

# Evaluation of the **STEPS** League of Extraordinary Fathers and Potential Additive and Maintenance Effects of Mentoring in Northeast Ohio

**Final Impact Evaluation Report for**  
**Passages Connecting Fathers and Families**  
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### **Disclosure:**

There are no conflicts of interest to disclose.

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## **Impact Evaluation of the STEPS League of Extraordinary Fathers and Potential Maintenance Effects of Mentoring in Northeast Ohio**

**Objective.** Engaged fathers influence their children across the lifespan, though adversity can interrupt meaningful relationship engagement. Increasing relational health among socioeconomically disadvantaged fathers through peer mentorship, parenting support, and resilience development stands to enhance the fathering role. Passages Connecting Fathers and Families developed an additive mentoring component to an existing fathering program to strengthen fathers' social support and remove barriers to effective fatherhood and family functioning. This randomized control trial examined impacts of mentoring on relational health among fathers with and without intimate partner violence (IPV) perpetration histories.

**Study design.** The program served low-income urban fathers (n=330) recruited from three sites. Fathers were randomly assigned to receive STEPS (Stabilizing Through Employment + Parenting Skills) League of Extraordinary Fathers programming as usual or STEPS plus mentoring. Data were collected at baseline, program exit, and six months post-enrollment.

**Results.** Fathers were predominantly Black men with high school degrees whose children were on average 4 years old. Fathers reported high rates of adverse childhood experiences. About half reported having perpetrated physical and/or psychological IPV. For both study conditions (STEPS and STEPS plus mentoring), relational health measures of self-efficacy, empowerment, engagement, and broader social networks increased significantly over time. The additive component of mentoring did not change treatment impacts for these outcomes, with no statistically significant differences between the services-as-usual and mentoring group at Program Exit. Significant maintenance effects were not found at the Six-Month Follow-Up, though some data suggests mentoring may have acted as a buffering effect to treatment losses between Program Exit and Six-Month Follow-Up. Fathers with an IPV history receiving mentoring had significant reductions in parent-child conflict and improvements in making child support payments.

From the implementation study, critical components of the program included skill building, empowerment, and creation of a safe space. Mentorship additionally provided shared experience, trust, and support. Fathers with high-risk backgrounds reported changed parenting behaviors due to shared experiences/inspiration within the program.

**Conclusion.** Fathers in both study groups increased relational health over time, but mentoring had no measurable impact. Mentoring may be more helpful for fathers with higher-risk backgrounds among certain aspects of relational health. It is possible that mentoring and programming will be most effective when there is shared lived experience.

# Impact Evaluation of the STEPS League of Extraordinary Fathers and Potential Maintenance Effects of Mentoring in Northeast Ohio

## I. Introduction

This chapter describes the goals of the study and the motivation behind it and gives a high-level overview of the research questions.

### A. Study overview

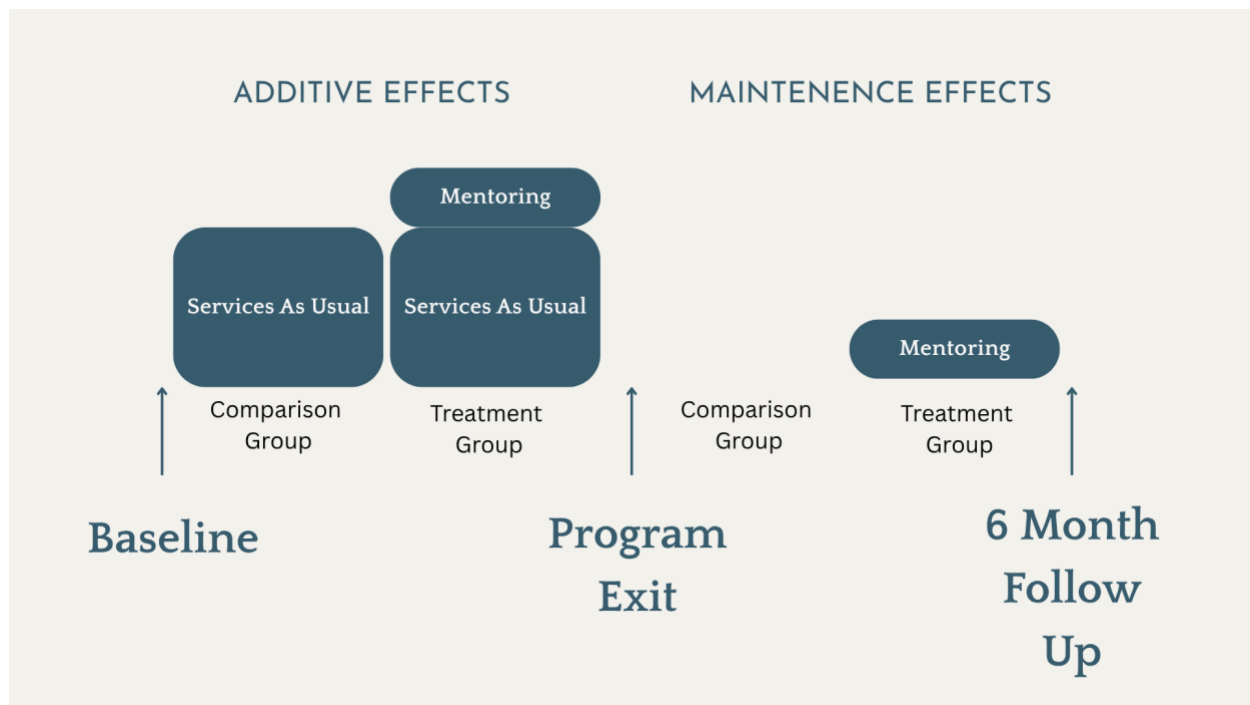
#### Background of Target Population

Passages, the preeminent fatherhood organization in Northeast Ohio, provides multiple services to support and empower families, primarily to families who are low-income and socio-economically disadvantaged. Father-presence has potential for a profound influence on children across the lifespan, improving child-outcomes spanning from toddlerhood (e.g., higher cognitive skills such as counting and vocabulary; Baker et al., 2018) to adolescence (e.g., lower risky behavior such as alcohol use, physical fights, risky sex; Nepomnyaschy et al., 2020). Fatherhood and family formation in the U.S. is not a monolith, however. Black families have disproportionately higher rates of “father-absent” homes (57.6%), compared to Hispanic (31.2%) and White, non-Hispanic (20.7 %) households (Vespa et al., 2012). Structural forces have shaped the circumstances of socioeconomically disadvantaged fatherhood and nuclear family formation, including economic policies (e.g., deindustrialization, globalization; Lu et al., 2010), social welfare policies (prerequisite changes for Temporary Assistance for Needy Families), criminal justice policies (e.g., the “War on Drugs”, disproportionate sentencing across race and class; Pettit & Gutierrez, 2018) and mass incarceration (e.g., privatizing prisons; Alexander, 2020, Wildeman & Wang, 2017). Socioeconomically disadvantaged fathers in Northeast Ohio (specifically, Cuyahoga, Lorain and Portage Counties) face multiple barriers to employment and self-sufficiency including limited education skills and sporadic job history, which are key to child access and supporting one’s family. Many fathers in the target area also grew up without a role model of what it means to be a responsible father and co-parent due to these structural forces, which inevitably affects how they approach fatherhood and family functioning as adults. To bolster these fathers’ experiences of social support and removal of structural barriers, Passages developed a novel mentoring program as an additive programming provision to its existing STEPS League of Extraordinary Fathers (also known as “STEPS”), which is made up of a constellation of case-management services and fatherhood educational curriculum.

#### Intervention Description

The STEPS League of Extraordinary Fathers is one of three primary programs at Passages, and for this analysis is considered “services as usual”. This includes a class cohort-based parenting education using National Fatherhood Initiative curricula, “24/7 Dads” and “Fathering in 15”; working with a fatherhood coach to develop an individual plan designed to remove barriers and improve co-parenting/relationship skills; and, for fathers expressing interest, one-on-one meetings with an employment coordinator to help fathers prepare for, find and retain employment through resume writing, mock interviews and other job skills. From the start of services, Program Exit typically occurs approximately four weeks later for those engaged in daytime programming and approximately seven weeks later for those engaged in evening programming.

A novel programming component featured in this impact analysis was mentoring, in which fathers were assigned a Fatherhood Support Mentor who was previously incarcerated and has successfully reentered his community, completed fatherhood programming at Passages and trained on motivational interviewing and mentoring. Cultivating a supportive relationship with the father, the mentor has at least two meaningful contacts with the father per month. Mentoring can continue for up to five months after program exit (total 6 months). Mentoring was tested in two ways. First, mentoring was tested for its potential additive effects to the current standard of care on fathers’ relational health from Baseline to Program Exit. Second, mentoring was tested for its maintenance effects on fathers’ relational health during the time between Program Exit and the Six Month Follow-Up, conducted six months post-enrollment. See Figure 1.

**Figure 1. Testing the effects of services-as-usual and mentoring on relational health with a randomized design**

#### Previous Research

*Impact Study.* Individual-level factors in childhood (e.g., child maltreatment, McKay et al., 2018) and adulthood (e.g., depression, Yaros et al., 2018; unemployment, Cunradi et al., 2009), as well as environmental-level factors such as concentrated disadvantage (Voith & Brondino, 2017) have an impact on men's formation and maintenance of healthy relationships with their children and romantic partners. These factors may be especially relevant for fathers who face greater adversity, including socioeconomically disadvantaged fathers with histories of incarceration. Research with socioeconomically disadvantaged fathers, including previously incarcerated men, documents challenges with finances (Charles et al., 2019), lowered self-efficacy (Sells et al., 2020), reduced engagement with their children (McKay et al., 2018), and relationship struggles with their partners (Laird et al., 2020).

