)	244	47.6 (11.7)	226	48.2 (11.0)	−0.6 (−2.7, 1.4)	.548
Employed	468	227 (48.5%)	243	117 (48.1%)	225	110 (48.9%)	−0.8% (−9.9%, 8.3%)	.873
Monthly income ($)	445	654 (628)	232	636 (587)	213	674 (671)	−38 (−155, 79)	.525
Paying child support (among those court ordered to pay)	192	132 (68.8%)	95	68 (71.6%)	97	64 (66.0%)	5.6% (−7.5%, 18.7%)	.403

[a]Child's age, child support order and living with the child pertain to the father's youngest child.

Co-parenting relationship

Co-parenting relationships were measured with the FRPN co-parenting relationship subscale. This 11-item measure was designed to assess fathers' co-parenting relationships with the mother of their children (Dyer et al., 2015, 2018). The five-item alliance subscale was used to assess the co-parents level of collaboration. Items such as "The mother of [name of child] and I try to understand where each other is coming from" were scored on a scale of 1 ("strongly disagree") to 5 ("strongly agree"), and then averaged. This scale was not asked if the mother was deceased. The alliance subscale was found to have good reliability with the analytic sample ($\alpha = 0.93$).

Psychological well-being

Fathers' psychological well-being was measured with the Short Form 12 Health Survey (SF-12v2) (Ware et al., 2007). The SF-12v2 measures functional health and well-being from the patient's perspective (e.g., "How much time in the past four weeks have you felt…calm and peaceful?") and has been validated and nationally normed (Turner-Bowker & Hogue, 2014). This study used the normalized Mental Component Summary (MCS) score derived from eight domains of health in the SF-12v2 and ranges from 0 to 100 (worst to best mental health). MCS was calculated using licensed instrument scoring software available from Quality Metric. The MCS was found to have good reliability with the analytic sample ($\alpha = 0.84$). Internal consistency for the MCS was calculated using the method outlined in the SF-12v2 user's manual (Maruish, 2012; Nunnally & Bernstein, 1994).

Financial responsibility and stability

Financial stability. Father's financial stability was assessed with their self-reported employment status and income level. The employment status was assessed with the question, "What is your current employment status?" Responses were dichotomized into "Currently not employed" and "Employed" (i.e., working 35 or more hours a week; working 1–34 h a week; employed but number of working hours changing from week to week; and temporary, occasional, or seasonal employment). Father's income level was assessed with another 1-item question, "In the past 30 days, how much money did you make?" The response options included (a) <$500, (b) $500–$1000, (c) $1001–$2000, (d) $2001–$3000, and (e) $3001–$4000. The midpoints of income levels were used to investigate the change in income level over time among fathers. For example, if the father endorsed (b) $500–$1000, the value $750 was used for the income value. Converting categorical income data to a continuous measure using the midpoint for use in modeling is commonly used (Fan et al., 2019; Fang & Saks, 2020; Jorgensen et al., 2010) and has been suggested for large national surveys like the General Social Survey (Hout, 2004). *Financial responsibility*. Father's financial responsibility was assessed with a question related to child support, "Are you paying toward the child support order?" The response options included Yes/No. This item was asked among fathers who were court ordered to pay child support for their youngest child.

Possible confounders

In addition to the above outcome measures, several key demographic variables were used to assess equivalence between fathers assigned to the FF and ES program at baseline. The variables assessed included: father's age (years), number of children, child's age (years), father's marital status (Ever married/Never married), education level (High school diploma or GED/

No high school diploma), currently lived with child (Yes/No), and whether the father had an alcohol or drug problem (Moderate to high/Below moderate).

Analytic approach

An intention-to-treat framework was used for analyses, including fathers randomized to their study group regardless of their program attendance or compliance. Baseline equivalence between the FF and ES groups were assessed using bivariate analysis (independent samples *t*-tests for continuous variables, Pearson chi-square tests for categorical variables). To examine whether the outcome measures changed over time among the participating fathers, and to what extent the changes in outcomes differed between fathers assigned to the FF and ES programs, random-intercept linear and generalized linear mixed models were performed. Separate regression models were performed for each outcome. Specifically, each model assessed the effects of group (FF vs. ES), time (baseline, 3-months follow-up, and 12-months follow-up), and the group × time interaction. A significant group × time interaction would indicate that changes over time in the outcome differed by treatment group.