Research documents that case management can help these men manage these risks and reduce recidivism (Miller et al., 2019). Recent research also finds that, in addition to case management, peer mentoring from other men who have similar life experiences may help promote positive outcomes (such as reduced recidivism among previously incarcerated men) via the provision of comraderies and social support which can be low among this population (Sells et al., 2020). Theory suggests exposure to higher levels of trauma and adversity in childhood can disrupt key brain developmental milestones that can have cascading and lasting effects into adulthood. Research with previously incarcerated men (who are predominately socioeconomically disadvantaged) indicates high levels of adversity and trauma (Jäggi et al., 2016), suggesting that this population may be navigating compounding effects of adversity from childhood. Resilience theory suggests that "resilience" is not static and is something that is malleable over time and across different domains, such as parenting, and that parental resilience is influenced by well-being and self-efficacy, family functioning, and social connectedness (Gavidia-Payne et al., 2015). Previous research suggests that increasing "relational health" or the number of people who are consistent, caring, and attentive to one's needs can mitigate the impact of adversity (Bethell et al., 2019). Extending this research to a group of socioeconomically disadvantaged fathers with high rates of incarceration, the current study examined changes associated with STEPS programming, the impact of STEPS plus mentoring, and the potential maintenance effects of mentoring in the STEPS League of Extraordinary Fathers program on

socioeconomically disadvantaged fathers' relational health. The impact study also examined the potential effect of fathers' history of intimate partner violence perpetration on changes in relational health, which has not been examined previously despite the heightened risks of forming unhealthy relationships among fathers with this history (Shadik & O'Connor, 2016).

*Implementation Study.* Understanding the mechanisms of impact of a program illuminates the key factors that promote or hinder positive change among fathers, allowing for more rigorous program evaluations (Hawkins et al., 2019; Silva et al., 2015). However, a program's mechanisms of impact are often "hidden below the surface" or vaguely understood even by the program staff, particularly if the program is "complex" (i.e., the program consists of multiple components and active ingredients; Astbury & Leeuw, 2010; Craig et al., 2008), which may further obstruct the development of a rigorous program evaluation. By carrying out a formative study aiming to understand the mechanisms of impact of the STEPS League of Extraordinary Fathers from the perspective of the program staff and stakeholders, this study will provide clearer understanding of key protective and risk factors among the study sample and potential underlying mechanisms explaining how the program works. The process of understanding the program mechanisms of impact may provide potential explanations of findings from the impact study and assist with replicability in future studies and other program development efforts. Furthermore, research documents fathers with histories of intimate partner violence (IPV) perpetration may have unique challenges on fathering (Shadik, 2020; Stover & Morgos, 2013). Therefore, it is warranted that research examines the unique mechanisms of impact and facilitators or barriers for fathers with histories of IPV in the fatherhood programs.

## **B. Primary research questions<sup>1,2</sup>**

1. Do any significant differences exist over time on primary outcomes assessing relational health among fathers randomized into the treatment condition compared with fathers randomized in the comparison condition?
  - a.) H1: Overall, fathers in the study—including both those in the treatment and control conditions—will improve on all measures of relational health over time.
  - b.) H2: Additive effects will be found for mentoring, with fathers assigned to receive mentoring (i.e., treatment group) reporting greater changes in relational health outcomes from Baseline to Program Exit compared to fathers not assigned to mentoring (i.e., comparison group).
  - c.) H3: Maintenance effects will be found for mentoring, with fathers assigned to receive mentoring (i.e., treatment group) reporting smaller changes in relational health outcomes from Program Exit to Six Month Follow-Up compared to fathers not assigned to mentoring (i.e., comparison group).
2. Are there group differences in primary outcomes among fathers with a self-reported history of intimate partner violence perpetration compared to fathers who do not report it?<sup>3</sup>
  - a.) H1: Fathers who reported intimate partner violence perpetration will have significantly lower scores on primary outcomes compared to fathers who do not report intimate partner violence perpetration.

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<sup>1</sup> In order to preserve randomization, reflect real-world conditions, reduce bias, and report conservative estimates, the study team decided to use an intent-to-treat analysis, which differed slightly from the original research questions that proposed to separate out participants who did not complete the program. Also, the descriptive study with a nonrandomized sample is not reported here due to space and overlap with the impact study.

<sup>2</sup> This research question is based on a longitudinal, repeated measures randomized design using a Linear Mixed Model. The three hypotheses reflect different parts of the research question that are answered using a single statistical model (and thus, are not "separate" research questions).

<sup>3</sup> For Research Question 2 (in both primary and secondary) we originally proposed to examine reported history of child maltreatment and IPV; however, very few fathers reported perpetrating child maltreatment, preventing our ability to test for differences and, thus, was dropped.

### C. Secondary research questions

1. Do any significant differences exist over time on secondary outcomes assessing barriers and child support among fathers randomized to receive mentoring (i.e. treatment group) compared with fathers who did not receive mentoring (i.e. comparison group)?<sup>4</sup>
  - a) H1: Overall, fathers in the study – including those in treatment and control conditions – will report lower total barriers and greater child support indicators over time.
  - b) H2: Additive effects will be found for mentoring, with fathers assigned to receive mentoring (i.e., treatment group) reporting greater reduction in total barriers and greater changes in child support payments and child support efforts from Baseline to Program Exit, compared to fathers who did not receive mentoring (i.e., comparison group)
  - c) H3: Maintenance effects will be found for mentoring, with fathers assigned to receive mentoring (i.e., treatment group) reporting smaller changes in total barriers, child support payments, child support efforts from Program Exit to Six Month Follow-Up, compared to fathers who did not receive mentoring (i.e., comparison group).
2. Do any significant differences exist on secondary outcomes assessing fathering, quality of romantic relationship, and economic stability among fathers randomized to receive mentoring (i.e., treatment condition) compared with fathers not randomized to receive mentoring (i.e., comparison group) at Program Exit, when controlling for key variables?<sup>5</sup>
  - a) H1: Fathers receiving mentoring (i.e., treatment group) will have significantly higher scores on fathering, quality of romantic relationship, and economic stability outcomes compared to fathers not assigned to receive mentoring (i.e., comparison group) at Program Exit.
3. Are there group differences in secondary outcomes among fathers with a self-reported history of intimate partner violence perpetration compared to fathers who do not report it?
  - a) H2: Fathers who reported intimate partner violence perpetration will have significantly lower scores on secondary outcomes compared to fathers who do not report intimate partner violence perpetration.

## II. Intervention and counterfactual conditions

This chapter describes the focal population, services as usual, and intervention. The incorporation of a novel mentoring component to the STEPS League of Extraordinary Fathers is being evaluated for its potential additive and maintenance effects along with the standard services as usual. In addition, this chapter describes the implementation research that aimed to identify the underlying mechanism of the program as experienced by fathers and staff, with special attention to differences among fathers who may be at higher-risk due to histories of intimate partner violence perpetration.

### A. Focal population

The program was intended for low-income adult fathers (age 18 and older with children 24 years and younger), including married and unmarried biological fathers, adoptive fathers, stepfathers, fathers who are custodial, and noncustodial fathers. The services were offered to three counties in Northeast Ohio, including Cuyahoga, Lorain, and Portage counties. Cuyahoga County is home to a major metropolitan city that has 1.24 million residents, with a median household income of nearly \$63,000, an overall poverty rate of 16%, a diverse racial make-up (30% Black, non-Hispanic and 63% white, non-Hispanic), and a growing economy (U.S. Census Bureau, 2023a). Lorain County is made up of numerous outer-ring suburbs with a total population of nearly 325,000, a median household income of over \$70,000, a poverty rate of 11%, and a large white, non-Hispanic population (85%, U.S. Census Bureau, 2023b). Portage County is a rural area that

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<sup>4</sup> This research question is based on a longitudinal, repeated measures randomized design using a Linear Mixed Model. The three hypotheses reflect different parts of the research question that are answered using a single statistical model (and thus, are not “separate” research questions).

<sup>5</sup> This research question is based on data collected at two time points (Baseline and Program Exit) and is analyzed using multiple linear regression.

has comparatively the smallest population with over 160,000, a median household income of \$72,822, a poverty rate of nearly 13%, and is majority white, non-Hispanic (90%; U.S. Census Bureau, 2023c). Cuyahoga and Portage counties poverty rates exceed the national average of 12.5% (Benson & Bishaw, 2024).

### **B. Description of program as intended (STEPS plus Mentoring)**

Fathers in the intervention group received services consisting of up to five components:

1. healthy relationship education,
2. parenting education,
3. fatherhood coaching, and
4. employment coordination,
5. with the Fatherhood Support Mentor as the key additive component.

The Fatherhood Support Mentor services aimed to build a meaningful relationship with the father through regular and prolonged contact, in addition to four components making up the STEPS program services (see “Intervention” in Table II.1). STEPS program services included fatherhood, healthy relationship / co-parenting, and economic stability educational content in a cohort-base setting for a total of 27 hours of curriculum. Additionally, fathers worked with a Fatherhood Coach to receive case-management services. An employment coordinator was supplementary for fathers who indicated interest in these services. All components except for mentoring were delivered between Baseline and Program Exit for fathers in both study groups, and the mentoring component was delivered between Baseline and Six-Month Follow-Up only for those in the treatment group. See Table II.1 for content, dosage, and setting descriptions, and Table II.2 for staffing characteristics.

### **C. Description of the counterfactual condition as intended (STEPS)**

All fathers in the comparison group received the first four program components listed above, making up the STEPS program services. In particular, these services included fatherhood, healthy relationship / co-parenting, and economic stability educational content in a cohort-base setting for a total of 27 hours of curriculum. Additionally, fathers worked with a Fatherhood Coach to receive case-management services. An employment coordinator was supplementary for fathers who indicated interest in these services (see “Counterfactual” in Table II.1). In order to successfully complete programming, fathers were required to complete 25 hours of the curriculum. All components in the comparison condition were delivered between Baseline and Program Exit. See Table II.1 for content, dosage, and setting descriptions, and Table II.2 for staffing characteristics.

### **D. Implementation research questions about the intervention and counterfactual condition**

1. What are the mechanisms of impact (i.e., the key factors that promote positive change) in the STEPS League of Extraordinary Fathers programs, specific to men’s engaged fatherhood, healthy partnerships, and economic stability?
2. What are the strengths and challenges to engaged fatherhood, healthy partnerships, and economic stability for fathers enrolled in the program?<sup>6</sup>
3. Do the men in high-risk subgroups (i.e., fathers who reported intimate partner violence perpetration or child maltreatment) differ in their report of mechanisms of impact?

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<sup>6</sup> This research question was amended prior to data collection to include fatherhood strengths, in addition to barriers/challenges.

**Table II.1. Description of intended intervention, counterfactual components, and focal populations**

Component	Curriculum and content	Dosage and schedule	Delivery	Focal population
<b>Intervention</b>				
24/7 Dad AM curriculum	<p>Healthy marriage and relationship curriculum: Understanding partner's perspectives; avoiding destructive conflict; and communicating effectively</p> <p>Responsible parenting curriculum: Understanding and adopting parenting practices such as healthy communication and listening skills, fathering skills, and healthy discipline strategies along with child development education</p> <p>Economic Stability curriculum: Addresses employment responsibility, work ethic, financial responsibility, and time and resource management</p>	Twenty-four hours completed in two-hour sessions (twelve sessions) facilitated alongside Understanding Domestic Violence. Day groups complete in 3½ weeks (4x per week) and evening groups complete in 7 weeks (2x per week).	Group program provided online via Zoom by trained program facilitator.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Understanding Domestic Violence curriculum	Domestic violence curriculum: Understanding domestic violence and its effects; understanding the cycles of violence; learning red flags; promoting a safe home environment	Three hours (two sessions) facilitated alongside 24/7 Dad AM. Day groups complete in 3½ weeks (4x per week) and evening groups complete in 7 weeks (2x per week).	Group program provided online via Zoom by trained program facilitator.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Case Management/ Fatherhood Coach	One on one meetings to complete needs assessment and work on individual goals such as getting basic needs met and assistance with navigating systems in the community	8 meaningful contacts	One on one in person, via Zoom, or over the telephone.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Employment Coordination	Employment assessment to determine needs and goals. Resume preparation, interview skills, job search, and interview clothing when needed.	At least one meaningful contact to complete employment assessment. Additional meetings as needed based on participant interest and goals.	One on one in person, via Zoom, or over the telephone.	Program participants who are interested in assistance with employment coordination.
Fatherhood Support Mentor	Individual meetings with a mentor who has similar lived experiences. This allows for support	Two meaningful contacts (i.e., conversation lasting at least 15 minutes	One on one in person, via	All participants who opted into the local

Component	Curriculum and content	Dosage and schedule	Delivery	Focal population
	and encouragement as fathers and father figures navigate their goals, complete programming, and work to enhance their fathering skills. The mentor also works to act as an added support to their network.	regarding topics beyond session attendance reminders) per month for a total of six months.	Zoom, or over the telephone.	evaluation and were randomly assigned to receive a mentor.
<b>Comparison</b>				
24/7 Dad AM curriculum	<p>Healthy marriage and relationship curriculum: Understanding partner’s perspectives; avoiding destructive conflict; and communicating effectively</p> <p>Responsible parenting curriculum: Understanding and adopting parenting practices such as healthy communication and listening skills, fathering skills, and healthy discipline strategies along with child development education</p> <p>Economic Stability curriculum: Addresses employment responsibility, work ethic, financial responsibility, and time and resource management</p>	Twenty-four hours completed in two-hour sessions (twelve sessions) facilitated alongside Understanding Domestic Violence. Day groups complete in 3½ weeks (4x per week) and evening groups complete in 7 weeks (2x per week).	Group program provided online via Zoom by trained program facilitator.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Understanding Domestic Violence curriculum	Domestic violence curriculum: Understanding domestic violence and its effects; understanding the cycles of violence; learning red flags; promoting a safe home environment	Three hours (two sessions) facilitated alongside 24/7 Dad AM. Day groups complete in 3½ weeks (4x per week) and evening groups complete in 7 weeks (2x per week).	Group program provided online via Zoom by trained program facilitator.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Case Management/ Fatherhood Coach	One on one meetings to complete needs assessment and work on individual goals such as getting basic needs met and assistance with navigating systems in the community	8 meaningful contacts	One on one in person, via Zoom, or over the telephone.	Fathers who have a child younger than 24 who live in Cuyahoga, Lorain, or Portage county.
Employment Coordination	Employment assessment to determine needs and goals. Resume preparation, interview skills, job search, and interview clothing when needed.	At least one meaningful contact to complete employment assessment. Additional meetings as needed based on participant interest and goals.	One on one in person, via Zoom, or over the telephone.	Program participants who are interested in assistance with

Component	Curriculum and content	Dosage and schedule	Delivery	Focal population
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employment  
coordination.

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Notes: The intervention services described include the Fatherhood Support Mentor in addition to services as usual. The counterfactual (or comparison services) include services as usual.

**Table II.2. Staff characteristics, education, training, and development to support intervention and counterfactual components**

Component	Staff characteristics, education, and initial training	Ongoing staff training
<b>Intervention</b>		
24/7 Dad AM curriculum	Three (3) Facilitators are male and female and received one day training on the 24/7 Dad AM curriculum by a master trainer (multiple staff certified as a master trainer).	Facilitators receive a half-day annual refresher training in the 24/7 AM and Understanding Domestic Violence curricula by master trainers on staff.
Understanding Domestic Violence curriculum	Three (3) Facilitators are male and female and received one day training in Understanding Domestic Violence as part of the 24/7 Dad AM training. This is taught by a master trainer.	Facilitators receive a half-day annual refresher training on the 24/7 AM and Understanding Domestic Violence curricula by master trainers on staff.
Case Management/ Fatherhood Coach	Three (3) Case Managers/Fatherhood Coaches are male and female and are trained by the program manager and peer case managers. This includes on-site shadowing, an instructional binder, and training videos.	Case Managers/Fatherhood Coaches receive ongoing training from Program Manager and Project Director as needed. Additional training opportunities are attended as available and applicable for things such as community services and best practices.
Employment Coordination	Three (3) Employment Coordinators (who also serve as Facilitators) are male and female and are trained by Program Manager and peer Employment Coordinators. This includes on-site shadowing, an instructional binder, training videos and other digital mediums.	Employment Coordinators receive ongoing training from Program Manager and Project Director as needed. Additional training is attended as available and applicable.
Fatherhood Support Mentor	One (1) Fatherhood Support Mentor is male and a father who has previously completed Passages programming and who has lived experience with the criminal justice system and other systems in the community that impact parenting. The Program Manager provides training and guidance.	Fatherhood Support Mentor receives ongoing training from Program Manager and Project Director as needed. Additional training is attended as available and applicable.
<b>Comparison</b>		
24/7 Dad AM curriculum	Three (3) Facilitators are male and female and received one day training on the 24/7 Dad AM curriculum by a master trainer.	Facilitators receive a half-day annual refresher training in the 24/7 AM and Understanding Domestic Violence curricula by master trainers on staff.
Understanding Domestic Violence curriculum	Three (3) Facilitators are male and female and received one day training in Understanding Domestic Violence as part of the 24/7 Dad AM training. This is taught by a master trainer.	Facilitators receive a half-day annual refresher training on the 24/7 AM and Understanding Domestic Violence curricula by master trainers on staff.

Component	Staff characteristics, education, and initial training	Ongoing staff training
Case Management/ Fatherhood Coach	Three (3) Case managers/fatherhood coaches are male and female and are trained by the program manager and peer case managers. This includes on-site shadowing, an instructional binder, and training videos.	Case Managers/Fatherhood Coaches receive ongoing training from Program Manager and Project Director as needed. Additional training opportunities are attended as available and applicable for things such as community services and best practices.
Employment Coordination	Three (3) Employment Coordinators (who also serve as Facilitators) are male and female and are trained by Program Manager and peer Employment Coordinators. This includes on-site shadowing, an instructional binder, training videos and other digital mediums.	Employment Coordinators receive ongoing training from Program Manager and Project Director as needed. Additional training is attended as available and applicable.