Linear mixed models were performed for continuous outcomes (i.e., father involvement/engagement, co-parenting relationship, psychological well-being). Generalized linear mixed models with the logistic link were performed for the dichotomous outcomes (i.e., employment status, paying child support). Mixed effects regression models are advantageous for longitudinal studies because they allow for correlation among repeated measures within individuals and also use all available data from each participant. For all models, beta coefficients and 95% confidence intervals for each fixed effect are presented, as well as *p* values for the Type III tests of fixed effects. To further investigate changes over time across both groups, post-hoc tests for pairwise comparisons by time point were employed with Tukey's adjustment for multiple comparisons. Standardized effect sizes for post-hoc comparisons of continuous outcomes for changes over time were calculated using the mean difference divided by the square root of the sum of all variance components (Brysbaert & Stevens, 2018; Westfall et al., 2014). Data were analyzed using IBM SPSS Statistics (IBM Corp, 2020) and R (R Core Team, 2019) with the packages lme4 (Bates et al., 2015) and emmeans (Lenth et al., 2020).

RESULTS

Program attendance

Among the 482 fathers responding to the follow-up surveys, attendance of at least one program session was slightly higher among FF (79%) vs. ES fathers (71%), but this difference did not reach statistical significance ($\chi^2(1, n = 482) = 3.20$, $p = .073$). Approximately, 46% of both groups attended at least 75% of program sessions, and differences by program assignment were not significant (FF 48% vs. ES 44%, $\chi^2(1, n = 482) = 0.79$, $p = .373$). Similarly, 47% graduated from the program, and differences by program assignment were not significant (FF 48% vs. ES 45%, $\chi^2(1, n = 482) = 0.38$, $p = .540$).

Outcomes over time

Average values or percentages (when applicable) of each outcome over time (baseline, 3 months follow-up, and 12 months follow-up) by treatment group are presented in Figure 2 (father involvement/engagement), Figure 3 (co-parenting), Figure 4 (psychological well-being), and

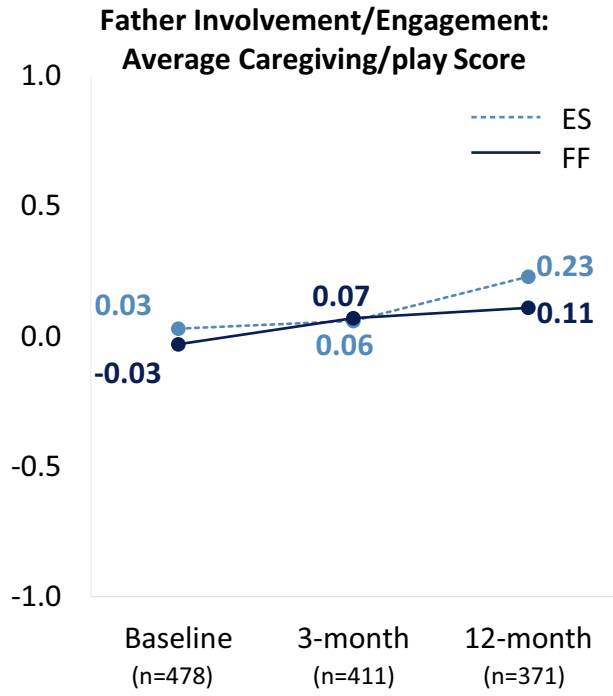

FIGURE 2 Father involvement/engagement over time by treatment group. *Note*. FF = Family Formation. ES = Economic Stability

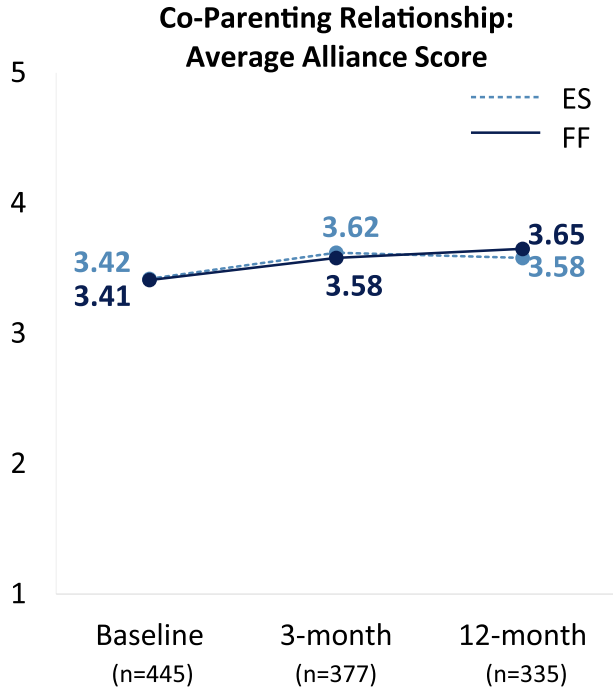

FIGURE 3 Co-parenting relationship skills over time by treatment group. *Note*. FF = Family Formation. ES = Economic Stability

Figure 5 (financial stability and responsibility). Table S1 presents the mean values, standard deviations, percentages (when applicable), and sample sizes by group and time. Table 3 presents results of linear and generalized linear mixed models examining whether the change over time for each outcome differed between the FF and ES program. All outcomes significantly improved after either the FF or ES program, but the changes over time did not significantly differ between the two groups (no significant group × time interactions). In general, the improvements experienced across study groups were either maintained or further improved at 12-months follow-up.