### III. Study design

This chapter describes the sample formation, research design, and data collection for the implementation and impact analyses. It also describes the methods used to analyze the data as part of the study. The impact analysis was not registered. All study procedures were approved by the Institutional Review Board at Case Western Reserve University (STUDY20220092).

#### A. Evaluation enrollment and assignment to study conditions

##### Recruitment and Enrollment Targets

The program targeted enrolling 200 men per year, with program recruitment efforts including flyer distribution on social media sites and community events, program alumni referrals, community partner direct referrals, and word-of-mouth. Evaluation recruitment and enrollment was based on the program's targeted enrollment of 200 men per year. We targeted recruiting all fathers enrolled in the program (N = 200 / year) with an enrollment target of 82.5%. Enrollment spanned August 2022 to February 2024 for Baseline and to August 2024 for the Six-Month Follow-Up, with a target enrollment of N = 330 at Baseline and 165 in each group.

##### Site

Passages programming is available to anyone in a fatherhood role who resides in Northeast Ohio (Cuyahoga, Lorain, and Portage Counties) who is over 18 years old and has a child under 25 years old. Fathers were recruited into the program on-site at one of the program's three locations across three counties in Northeast Ohio (Cuyahoga County, Lorain County, and Portage County). Recruitment and enrollment into the evaluation was conducted during the same program recruitment meeting. On-site staff (e.g., Fatherhood Coach, Facilitators, or program administrative staff) conducted the study recruitment and enrollment process, each of whom were provided recruitment, informed consent, randomization, and enrollment protocols and scripts, and trained quarterly on study recruitment and enrollment procedures.

##### Eligibility criteria

Fathers eligible for the study mirrored the program enrollment criteria, including low-income adult fathers (18 years and older, with children less than 24 years old) who reside in the Passages service area, including married and unmarried biological fathers, adoptive fathers, stepfathers, and fathers who are noncustodial and custodial single fathers.

##### Consent process

Following recruitment, program staff completed informed consent procedures with fathers who indicated interest in participating in the study using an electronic device. The consent documents covered study procedures, risk and benefits, compensation, service alternatives, data retention, and the voluntary nature of the study. After reviewing the informed consent documents on REDCap (a browser-based survey software) and answering any questions the father had concerning the study, the father indicated his consent into the study by selecting "I agree to participate in this survey" or "I do NOT agree to participate in this survey" on the electronic device. He also indicated separately if he was NOT willing to externally share his de-identified data, in anticipation of storing study data in a repository at a later date.

##### Randomization

Immediately after providing consent electronically (using an iPad), the staff member navigated to the next page of the survey, which indicated the group the father was enrolled into (treatment or comparison). Though the program staff communicated which group the father was randomly assigned to, the randomization procedure was prepared and controlled by the evaluators using REDCap software. For those randomized into the comparison group, staff reminded them that they were eligible to receive mentoring services (the intervention) after the Six-Month Follow-Up passed. Randomization was completed in two batches, with the first 220 eligible enrollees and then with an additional 110 enrollees, with a planned

probability of 50% for assignment into the intervention group in each batch. This randomization approach was used as a caution, in case sample targets were not met; however, this was not an issue and the target sample size was achieved.

## **B. Outcome measures**

Primary outcome measures are related to relational health and are reported in Table III.1. These included elements of father's characteristics (e.g., self-efficacy) and interpersonal relationships (e.g., social support). Fathering self-efficacy was assessed using a revised form of the PROMIS scale edited to relate to fathering rather than management of chronic conditions (Gibaud-Wallston & Wandersman, 1978). The revised self-efficacy scale had high reliability among this sample ( $\alpha=.96$ ). Fathers were also asked questions about empowerment and engagement related to social belonging using the Relational Health Indices Community Scale (Liang et al., 2002). The empowerment scale assessed fathers' confidence in navigating social situations, including individual characteristics (e.g., self-worth) and connection to community (e.g., interactions and action). The engagement scale assessed fathers' felt sense of being understood (e.g., liked) and supported (e.g., emotional support, others noticing discomfort). Interpersonal relationships included multiple assessments of fathers' social networks. The individual social support scale included support from family and friends and scoring followed the author guidelines for the 6-item Lubben Social Network Scale (Lubben et al., 2006). Scales also assessed fathers' broad and formal social supports, role models, and people to count on which mirrored the Lubben scoring structure.

Secondary outcome measures related to co-parenting, romantic relationships, connection to children, and personal challenges and barriers can be found in Table III.2. Fathers indicated their experiences of barriers in life related to children (e.g., access to children), social determinants of health (e.g., access to housing), and co-parenting (e.g., child support). Fathers were also asked directly about whether they have made a child support order in the past month, if relevant, and if not, what actions have been taken to make efforts toward a child support payment. Among fathers with who saw their children at least once in the past month, relationships between parent and child were assessed along two scales, closeness and conflict, using the Parent-Child Relationship Scale-Short Form (PCRS-SF; Driscoll & Pianta, 2011, Stattin & Kerr, 2000). Co-parenting relationships and challenges, including gatekeeping, undermining, and alliance, were assessed utilizing the Fatherhood Research and Practice Network Co-parenting Perceptions Scale (CPS; Dyer et al., 2018). Among fathers with an intact romantic relationship, romantic relationship quality was measured with a three-item index including stress, leisure, and satisfaction. We also explored outcomes related to economic stability such as fathers' employment, difficulty paying bills, and job readiness.

## **C. Implementation measures**

Semi-structured focus group questions explored programmatic features promoting positive change and potential programmatic areas of improvement for Research Question 1 (Voith et al., 2024), and fathers' personal strengths and barriers for Research Question 2 (Russell et al., 2024), related to engaged fatherhood, healthy relationships, and economic stability. Research Question 3 examining differences between men with and without high-risk backgrounds (i.e., IPV perpetration or child maltreatment perpetration) relied on the thematic coding structure derived from Research Question 1 and self-report measures of IPV or child maltreatment. Each focus group was recorded and transcribed verbatim. Pseudonyms were applied to all participants to promote confidentiality. See Table III.3 for more specifics on the measures used for the implementation evaluation.

**Table III.1. Outcome measures used to answer primary research questions on relational health in the impact analysis**

Research question #	Outcome name	Description of the outcome measure and its properties	Source of the measure	Timing of measure since Baseline
RQ1 & RQ2	Fathering Self-Efficacy	<p>The outcome measure is a scale ranging from 10-50 assessing father’s ability to stay calm and solve problems related to parenting. Fathers completed ten survey items on a scale of 1 (not at all confident) to 5 (very confident) and scores on all items were summed.</p> <p>Sample items include (see reference for full item list):</p> <ul style="list-style-type: none"> <li>• I can solve most problems related to fathering if I try hard enough</li> <li>• I am confident that I could deal efficiently with unexpected events related to fathering</li> <li>• I stay calm when facing difficulties related to fathering because I can handle them</li> </ul> <p><b>Cronbach’s alpha:</b> Program Exit <math>\alpha=.96</math>, Six-Month Follow-Up <math>\alpha=.96</math></p>	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Sense of Belonging - Empowerment	<p>The outcome measure is a mean score of 5 items ranging from 1 (never) to 5 (always) related to father’s felt sense of personal empowerment related to social situations.</p> <p>These items include:</p> <ul style="list-style-type: none"> <li>• I feel better about myself after my interactions with this community.</li> <li>• I feel mobilized to personal action after meetings within this community.</li> <li>• I have a greater sense of self-worth through my connection with this community.</li> <li>• My connections with this community are so inspiring that they motivate me to pursue relationships with other people outside this community.</li> <li>• This community has shaped my identity in many ways.</li> </ul> <p><b>Cronbach’s alpha:</b> Program Exit <math>\alpha=.92</math>, Six-Month Follow-Up <math>\alpha=.91</math></p>	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Sense of Belonging - Engagement	<p>The outcome measure is a mean score of 5 items ranging from 1 (never) to 5 (always) related to father’s felt sense of engagement in social situations.</p> <p>These items include:</p> <ul style="list-style-type: none"> <li>• I feel a sense of belonging to this community.</li> <li>• If members of this community know something is bothering me, they ask me about it.</li> <li>• I feel understood by members of this community.</li> <li>• It seems as if people in this community really like me as a person.</li> <li>• This community provides me with emotional support.</li> </ul> <p><b>Cronbach’s alpha:</b> Program Exit <math>\alpha=.95</math>, Six-Month Follow-Up <math>\alpha=.93</math></p>	Local Evaluation Survey	Program Exit, Six-Month Follow-Up

Research question #	Outcome name	Description of the outcome measure and its properties	Source of the measure	Timing of measure since Baseline
RQ1 & RQ2	Social Network Score	The outcome measure is a count variable measuring the support received from family and friends. Fathers were asked about the people they are related to by birth or marriage and friends and neighbors. Fathers answered three questions about family and three questions about friends related to the number of friends and family that provide social support. Each question was asked on a scale of 0-5 where 0 = 0, 1 = 1, 2 = 2, 3 = 3-4, 4 = 5-8, and 5 = 9 or more as a count of people who fathers see or hear from at least once a month, can call upon for help, or talk about private matters.	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Broad/Formal Social Support	The outcome measures fathers' connection to social support broadly and in formal settings. Fathers were asked to consider broad supports (i.e., other fathers, your barber, members of your faith community) and formal supports (i.e., support people at Passages, other community organizations, or social services). Fathers answered three questions in each category and then responses were summed to create a total score. Each question was asked on a scale of 0-5 where 0 = 0, 1 = 1, 2 = 2, 3 = 3-4, 4 = 5-8, and 5 = 9 or more as a count of people in father's life for whom he can count on for help in looking for a job, with challenges that arise during romantic relationships, and to navigate challenges related to parenting his child(ren).	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Number of Individuals to Count On	The outcome measures fathers' connection to social support overall, including all connections. Each question was asked on a scale of 0-5 where 0 = 0, 1 = 1, 2 = 2, 3 = 3-4, 4 = 5-8, and 5 = 9 or more as a count of people in father's life for whom he can count on for help in looking for a job, with challenges that arise during romantic relationships, and to navigate challenges related to parenting his child(ren).	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Number of Role Models	The outcome assessed the number of people fathers felt they could look up to. Two questions were asked: "How many people do you look to for guidance to help you be the best father you can be?" and "How many people do you look to for guidance to help you be the best partner in a romantic relationship that you can be?" Each question was asked on a scale of 0-5 where 0 = 0, 1 = 1, 2 = 2, 3 = 3-4, 4 = 5-8, and 5 = 9 and the scores on both questions were summed.	Local Evaluation Survey	Program Exit, Six-Month Follow-Up

Notes: All social support count variables use scoring that mirrors the Lubben Social Network Scale scoring structure. Cronbach alpha are reported only for measures with ratio-scales and are not appropriate for scales that use a "count" of events. Program Exit occurred approximately four weeks after beginning services among fathers in the daytime cohort and approximately seven weeks after beginning services among fathers in the evening cohort.

**Table III.2. Outcome measures used to answer secondary research questions for the impact analysis**

Research question #	Outcome name	Description of outcome measure and its properties	Source of the measure	Timing of measure since Baseline
RQ1 & RQ2	Barriers	<p>The outcome measure is a count of perceived barriers where 1=yes and 0=no. Fathers were asked “in the last month, which of the following have felt like barriers in your life?”</p> <ul style="list-style-type: none"> <li>• Access to your children</li> <li>• Navigating co-parenting challenges</li> <li>• Child support orders</li> <li>• Medical coverage</li> <li>• Access to transportation</li> <li>• Access to housing</li> <li>• Lack of employment</li> <li>• Access to mental health services/resources</li> <li>• Lack of support from important people in your life</li> <li>• Other (please specify)</li> </ul> <p>These barriers were summed to create a count variable.</p>	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
<b>Fathering</b>				
RQ1 & RQ2	Parent-Child Attitudes	<p>The outcome measures parent-child relationships using two subscales: conflict and closeness. If a father had multiple children, the measures were completed individually for the youngest and oldest child and then averaged for the final subscale score.</p> <p>Parent-child conflict was measured using four items on a scale of 1=Always; 2=Often; 3=Sometimes; 4=Rarely; 5=Never. These items were each re-coded so that higher scores reflect higher conflict. The items included the degree to which parents wished their child was different, feel angry or irritated with their child, argue with their child, and feel disappointed with their child.</p> <p><b>Cronbach’s alpha:</b> Child 1 <math>\alpha=0.61</math>, Child 2 <math>\alpha=.74</math></p> <p>Parent-child closeness was measured using four items on a scale of 1=Always; 2=Often; 3=Sometimes; 4=Rarely; 5=Never. These items were each re-coded so that higher scores reflect higher closeness. The items included the degree to which parents feel proud of their child, accept their child for who they are, and how often parent and child understand each other.</p> <p><b>Cronbach’s alpha:</b> Child 1 <math>\alpha=0.61</math>, Child 2 <math>\alpha=.50</math></p>	nFORM (entrance/exit)	Program Exit

Research question #	Outcome name	Description of outcome measure and its properties	Source of the measure	Timing of measure since Baseline
RQ1 & RQ2	Co-Parenting Challenges	<p>The outcome assessed co-parenting attitudes using three scales: Gatekeeping, Undermining, and Alliance. If a father had multiple children, the measures were completed individually for the youngest and oldest child and then averaged for the final subscale score. Each question was asked on a scale of 1=Strongly disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly agree. Gatekeeping and Undermining were each summed so that higher scores equaled higher challenges related to co-parenting. Higher Alliance scores reflected higher levels of partnership between co-parents.</p> <p>The Gatekeeping scale consisted of three items asking fathers to indicate their level of agreement that the mother of their child makes it hard to spend time with their child, makes it hard to talk to their child, and tells the child what they are allowed to say to father. Gatekeeping scores range from 3-15.</p> <p><b>Cronbach's alpha:</b> Child 1 <math>a=0.83</math>, Child 2 <math>a=.88</math></p> <p>The Undermining scale consisted of three items asking fathers to indicate their level of agreement that the mother of their child contradicts the decisions father makes about child, makes negative comments/jokes/sarcastic comments about the way father parents, and undermines him as a father. Undermining scores range from 3-15.</p> <p><b>Cronbach's alpha:</b> Child 1 <math>a=0.85</math>, Child 2 <math>a=.91</math></p> <p>The Alliance scale consisted of five items asking fathers to indicate their level of agreement related to behaviors between themselves and the mother of their child: discussing the best way to meet child's needs, share information about child with each other, make joint decisions about child, try to understand where each other is coming from, and respect each other's decisions made about child. Alliance scores range from 5-25.</p> <p><b>Cronbach's alpha:</b> Child 1 <math>a=0.94</math>, Child 2 <math>a=.96</math></p> <p>To create a score for total co-parenting challenges, the scale for Alliance was reverse coded and scores were summed with Gatekeeping and Undermining, such that higher scores reflected higher co-parenting challenges on a range of 11-55.</p> <p><b>Cronbach's alpha:</b> Child 1 <math>a=.93</math>, Child 2 <math>a=.94</math></p>	nFORM (entrance/exit)	Program Exit
RQ1 & RQ2	Child Support Payment	The outcome is assessed using a single item, with 1=yes and 0=no. The question asked was "Did you make a child support payment in the past month?"	Local Evaluation Survey	Program Exit, Six-Month Follow-Up
RQ1 & RQ2	Child Support Efforts	<p>The outcome is assessed as the number of efforts fathers have made towards paying child support. Each item could be reported so that 1=yes, 0=no and efforts were then summed. The question asked was "What efforts have you taken towards child support payments?"</p> <ul style="list-style-type: none"> <li>Seeking employment</li> </ul>	Local Evaluation Survey	Program Exit, Six-Month Follow-Up

Research question #	Outcome name	Description of outcome measure and its properties	Source of the measure	Timing of measure since Baseline
		<ul style="list-style-type: none"> <li>• Modification to child support amount</li> <li>• Talked/negotiated with co-parent</li> <li>• Other (please describe):</li> <li>• None of the above</li> </ul>		
<b>Romantic Relationship</b>				
RQ1 & RQ2	Relationship Quality	A healthy relationship index was created from the z-scores of 3 items. Two items came from the local post-survey, relationship stress (“How stressful do you find your relationship with your romantic partner?”) and relationship leisure (“How much leisure time do you and your romantic partner spend together in an average week?”). Relationship leisure was reverse coded so that higher scores indicate greater quality relationships. The third item came from the nFORM exit survey, relationship satisfaction (“How satisfied are you with your current relationship?”). As these three questions were asked using different scales, a z-score was calculated for each item and those scores were summed to create the final healthy relationship index.	Local Evaluation Survey nFORM (entrance/exit)	Program Exit
<b>Economic Stability</b>				
RQ1 & RQ2	Challenge Paying Bills	Fathers were asked how often they have difficulty paying their bills using a single item scored 0=Never; 1=Once in a while; 2=Somewhat often; 3=Very often	nFORM (entrance/exit)	Program Exit
RQ1 & RQ2	Employment	Employment was assessed using a dichotomous variable in which 0=not currently employed and 1=any form of employment, including full-time, part-time, variable hours, and temporary/occasional work.	nFORM (entrance/exit)	Program Exit
RQ1 & RQ2	Job Readiness	The outcome measure is assessed as a sum of five items indicating perceived readiness for employment, with each question asked on a scale of 1=Strongly agree; 2=Agree; 3=Disagree; 4=Strongly disagree and then reverse-coded so that higher scores indicate higher job readiness. Participants could also select 5 = Not Applicable and were excluded from analyses related to this outcome. These items include: <ul style="list-style-type: none"> <li>• I feel confident in my interviewing skills.</li> <li>• I know how to apply for a job.</li> <li>• I know where to find job openings.</li> <li>• I would like to learn new job skills.</li> <li>• I feel confident in my ability to conduct an effective job search for a job I want.</li> </ul> <p><b>Cronbach’s alpha:</b> <math>a=0.80</math></p>	nFORM (entrance/exit)	Program Exit

Notes: Participants with more than two children were asked to report on the youngest child first, then the oldest child. Measures have been calculated as average scores across both children when appropriate. Participants were only asked if they made child support efforts if they indicated “no” to making a child support payment in the last 30 days. Participants were only asked to reflect on their relationship quality if they were currently in a romantic partnership. Cronbach alpha are reported only for measures with ratio-scales, and are not appropriate for scales that use a “count” of events or categorical responses. Program Exit occurred approximately four weeks after beginning services among fathers in the daytime cohort and approximately seven weeks after beginning services among fathers in the evening cohort.