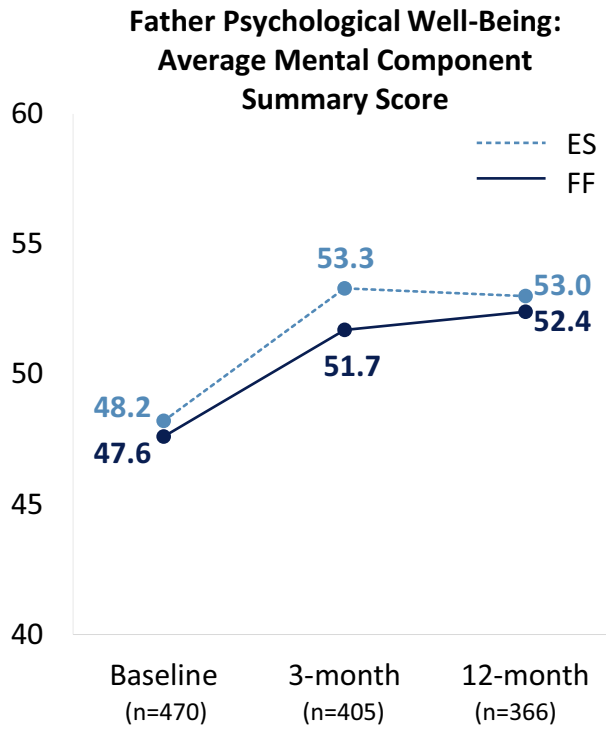

FIGURE 4 Father psychological well-being over time by treatment group. *Note*. FF =Family Formation. ES = Economic Stability

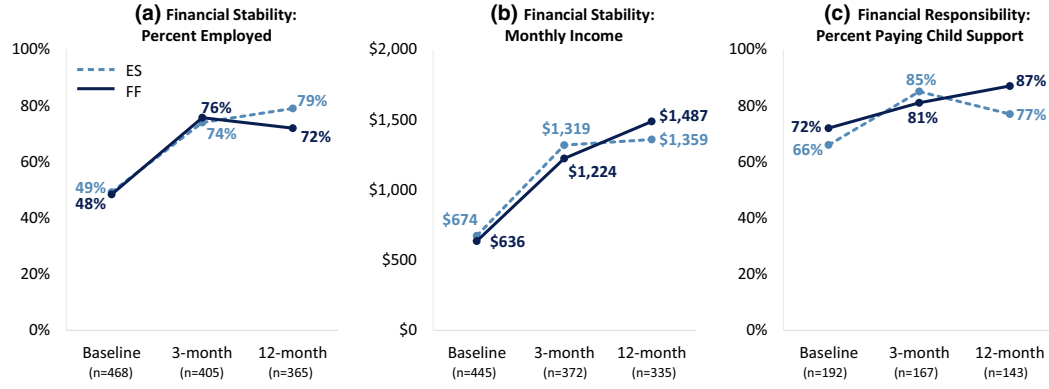

FIGURE 5 Financial stability and responsibility outcomes over time by treatment group. *Note*. FF = Family Formation. ES = Economic Stability

TABLE 3 Results of mixed models for parenting skills, psychological well-being, and financial responsibility and stability

Outcome measure	Group			Time			Group * Time		
	n	FF vs. ES		3 months vs. baseline	12 months vs. baseline	*p*	Group* (3 months vs. baseline)	Group* (12 months vs. baseline)	*p*
		β (95% CI)	*p*	*β* (95% CI)	*β* (95% CI)		*β* (95% CI)	*β* (95% CI)	
Father involvement/engagement									
FRPN Father Engagement caregiving/play subscale (standardized—*Z* scores)	478	−0.06 (−0.23, 0.11)	.434	0.09 (−0.01, 0.19)	0.21 (0.11, 0.31)	<.001	0.02 (−0.11, 0.16)	−0.04 (−0.18, 0.11)	.743
Co-parenting relationship									
FRPN Co-parenting Alliance subscale (Range 1–5)	445	−0.01 (−0.23, 0.21)	.870	0.20 (0.06, 0.34)	0.18 (0.04, 0.33)	<.001	−0.03 (−0.22, 0.16)	0.02 (−0.19, 0.22)	.910
Psychological well-being									
Mental Health Composite Scale score (MCS) (Range 0–100)	470	−0.63 (−2.61, 1.35)	.302	4.93 (3.46, 6.40)	4.43 (2.90, 5.96)	<.001	−0.73 (−2.77, 1.31)	−0.02 (−2.14, 2.10)	.747
Financial stability and responsibility									
Employed	468	−0.05 (−0.60, 0.50)	.861	1.68 (1.15, 2.25)	2.04 (1.46, 2.67)	<.001	0.11 (−0.62, 0.83)	−0.54 (−1.31, 0.21)	.246
Monthly income ($)	445	−37.9 (−219.8, 144.0)	.999	638.0 (480.2, 795.9)	679.4 (515.1, 843.7)	<.001	−49.6 (−269.3, 170.2)	163.5 (−64.3, 391.4)	.196
Paying child support (among those court ordered to pay)	192	0.37 (−0.49, 1.25)	.402	1.44 (0.60, 2.36)	0.79 (−0.02, 1.65)	.004	−0.73 (−1.95, 0.46)	0.50 (−0.75, 1.80)	.218