**Table III.3. Measures used to address implementation research questions**

Implementation element	Research question	Measures
Intervention Characteristics	What are the mechanisms of impact (i.e., the key factors that promote positive change) in the STEPS League of Extraordinary Fathers programs, specific to men’s engaged fatherhood, healthy partnerships, and economic stability?	<p>Sample Focus Group Questions for Fathers:</p> <ol style="list-style-type: none"> <li>1. Are there any parts of the program that you think really touched on [engaged fatherhood, healthy relationships, economic stability] and helped you to do so?</li> <li>2. Did the program touch on any challenges in your goals to become a more [engaged father, partner, provider]?                             <ol style="list-style-type: none"> <li>a) If yes, describe those aspects of the program</li> <li>b) If no, what would have been helpful for the program to cover?</li> </ol> </li> </ol> <p>Sample Focus Group Questions for STEPS Staff:</p> <ol style="list-style-type: none"> <li>1. Describe how you promote [engaged fatherhood, healthy relationships, economic stability] in your role in the program a. What about these things are important to really make a difference in [parenting, healthy partnerships, economic stability]?</li> <li>2. Does the program address any challenges/barriers you observed from fathers in any way?                             <ol style="list-style-type: none"> <li>a) If yes, describe those aspects of the program</li> <li>b) If no, how could they be addressed in the program?</li> </ol> </li> </ol> <p>Sample Interview Questions for Fatherhood Support Mentor:</p> <ol style="list-style-type: none"> <li>1. What were the primary activities you carried out as a mentor for STEPS?</li> <li>2. What about mentoring was most important to improving relational health for fathers?</li> <li>3. What were the biggest challenges to supporting relational health for fathers as a mentor?</li> </ol>
Context	What are the strengths and barriers/challenges (i.e., risk factors) to engaged fatherhood, healthy partnerships, and economic stability for fathers enrolled in the program?	<p>Sample Focus Group Questions for Fathers:</p> <ol style="list-style-type: none"> <li>1. What are your greatest strengths as a [father, partner, provider]?</li> <li>2. Have you faced any challenges in your goals to become a more [engaged father, partner, provider]?</li> </ol>
Context	Do the men in high-risk subgroups (i.e., fathers who reported intimate partner violence perpetration or child maltreatment) differ in their report of mechanisms of impact?	<p>Thematic findings from Research Question 1 of Implementation Study</p> <p>Self-Report Items on IPV perpetration or child maltreatment</p> <ul style="list-style-type: none"> <li>• 6-items drawn and adapted from the Conflict Tactics Scale (Straus et al., 1996)</li> <li>• HITS Domestic Violence Screening Tool (Sherin et al., 1998)</li> <li>• Reported that their child was removed from the home</li> </ul>

Note: IPV = intimate partner violence; HITS = Hurts, Insults, Threatens, and Screams

## **D. Data collection**

This section describes how data was obtained from the participants in the evaluation.

### **1. Impact data collection**

The impact data collection relied on two data sources, the local evaluation survey and the nFORM survey. Participants completed the local evaluation survey at three time points: Baseline (pre-intervention services), Program Exit (completion of services-as-usual), and Six-Month Follow-Up. The nFORM survey was completed at two time points: Baseline (pre-intervention services) and Program Exit (post-services-as-usual). Across all three time points, surveys with closed-ended questions were the mode of data collection.

The procedures for data collection were as follows. Both sources of data at Baseline and Program Exit were collected by the program staff, and Six-Month Follow-Up was collected by the evaluation staff. The data collection window for each time point was one month, after which data collection was no longer pursued. If a father completed a survey outside of this one-month window, then we did not retain the data. The one-month window used to establish distinction between time points, while also allowing for flexibility in data collection given the challenging life circumstances of participants. In order to enhance the visibility of the evaluation team to promote survey completion at Six-Month Follow-Up, all participants received monthly outreach from the evaluation team in the form of text or email from the point of enrollment (for a total of 7). The outreach materials were co-developed with Community Scholars (fathers who shared lived experiences with the study participants) to enhance relatability, such as personal anecdotes, positive and affirming messages, and reminders of upcoming surveys at Program Exit and Six-Month Follow-Up. After noting higher attrition rates at Six-Month Follow-Up, recruitment protocols were adjusted. Specifically, if participants were non-responsive after at least 5 recruitment attempts by the evaluation staff for Six-Month Follow-Up, then data collection efforts were transitioned to the program staff to provide the survey link within the one-month collection period. These data collection modes and methods were the same across the intervention and comparison conditions. See Table B.1. in the Appendix for key features of data collection of the impact analysis.

### **2. Implementation data collection**

Semi-structured interviews with fathers (N = 26 across 7 focus groups) and staff (N = 8 across 2 focus groups; N = 1 interview) were conducted to address research questions 1-3 in the implementation study. Fathers who had completed approximately 75% of the services-as-usual program components were recruited following a regularly scheduled fatherhood session. The program facilitator described the opportunity to stay for the focus group and then left before the study staff conducted recruitment and informed consent procedures with the fathers. Fathers received a \$25 gift card for participation. Staff were recruited via email and did not receive an incentive. For research question 3, self-reported survey items and data from program records were used to stratify the sample of fathers post-hoc into a high-risk group (i.e., fathers who selected items indicating a history of intimate partner violence perpetration on the local evaluation survey or for whom program data indicated a history of intimate partner violence or child maltreatment via program data) and a no-risk group to examine differences across qualitative findings. See Appendix Table B.2 for data collection specific details.

## **IV. Analytic methods**

This chapter describes how the sample was constructed for the main impact analysis, how equivalence of the treatment and comparison groups was assessed at Baseline, Program Exit, and Six-Month Follow Up, sample characteristics and covariate selection, and the estimation approaches used to address the primary and secondary research questions.

### **A. Analytic sample**

Cases that had enrolled into the local evaluation study, but did not complete any survey items were dropped from the analytic sample; however, any cases with partial data were retained resulting in an analytic sample

size of N = 306 at baseline. A small number of outcomes relied on the nFORM data, which had partial or full data for N = 329 participants at baseline. Only one participant withdrew from the study and data from this case was dropped from the analytic sample. Regardless of survey completion at any time point, participants were recruited to complete both the Program Exit and Six-Month Follow-Up survey waves to maximize data for the impact analysis. Using linear mixed modeling (see section IV.C), we employed a statistical approach to estimating the model parameters (e.g. intercepts, slopes) termed restricted maximum likelihood (REML). REML effectively handles missing data (Hancock et al., 2019). This statistical approach uses all available observations, rather than excluding individual cases with missing data. The missing data under REML estimation is also based on the practical “missing at random” assumption where the reason some observations are missing is related to other known information in the data, but not to the missing observations themselves. This allowed us to utilize an analytic sample size of N = 306 for the majority of the outcomes and N = 329 for four outcomes (see Tables IV.1 and the Appendix CONSORT Diagram for further details).

For Program Exit, the overall attrition rate was 32% with a differential attrition (i.e., difference in attrition rates between treatment and comparison groups) of 1.4%. At the Six-Month Follow-Up, the overall attrition was 35% with a differential attrition of 5.9%. According to the What Works Clearinghouse (WWC, 2022), attrition standards that were developed using educational research, the Program Exit attrition rates provide no cause for concern, and the Six-Month Follow-Up rates marginally exceed the conservative attrition standards. Since the attrition rates at the Program Exit are well below conservative attrition standards and the Six Month Follow-Up attrition rate only marginally exceeds the conservative attrition standards and is well below the liberal attrition standards, we consider the current study’s attrition to be acceptable. We adopted the use of the liberal attrition standards set forth by the WWC.

## **B. Baseline equivalence and sample characteristics**

### Sample Characteristics

Fathers in both the intervention and comparison group were predominantly Black men with a high school degree with a history of incarceration averaging over 2.5 years, with most fathers reporting a mode of 90 (intervention group) to 120 (comparison group) days (See Table IV.2a). About a quarter of the fathers had some college, and less than 10% had a college degree. Most fathers were never married, with children aged 4 years, averaged across all children. Fathers in both groups reported approximately 6 adverse childhood experiences using a combined measure of the original ten ACEs of household dysfunction and child abuse and neglect, and “extended” ACEs that have been validated with racial/ethnic minority populations, such as feeling unsafe in one’s neighborhood, living in foster care, bullying, etc. (see Cronholm et al., 2015). Together, these measures had a theoretical range 0–16. This suggests fathers had experienced high levels of trauma in childhood (Swedo et al., 2023). About half of fathers endorsed either physical or psychological IPV perpetration with a current or recent partner.

### Equivalence

Equivalence of the study sample was assessed at Baseline, using independent sample t-tests and Chi-square tests, depending on the variable. We also examined the experimental groups’ equivalence at each follow-up point to evaluate compositional changes due to study attrition. Equivalence tests at all three time points (Baseline, Program Exit, Six Month Follow-Up) did not show any statistically significant differences (at a threshold of <.05) between the two experimental groups on demographic variables (age, race, education level, marital status, child age, incarceration time, ACES score or rate of IPV perpetration; see Table IV.2a–c); therefore no statistical adjustment was required. One difference did emerge related to conflict scores; notably, this was not a primary outcome of interest and had a very small sample size.