Father involvement/engagement and co-parenting relationship skills significantly improved following the ES and FF programs. Interaction effects between group and time were small and not significant indicating that there were no differences in changes over time by program assignment. Post hoc tests for time revealed that, across both groups, estimated mean scores of father involvement/engagement at 3-months (0.094) and 12-months (0.189) were significantly higher than baseline (−0.004; mean difference 3-months vs. baseline 0.10, 95% CI 0.02–0.18, $p = .015$, effect size = 0.1; mean difference 12-months vs. baseline 0.19, 95% CI 0.11–0.28, $p < .001$, effect size = 0.2) In addition, father involvement/engagement scores at 12-months were slightly higher than 3-month scores (mean difference 0.09, 95% CI 0.003–0.19, $p = .040$, effect size 0.1). Estimated mean co-parenting relationship scores were also significantly higher across both groups at 3-months (3.60) and 12-months (3.61) compared to baseline (3.42; mean difference 3-months vs. baseline 0.19, 95% CI 0.07–0.30, $p = .001$, effect size=0.2; mean difference 12-months vs. baseline 0.19, 95% CI 0.07–0.31, $p = .001$, effect size = 0.2). However, 12-month scores did not significantly differ from 3-month scores (mean difference <0.01, 95% CI −0.13 to 0.13, $p = .997$, effect size < 0.01).

Changes in psychological well-being outcomes over time did not differ between the FF and ES programs, as group by time interaction effects were small and not significant. However, improvements following the programs were observed for both groups. Across both groups, post hoc tests revealed that father well-being as measured by estimated mean MCS scores was significantly better at 3-months (52.4) and 12-months (52.3) compared to baseline (47.9; mean difference 3-months vs. baseline 4.6, 95% CI 3.3–5.8, $p < .001$, effect size = 0.4; mean difference 12-months vs. baseline 4.4, 95% CI 3.2–5.7, $p < .001$, effect size 0.4). Scores at 12-months did not differ from 3-month scores (mean difference −0.1, 95% CI −1.5–1.2, $p = .964$, effect size 0.01).

Similar to the other outcomes, financial stability and responsibility improved following the ES and FF programs but changes over time did not differ by group. Across both groups, post hoc tests showed that employment was significantly higher at 3-months (estimated probability .838) and 12-months (estimated probability .842) than at baseline (estimated probability .475; odds ratio 3-months vs. baseline 5.7, 95% CI 3.5–9.2, $p < .001$, odds ratio 12-months vs. baseline 5.9, 95% CI 3.6–9.7, $p < .001$), but did not differ significantly between 12-months and 3-months (odds ratio 1.03, 95% CI 0.6–1.7, $p = .986$). Estimated mean income was also significantly higher across groups at 3-months ($1268) and 12-months ($1416) compared to baseline ($655; mean difference 3-months vs. baseline $613, 95% CI $481–745, $p < .001$, effect size = 0.6; mean difference 12-months vs. baseline $761, 95% CI $624–898, $p < 0.001$, effect size=0.8); furthermore income at 12-months was slightly but significantly higher than at 3-months (mean difference $148, 95% CI $3–293, $p = .044$, effect size = 0.2). Among fathers with a child support order at baseline, paying child support was significantly higher at 3-months (estimated probability .904) and 12-months (estimated probability .901) compared to baseline (estimated probability .762; odds ratio 3-months vs. baseline 2.9, 95% CI 1.4–6.1, $p = .002$; odds ratio 12-months vs. baseline 2.8, 95% CI 1.3–6.2, $p = .005$), and did not differ between 12-months and 3-months (odds ratio 1.0, 95% CI 0.4–2.2, $p = .996$). While examining three way interactions between group, time, and father's residential status would be useful to determine whether residential status might have moderated the findings, our study was not powered to detect these interaction effects.

DISCUSSION

This study represents an important advancement in scholarship on responsible fatherhood programs. This study tested a combined parenting/economic program compared to a robust alternative treatment. Although results suggest no advantage of FF compared to ES

across parenting, well-being, and economic outcomes, these findings are promising. While changes cannot be attributed directly to either program because there was not an untreated comparison group, the participants in both groups demonstrated significant improvements in father involvement/engagement, co-parenting, psychological well-being, and economic outcomes. Furthermore, these gains were maintained over a 12-month period following program participation.

The lack of a significant treatment effect suggests that training in economic stability alone—without the additional fathering-focused content—may have an impact on parenting outcomes. The shorter ES training, therefore, may be the more economical and efficient strategy to improve outcomes across parenting and economic stability. Additionally, the retention of the participants in fatherhood programs can be very challenging (Fabiano & Caserta, 2018). The time burden on fathers in the ES program was a third of that for fathers in the FF program (80 h compared to 240 h). The shortened duration may serve as a means to increase retention rates.

Both groups focused on skill building to help fathers gain employment or secure better employment. The Family Process Model (Conger et al., 1992, 1994) suggests that financial stability likely influenced improvements in other outcomes. Per this model, reduced economic stress led to better psychological well-being, improved co-parenting relationship, and more father involvement. The underlying theory of this model is supported by the empirical literature. For example, employment is associated with higher psychological well-being (McKee-Ryan et al., 2005), employed low-income minority fathers are more involved with their children (Coley & Morris, 2002), and employed nonresident fathers perceive their co-parental relationship more positively than unemployed fathers (Bronte-Tinkew & Horowitz, 2010). Given the simultaneous improvements in many outcomes along with employment status in this study, disentangling these relationships warrants further exploration.

Several limitations should be considered when interpreting the results of this study. First, though a strength of the study, an active control group rather than an untreated control was used, making it more difficult to find a treatment effect and rule out potential confounders. Ideally, we would have conducted a three arm study: FF, ES and a no treatment comparison group. Budgetary constraints limited our ability to add a third arm, and most importantly, it was essential to our community partner Fathers & Families Support Center that all fathers who sought services from their agency received a robust intervention. High attrition (larger than anticipated) was another limitation; however, the utilization of mixed models allowed the use all available data from the participants, including those who completed either a 3-month or 12-month follow-up survey. Fathers were not queried about the amount of payment toward child support, precluding examination of full vs. partial child support payment. This study was not powered to test moderation of program effects over time by fathers' residential status. Conducting a rigorous fidelity assessment was outside of the scope of this study and there is some evidence in our qualitative data that parenting content was discussed in the ES groups (Brown School Evaluation Center, 2020). These discussions very likely had an impact on evaluation findings.

Both FF and ES are bundled interventions. FF included content on economic stability, responsible parenting and healthy relationships. They also received case management and legal services. Fathers in ES received content on economic stability, as well as limited case management and legal services. Therefore, it is difficult to empirically disentangle the relationship between specific components of the intervention and outcomes. Further research would benefit from Multiphase Optimization Strategy (MOST). MOST is an engineering-based framework to guide the development, optimization, and evaluation of an intervention (Collins, 2018; Pellegrini et al., 2014). It would be beneficial to assess FF using the MOST approach to determine which components of the intervention make the most meaningful contributions to the

outcomes. Following a series of factorial experimental designs, which allow for the assessment of individual components, the FF program could be modified and shortened to include only those components which result in optimal outcomes.

While FF fathers did not experience better outcomes than ES fathers, findings provide promising evidence that FF and ES promoted change among economically disadvantaged fathers on parenting, well-being, and economic outcomes. It is possible that gaining financial stability contributed to positive improvements in other fatherhood domains like engagement with the child and well-being. And while there were some differences between the FF and ES programs in content and implementation (FF, 6 weeks/240 h vs. 4 weeks, 80 h) both programs did focus on economic stability. An RCT comparing ES to a no treatment control group on parenting and co-parenting would more fully answer the question about the effects of ES on these outcomes. Future research should examine child outcomes in addition to fathering/co-parenting outcomes as well as focus on further understanding the connection between fathers gaining employment and improved fatherhood outcomes. Testing of the mediating pathways put forth in the Family Process Model could help further illuminate these pathways and identify key targets of interventions.

Longer is not necessarily better. The implementation of shorter, more optimized, programs can save fatherhood programs resources and reduced the burden on fathers, who may not have six full weeks. Therefore, researchers should also continue to explore which specific components of responsible fatherhood programs (e.g., parenting, economic stability) are most needed and provide the greatest benefit for fathers and their children.