### Covariates

Theoretical and empirically validated potential covariates (e.g., adverse childhood experiences, incarceration history) were included in data collection as an added safeguard to potentially include in the final models if

equivalence across groups was not established. After examining equivalence at each time point, no significant differences emerged across groups (except for conflict scores, as discussed in the previous paragraph) and therefore did not warrant the inclusion of covariates to control for differences. However, the lived experience of socioeconomically disadvantaged fathers in the study of relational health and secondary outcomes (including fathering, healthy relationships, and economic stability) is theoretically justified and, thus, we included the following covariates in each model for the primary and secondary analyses: age, race, and education (see Table IV.3).

### C. Estimation approach for primary analyses

#### Modeling Approach

For the primary analyses addressing research questions 1 and 2, a linear mixed model (LMM) was used to investigate changes in our repeated measures outcomes across three time points. LMM allows us to extend standard linear regression for our repeated measures data. That is, LMM allows us to model correlations across the three time points within each individual on each outcome, handle missing data, and adjust for potential confounding. As noted before, REML is a commonly used method for dealing with missing data under practical study assumptions of missing observations that are “missing at random”. REML is also more suitable for smaller sample sizes than other methods, protecting against inflated Type I error rates (Hancock, Stapleton, & Mueller, 2019; McNeish, 2017). Thus, REML is a good method for addressing missing data from attrition in our study.

In a mixed effects model, **fixed effects** are the main variables of focus, and **random effects** account for variation across individuals that influence the results. Fixed effects (similar to slope parameters in standard linear regression) for time, group, and a time by group interaction and covariates were included in the analysis. Time was treated as a categorical variable to allow for flexible estimation of mean differences over time across the three time points. A random effect for the intercept was included in the model, allowing all individuals to have their own baseline starting point and enabling the model to account for natural differences in starting levels across individuals.

To assess the statistical significance of fixed effects using two-tailed tests, degrees of freedom were approximated using Satterthwaite’s method for t-tests. This approach provides a more accurate estimation of standard errors in the presence of missing data. Model assumptions were evaluated through residual diagnostics, confirming the appropriateness of the model.

For primary analyses research question 2, the sample was stratified by intimate partner violence (IPV) into a “No IPV” sample and an “IPV” sample. The linear mixed model was used to estimate changes over time for both samples, and differences in outcome means were examined across each set of analyses.

Post-hoc analyses were performed using The Benjamini-Hochberg (BH) procedure to control for the False Discovery Rate (FDR) when doing multiple hypothesis tests. The FDR is the expected proportion of false positives among the rejected hypotheses. This test was chosen to control for too many false positives while also increasing power, compared to more restrictive tests like Bonferroni.

#### Model Specification

To answer primary analyses research questions 1 and 2, we modeled relational health using seven outcomes (see Table III.1). All outcomes had excellent reliability. In these models, the independent variable was “treatment group” (1 = services-as-usual and mentoring, 0 = services-as-usual), with services-as-usual serving as the reference group, accounting for correlated repeated measures, missing data, and potential confounding variables (see Table IV.3). The aim of this study was to examine whether (1) the estimated effect of the program components was statistically significantly greater at Program Exit compared to Baseline, and whether (2) the added component of mentoring resulted in statistically significant additive effect at Program Exit and (3) sustained effects at Six-Month Follow-Up compared to the effect of the comparison condition.

As a result, we tested whether the differences in outcome means between the intervention and comparison groups were statistically significantly different from zero across time points (via the time by group interaction term in the mixed model). Due to the controversial debate on the use of multiple test corrections, with previous standards suggesting the application to reduce Type II error rate and emerging standards suggesting no application to guard against Type I error rate (Liu, 2022), we chose to apply a correction for multiple hypotheses tests and to include a more liberal p-value to guard against Type I error rate. Specifically, all impact and secondary findings were considered statistically significant based on the adjusted p-values, if those values fell at or below the levels of  $p < .05$  or  $p < .10$ .

**Table IV.1 Individual sample sizes by intervention status**

Number of individuals	Intervention sample size	Comparison sample size	Total sample size	Total response rate	Intervention response rate	Comparison response rate
Assigned to condition	165	164	329	n.a.	n.a.	n.a.
Contributed to Baseline survey	155	151	306	93.0%	93.9%	92.1%
<b>Contributed to the First follow-up survey (Program Exit):</b> within one month after the program exit	<b>113</b>	<b>110</b>	<b>223</b>	<b>67.8%</b>	<b>68.5%</b>	<b>67.1%</b>
<b>Contributed to the first follow-up outcomes</b>						
Fathering self-efficacy	113	110	223	67.8%	68.5%	67.1%
Social Network Score	111	107	218	66.3%	67.3%	65.2%
Sense of Belonging - Empowerment	112	107	219	66.6%	67.9%	65.2%
Sense of Belonging - Engagement	112	107	219	66.6%	67.9%	65.2%
Broad/Formal Social Support	111	107	218	66.3%	67.3%	65.2%
Number of Individuals to Count On	111	107	218	66.3%	67.3%	65.2%
Number of Role Models	111	107	218	66.3%	67.3%	65.2%
Barriers	111	107	218	66.3%	67.3%	65.2%
Healthy relationship index <sup>a</sup>	15	17	32	9.7%	9.1%	10.4%
Parenting attitudes about relationship with child <sup>b</sup>						
Closeness subscale	62	69	131	39.8%	37.6%	42.1%
Conflict subscale	62	69	131	39.8%	37.6%	42.1%
Co-parenting	69	78	147	44.7%	41.8%	47.6%
Child support yes <sup>c</sup>	63	56	119	36.2%	38.2%	34.1%
Child support efforts	113	110	223	67.8%	68.5%	67.1%

Employment	70	82	152	46.2%	42.4%	50.0%
Job readiness <sup>†</sup>	66	70	136	41.3%	40.0%	42.7%
Challenge paying bills <sup>†</sup>	77	85	162	49.2%	46.7%	51.8%
<b>Contributed to the second follow-up survey (Six Month Follow-Up): within six months after program exit</b>	<b>101</b>	<b>110</b>	<b>211</b>	<b>64.1%</b>	<b>61.2%</b>	<b>67.1%</b>
<b>Contributed to the second follow-up outcomes</b>						
Fathering self-efficacy	100	104	204	62.0%	60.6%	63.4%
Social Network Score	99	101	200	60.8%	60.0%	61.6%
Sense of Belonging - Empowerment	98	103	201	61.1%	59.4%	62.8%
Sense of Belonging - Engagement	98	103	201	61.1%	59.4%	62.8%
Broad/Formal Social Support	99	101	200	60.8%	60.0%	61.6%
Number of Individuals to Count On	98	101	199	60.5%	59.4%	61.6%
Number of Role Models	99	101	200	60.8%	60.0%	61.6%
Passages Support	98	103	201	61.1%	59.4%	62.8%
Barriers	99	100	199	60.5%	60.0%	61.0%
Child support yes	50	61	111	33.7%	30.3%	37.2%
Child support efforts	50	61	111	33.7%	30.3%	37.2%
Employment	101	110	211	64.1%	61.2%	67.1%
Challenge paying bills	101	110	211	64.1%	61.2%	67.1%

Notes: The original comparison sample size was 165, but one participant withdrew before data collection ended, reducing the final sample to 164.

<sup>a</sup> The healthy relationship index required a response from three items (2 on the local survey, 1 on nFORM) and only applies to fathers in an intact romantic relationship  
n.a. = not applicable. <sup>†</sup>These outcomes relied on nFORM data as the source and response rates were computed using a sample size of N = 329.

**Table IV.2a Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing the Baseline survey**

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Age	36.79	9.42	38.33	9.15	1.54	0.14	0.17
Race	<i>N</i> (%)		<i>N</i> (%)				
Black	115 (69.7%)		108 (65.9%)				
White	21 (12.7%)		25 (15.2%)				
AI/AN	7 (4.2%)		6 (3.7%)				
Asian	1 (0.6%)		0 (0%)				
NH/PI	1 (0.6%)		3 (1.8%)		n.a.		
Other	18 (10.9%)	n.a.	18 (11.0%)	n.a.		0.76 <sup>a</sup>	n.a.
Education Level	<i>N</i> (%)		<i>N</i> (%)				
No Degree	22 (13.3%)		21 (12.8%)				
High School	83 (50.3%)		89 (54.3%)				
Some College	44 (26.7%)		39 (23.8%)		n.a.		
College Degree	16 (9.7%)	n.a.	15 (9.1%)	n.a.		0.91 <sup>a</sup>	n.a.
Marital Status	<i>N</i> (%)		<i>N</i> (%)				
Married	27 (16.4%)		22 (13.4%)				
Engaged	6 (3.6%)		7 (4.3%)				
Separated	18 (10.9%)		13 (7.9%)				
Divorced	20 (12.1%)		21 (12.8%)		n.a.		
Never Married	94 (57.0%)	n.a.	100 (61.0%)	n.a.		0.81 <sup>a</sup>	n.a.
Average Child Age (All children reported on)	4.30	3.18	4.33	4.14	0.03	0.43	
Incarceration Time (in days)	951.84	1,694.50	1,043.00	149.04	91.16	0.33	0.05
ACES	6.39	3.75	6.75	3.75	0.35	0.88	0.09
IPV Perpetration	0.57	0.50	0.47	0.50	-0.10	0.08 <sup>a</sup>	-0.20