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AUTHORS' CONTRIBUTIONS

PLK, PF, CK, NM, AS, DG, CT, and HS conceptualized and designed this study. CK, NM, PLK, DG, CT, and AS contributed to the acquisition of data. MJK, SYC, AS, and PF contributed to data analysis. All authors contributed to the interpretation of study results. PLK, MJK, CK, and SYC drafted the manuscript, and all other authors reviewed and revised the manuscript for important intellectual content. All authors have reviewed and approved the final manuscript.

REFERENCES

Amato, P. R., & Gilbreth, J. G. (1999). Nonresident fathers and children's well-being: A meta-analysis. *Journal of Marriage and Family*, *61*(3), 557–573. https://doi.org/10.2307/353560

Avellar, S., Covington, R., Moore, Q., Patnaik, A., & Wu, A. (2018). Parents and children together: Effects of four responsible fatherhood programs for low-income fathers. Retrieved from https://ideas.repec.org/p/mpr/mprres/a402e2e5debd413fbd90a22aaa92820a.html

Barthelemy, J. J., & Coakley, T. M. (2017). Fathering attitudes and behaviors among low-income fathers. *Journal of Family Social Work*, *20*(5), 399–415. https://doi.org/10.1080/10522158.2017.1302379

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1), 1–48. https://doi.org/10.18637/jss.v067.i01

Bronte-Tinkew, J., Carrano, J., Ericson, S., & Mbwana, K. (2009). Promising practices in employment and self-sufficiency programs for fathers: Findings from evidence-based research. NRFC Practice Briefs. US DHHS, Administration for Children and Families, Office of Family Assistance. Downloaded on January 21, 2021 from https://www.fatherhood.gov/sites/default/files/resource_files/nrfc_practice_brief_whatworksinfatherhoodprograms.pdf

Bronte-Tinkew, J., & Horowitz, A. (2010). Factors associated with unmarried, nonresident fathers' perceptions of their coparenting. *Journal of Family Issues*, *31*(1), 31–65. https://doi.org/10.1177/0192513X09342866

Brown School Evaluation Center at Washington University in St. Louis (2020). *Final Impact Evaluation Report: The Evaluation of the New Pathways to Responsible Fatherhood Family Formation Program*. Administration for Children and Families. Retrieved from https://www.acf.hhs.gov/sites/default/files/documents/ofa/FFSC_Impact_Report.pdf

Brysbaert, M., & Stevens, M. (2018). Power Analysis and effect size in mixed effects models: A tutorial. *Journal of Cognition*, *1*(1), 1–20. https://doi.org/10.5334/joc.10

Cabrera, N. J., Karberg, E., Malin, J. L., & Aldoney, D. (2017). The magic of play: Low-income mothers' and fathers' playfulness and children's emotion regulation and vocabulary skills. *Infant Mental Health Journal*, *38*(6), 757–771. https://doi.org/10.1002/imhj.21682

Caldwell, C. H., Antonakos, C. L., Assari, S., Kruger, D., De Loney, E. H., & Njai, R. (2014). Pathways to prevention: Improving nonresident African American fathers' parenting skills and behaviors to reduce sons' aggression. *Child Development*, *85*(1), 308–325. https://doi.org/10.1111/cdev.12127

Caldwell, C., Rafferty, J., Reischl, T., de Loney, E., & Brooks, C. (2010). Enhancing parenting skills among non-resident African American fathers as a strategy for preventing youth risky behaviors. *American Journal of Community Psychology*, *45*, 17–35. https://doi.org/10.1007/s10464-009-9290-4

Carlson, M. J., & Magnuson, K. A. (2011). Low-income fathers' influence on children. *Annals of the American Academy of Political and Social Science*, *635*, 95–116. https://doi.org/10.1177/0002716210393853

Coley, R. L., & Morris, J. E. (2002). Comparing fathers and mother reports of father involvement among low-income minority families. *Journal of Marriage and Family*, *64*(4), 982–997. https://doi.org/10.1111/j.1741-3737.2002.00982.x

Collins, L. M., & Collins, L. M. (2018). Conceptual introduction to the Multiphase Optimization Strategy (MOST). In L. M. Collins, & K. C. Kugler (Eds.), *Optimization of behavioral, biobehavioral, and biomedical interventions. Statistics for social and behavioral sciences* (pp. 1–34). Springer. https://doi.org/10.1007/978-3-319-72206-1_1

Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. A. (1992). Family process model of economic hardship and adjustment of early adolescent boys. *Child Development*, *63*, 526–541. https://doi.org/10.1111/j.1467-8624.1992.tb01644.x

Conger, R. D., Ge, S., Elder, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family process and developmental problems of adolescents. *Child Development*, *65*, 541–561. https://doi.org/10.2307/1131401

Cowan, P. A., Cowan, C. P., Pruett, M. K., Pruett, K., & Wong, J. J. (2009). Promoting fathers' engagement with children: Preventive interventions for low-income families. *Journal of Marriage & Family*, *71*, 663–679. https://doi.org/10.1111/j.1741-3737.2009.00625.x

Davis, L., Pearson, J., & Thoennes, N. (2014). Building assets for fathers and families in Tennessee, BAFF final report. Retrieved from https://centerforpolicyresearch.org/publications/building-assets-for-fathers-and-families-in-tennessee/

Dyer, W. J., Fagan, J., Kaufman, R., Pearson, J., & Cabrera, N. (2018). Self-perceived coparenting of non-resident fathers: Scale development and validation. *Family Process*, *57*(4), 927–946. https://doi.org/10.1111/famp.12331

Dyer, W. J., Kaufman, R., Cabrera, N., Fagan, J., & Pearson, J. (2015). FRPN research measure: Fathers' engagement (English and Spanish Versions Available). Retrieved from https://www.frpn.org/asset/frpn-research-measure-fathers-engagement-english-and-spanish-versions-available

Fabiano, G. A., & Caserta, A. (2018). Future directions in father inclusion, engagement, retention, and positive outcomes in child and adolescent research. *Journal of Clinical Child & Adolescent Psychology*, *47*(5), 847–862. https://doi.org/10.1080/15374416.2018.1485106

Fagan, J. (2008). Randomized study of a prebirth coparenting intervention with adolescent and young fathers. *Family Relations*, *57*(3), 309–323. https://doi.org/10.1111/j.1741-3729.2008.00502.x

Fagan, J., & Iglesias, A. (1999). Father involvement program effects on fathers, father figures, and their head start children: A quasi-experimental study. *Early Childhood Research Quarterly*, *14*(2), 243–269. https://doi.org/10.1016/S0885-2006(99)00008-3

Fagan, J., & Kaufman, R. (2015). Reflections on theory and measures for fatherhood programs. *Families in Society*, *96*, 135–142. https://doi.org/10.1606/1044-3894.2015.96.19

Fagan, J., & Stevenson, H. C. (2002). An experimental study of an empowerment-based intervention for African American Head Start fathers. *Family Relations*, *51*(3), 191–198. https://doi.org/10.1111/j.1741-3729.2002.00191.x

Fan, W., Lam, J., & Moen, P. (2019). Stress proliferation? Precarity and work-family conflict at the intersection of gender and household income. *Journal of Family Issues*, *40*(18), 2751–2773. https://doi.org/10.1177/0192513X19862847

Fang, R. T., & Saks, A. M. (2020). Class advantage in the white-collar labor market: An investigation of social class background, job search strategies, and job search success. *Journal of Applied Psychology*, *106*(11), 1695–1713. https://doi.org/10.1037/apl0000842

Goncy, E. A., & van Dulmen, M. H. M. (2010). Fathers do make a difference: Parental involvement and adolescent alcohol use. *Fathering*, *8*(1), 93. https://doi.org/10.3149/fth.0801.93

Holmes, E. K., Egginton, B. R., Hawkins, A. J., Robbins, N. L., & Shafter, K. (2020). Do responsible fatherhood programs work? A comprehensive meta-analysis study. *Family Relations*, *69*, 967–982. https://doi.org/10.1111/fare.12435

Holmes, E. K., Galovan, A. M., Yoshida, K., & Hawkins, A. J. (2010). Meta-analysis of the effectiveness of residential fathering programs: Are family life educators interested in fathers? *Family Relations*, *59*(3), 240–252. https://doi.org/10.1111/j.1741-3729.2010.00599.x

Hout, M. (2004) Getting the most out of the GSS income measures. GSS Methodological Report No. 101. Survey Research Center, University of California Berkeley. Accessed May 19, 2021 at http://www.gss.norc.org/Documents/reports/methodological-reports/MR101%20Getting%20the%20Most%20Out%20of%20the%20GSS%20Income%20Measures.pdf

IBM Corp (2020). *IBM SPSS statistics for windows, Version 27.0*. IBM Corp.

Jorgensen, B. S., Jamieson, R. D., & Martin, J. F. (2010). Income, sense of community and subjective well-being: Combining economic and psychological variables. *Journal of Economic Psychology*, *31*(4), 612–623. https://doi.org/10.1016/j.joep.2010.04.002

Kim, Y., & Jang, S. J. (2018). Final evaluation report: A randomized controlled trial of the effectiveness of a responsible fatherhood program: The case of TYRO Dads. Retrieved from https://www.frpn.org/asset/frpn-grantee-report-randomized-controlled-trial-the-effectiveness-responsible-fatherhood

Lenth, R., Buerkner, P., Herve, M., Love, J., Riebl, H., & Singmann, H. (2020). Emmeans: Estimated marginal means, aka least-squares means. R package version 1.4.5. Retrieved from https://cran.r-project.org/web/packages/emmeans/index.html

Lippold, K., Nichols, A., & Sorensen, E. (2011). Strengthening families through stronger fathers: Final impact report for the pilot employment programs. https://www.urban.org/research/publication/strengthening-families-through-stronger-fathers-final-impact-report-pilot-employment-programs/view/full_report

Lundahl, B., Risser, H. J., & Lovejoy, M. C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review*, *26*, 86–104. https://doi.org/10.1016/j.cpr.2005.07.004

Magill-Evans, J., Harrison, M. J., Benzies, K., Gierl, M., & Kimak, C. (2007). Effects of parenting education on first-time fathers' skills in interactions with their infants. *Fathering: A Journal of Theory, Research & Practice about Men as Fathers*, *5*(1), 42–57.

Maruish, M. E. (Ed.) (2012). *User's manual for the SF-12v2 Health Survey* (3rd ed.). QualityMetric Incorporated.

McKee-Ryan, F., Song, Z., Wanberg, C., & Kinicki, A. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. *The Journal of Applied Psychology*, *90*(1), 53–76. https://doi.org/10.1037/0021-9010.90.1.53

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Pellegrini, C. A., Hoffman, S. A., Collins, L. M., & Spring, B. (2014). Optimization of remotely delivered intensive lifestyle treatment for obesity using the Multiphase Optimization Strategy: Opt-IN study protocol. *Contemporary Clinical Trials*, *38*, 251–259. https://doi.org/10.1016/j.cct.2014.05.007

R Core Team (2019). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Retrieved from https://www.R-project.org/

Rienks, S. L., Wadsworth, M. E., Markman, H. J., Einhorn, L., & Etter, E. M. (2011). Father involvement in urban low-income fathers: Baseline associations and changes resulting from preventive intervention. *Family Relations*, *60*(2), 194–204. https://doi.org/10.1111/j.1741-3729.2010.00642.x

Robbers, M. L. P. (2009). Facilitating fatherhood: A longitudinal examination of father involvement among young minority fathers. *Children and Adolescent Social Work Journal*, *26*, 121–134. https://doi.org/10.1007/s10560-008-0157-6

Sarfo, B. (2018). *The DAD MAP evaluation: A randomized controlled trial of a culturally tailored parenting and responsible fatherhood program*. Retrieved from https://mefassociates.com/wordpress/wp-content/uploads/2018/03/The-DAD-MAP-Evaluation-Final-Report.pdf

Sarkadi, A., Kristiansson, R., Oberklaid, F., & Bremberg, S. (2008). Fathers' involvement and children's developmental outcomes: A systematic review of longitudinal studies. *Acta Pædiatrica*, *97*(2), 153–158. https://doi.org/10.1111/j.1651-2227.2007.00572.x

Threlfall, J. M., Seay, K. D., & Kohl, P. L. (2013). The parenting role of African American fathers in the context of urban poverty. *Journal of Children and Poverty*, *19*(1), 45–61. https://doi.org/10.1080/10796126.2013.764846

Turner-Bowker, D., & Hogue, S. J. (2014). Short Form 12 Health Survey (SF-12). In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 5954–5957). Springer, Netherlands.

Ware, J. E., Kosinski, M., Turner-Bowker, D. M., & Gandeck, B. (2007). *User's Manual for the SF-12v2 Health Survey with a Supplement Documenting SF-12 Health Survey*. QualityMetric Incorporated.

Westfall, J., Kenny, D. A., & Judd, C. M. (2014). (2014). Statistical power and optimal design in experiments in which samples of participants respond to samples of stimuli. *Journal of Experimental Psychology: General*, *143*(5), 2020–2045. https://doi.org/10.1037/xge0000014

Wilson, K. R., Havighurst, S. S., Kehoe, C., & Harley, A. E. (2016). Dads tuning in to kids: Preliminary evaluation of a fathers' parenting program. *Family Relations*, *65*(4), 535–549. https://doi.org/10.1111/fare.12216

Yoder, J. R., Brisson, D., & Lopez, A. (2016). Moving beyond fatherhood involvement: The association between father–child relationship quality and youth delinquency trajectories. *Family Relations*, *65*(3), 462–476. https://doi.org/10.1111/fare.12197

Yogman, M., & Garfield, C. F. & Committee on Psychosocial Aspects of Child Family Health. (2016). Fathers' roles in the care and development of their children: the role of pediatricians. *Pediatrics*, *138*(1), e20161128. https://doi.org/10.1542/peds.2016-1128

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