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
<b>Baseline measure of outcome</b>							
Fathering self-efficacy	37.39	9.07	39.50	9.29	-2.12	0.05	0.23
Social Network Score	11.43	6.77	11.78	6.74	-0.34	0.65	0.05
Sense of Belonging - Empowerment	3.20	1.06	3.34	1.13	-0.14	0.26	0.13
Sense of Belonging - Engagement	3.15	1.14	3.22	1.18	-0.07	0.62	0.06
Broad/Formal Social Support	6.04	6.34	5.07	6.14	0.97	0.18	-0.16
Number of Individuals to Count On	3.98	3.52	4.51	3.79	-0.53	0.21	0.15
Number of Role Models	2.41	2.43	2.72	2.56	-0.31	0.29	0.12
Barriers	2.85	1.93	2.75	2.07	0.10	0.66	-0.05
Healthy relationship index	-0.08	2.42	0.23	2.26	-0.30	0.46	0.13
Parenting attitudes about relationship with child							
Closeness subscale	13.75	1.42	14.03	1.18	-0.29	0.88	0.22
Conflict subscale	6.27	2.24	5.61	1.65	0.66	0.01	-0.34
Co-parenting	31.96	11.05	31.80	11.17	0.16	0.90	-0.10
Child Support Arrangement							
No	35(43.2%)		43(50%)				
Yes	46(56.8%)		43(50%)		0.38		
Child support efforts	0.41	0.65	0.53	0.66	-0.13	0.21	0.19
Employment							
Unemployed	61(39.4%)		56(36.6%)				

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Employed	94(60.6%)		97(63.4%)			0.62	
Job readiness	15.95	2.50	16.12	2.26	-0.17	0.92	0.07
Challenge paying bills	2.48	1.01	2.50	1.05	-0.02	0.50	0.02
Sample size	164	n.a.	165	n.a.	n.a.	n.a.	n.a.

*Notes:* t-tests reported unless otherwise noted (<sup>a</sup>Chi-square). Effect sizes are calculated using Cohen's d formula. n.a. = not applicable. AI/AN = American Indian Alaska Native. NH/PI = Native Hawaiian Pacific Islander.

Table IV.2b Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing the Program Exit survey

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Age	36.60	8.74	38.51	9.47	1.917	0.116	0.21
Race	<i>N (%)</i>		<i>N (%)</i>				
Black	80 (70.80%)		77 (70.64%)				
White	15 (13.27%)		15 (13.76%)				
AI/AN	6 (5.31%)		4 (3.67%)				
Asian	1 (0.88%)		0				
NH/PI	0		3 (2.75%)				
Other	11 (9.73%)	n.a.	10 (9.17%)	n.a.	n.a.	0.489 <sup>a</sup>	n.a.
Education Level	<i>N (%)</i>		<i>N (%)</i>				
No Degree	59 (51.75%)		57 (50.89%)				
High School	14 (12.28%)		15 (13.39%)				
Some College	29 (25.44%)		26 (23.21%)				
College Degree	12 (10.53%)	n.a.	14 (12.50%)	n.a.	n.a.	0.947 <sup>a</sup>	n.a.
Marital Status	<i>N (%)</i>		<i>N (%)</i>				
Married	13 (16.67%)		14 (16.47%)				
Engaged	2 (2.56%)		3 (3.53%)				
Separated	10 (12.82%)		3 (3.53%)				
Divorced	10 (12.82%)		10 (11.76%)				
Never Married	43 (55.13%)	n.a.	55 (64.70%)	n.a.	n.a.	0.269 <sup>a</sup>	n.a.
Child Age	4.37	3.40	4.29	4.34	-0.079	0.883	-0.021
Incarceration Time (in days)	809.43	1257.89	992.95	1706.14	183.52	0.381	0.146
ACES	6.55	3.67	6.40	3.72	-0.15	0.767	-0.041
IPV Perpetration	64 (58.18%)	n.a.	49 (46.67%)	n.a.	n.a.	0.091 <sup>a</sup>	n.a.
<b>Baseline measure of outcome</b>							

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Fathering self-efficacy	40.10	9.12	41.83	7.45	1.73	0.123	0.207
Social Network Score	11.56	6.25	12.27	6.51	0.71	0.410	0.112
Sense of Belonging - Empowerment	18.94	4.98	19.46	4.56	0.52	0.422	0.109
Sense of Belonging - Engagement	18.61	5.80	19.12	5.41	0.51	0.499	0.092
Broad/Formal Social Support	8.23	6.53	8.54	7.39	1.31	0.718	0.049
Number of Individuals to Count On	4.84	3.50	5.74	3.89	0.90	0.074	0.243
Number of Role Models	3.00	2.35	3.50	2.72	0.50	0.152	0.195
Barriers	2.27	1.66	2.41	1.80	0.14	0.548	0.082
Healthy relationship index	-0.06	1.84	-0.02	1.31	0.04	0.948	0.023
Parenting attitudes about relationship with child							
Closeness subscale	13.73	1.47	14.14	1.45	0.41	0.110	0.282
Conflict subscale	5.98	1.88	5.67	1.80	-0.31	0.338	-0.168
Co-parenting	30.20	10.17	30.94	9.97	0.73	0.660	0.073
Child support yes	38 (60.32%)	n.a.	32 (57.14%)	n.a.	n.a.	0.725 <sup>a</sup>	n.a.
Child support efforts	0.41	0.64	0.59	0.83	0.18	0.192	0.241
Employment	73 (76.71%)	n.a.	57 (68.67%)	n.a.	n.a.	0.262 <sup>a</sup>	n.a.
Job readiness	16.33	2.16	16.37	2.03	0.04	0.916	0.018
Challenge paying bills	2.26	1.00	2.36	0.99	0.10	0.504	0.106
Sample size	114	n.a.	112	n.a.	n.a.	n.a.	n.a.

Notes: t-tests reported unless otherwise noted (<sup>a</sup>Chi-square). Effect sizes are calculated using Cohen's d formula. n.a. = not applicable. AI/AN = American Indian Alaska Native. NH/PI = Native Hawaiian Pacific Islander.

**Table IV.2c Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing the Six-Month Follow-Up survey**

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Age	37.52	9.54	38.38	8.85	0.86	0.498	0.093
Race	<i>N (%)</i>		<i>N (%)</i>				
Black	70 (70.71%)		70 (65.42%)				
White	14 (14.14%)		17 (15.89%)				
AI/AN	4 (4.04%)		5 (4.67%)				
Asian	0		0				
NH/PI	0		3 (2.80%)				
Other	11 (11.11%)	n.a.	12 (11.21%)	n.a.	n.a.	0.535 <sup>a</sup>	n.a.
Education Level	<i>N (%)</i>		<i>N (%)</i>				
No Degree	51 (51.00%)		53 (47.75%)				
High School	9 (9.00%)		16 (14.41%)				
Some College	27 (27.00%)		28 (25.22%)				
College Degree	13 (13.00%)	n.a.	14 (12.61%)	n.a.	n.a.	0.686 <sup>a</sup>	n.a.
Marital Status	<i>N (%)</i>	n.a.	<i>N (%)</i>	n.a.	n.a.	0.686 <sup>a</sup>	n.a.
Child Age	4.58	3.69	4.18	3.36	-0.39	0.439	-0.111
Incarceration Time (in days)	879.02	1528.24	1083.03	1869.52	204.01	0.411	0.119
ACES	6.48	3.73	6.58	3.75	0.10	0.849	0.027
IPV Perpetration	60 (61.86%)	n.a.	53 (50.00%)	n.a.	n.a.	0.089 <sup>a</sup>	n.a.
<b>Baseline measure of outcome</b>							
Fathering self-efficacy	40.48	8.04	41.26	7.99	0.78	0.492	0.097
Social Network Score	11.41	6.79	12.41	11.02	1.00	0.308	0.145
Sense of Belonging - Empowerment	3.53	0.90	3.70	1.02	0.17	0.221	0.174
Sense of Belonging - Engagement	3.49	1.01	3.64	1.12	0.15	0.328	0.139

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Intervention and comparison difference in means	p-value of test of difference in means	Effect size
Broad/Formal Social Support	8.01	6.70	8.57	6.75	0.56	0.559	0.083
Number of Individuals to Count On	4.76	3.80	4.99	3.24	0.23	0.652	0.064
Number of Role Models	2.85	2.50	2.95	2.16	0.10	0.757	0.044
Barriers	2.30	1.76	2.17	1.92	-0.12	0.636	-0.067
Child support yes	35 (71.43%)	n.a.	41 (67.21%)	n.a.	n.a.	0.634 <sup>a</sup>	n.a.
Child support efforts	0.45	0.84	0.41	0.72	-0.04	0.793	-0.051
Employment	71 (76.34%)	n.a.	73 (68.87)	n.a.	n.a.	0.239	n.a.
Challenge paying bills	2.36	0.96	2.29	1.06	-0.07	0.637 <sup>a</sup>	-0.065
Sample size	100	n.a.	111	n.a.	n.a.	n.a.	n.a.

Notes: t-tests reported unless otherwise noted (<sup>a</sup>Chi-square). Effect sizes are calculated using Cohen's d formula. n.a. = not applicable. AI/AN = American Indian Alaska Native. NH/PI = Native Hawaiian Pacific Islander.

#### **D. Implementation analyses**

##### Research Questions 1 and 2

Using a three-person coding team, we used thematic analysis to identify, analyze, and report themes or patterns in the dataset relevant to each research question among the implementation analyses (Braun & Clarke, 2006). The three-coder team completed each stage of data analysis using Dedoose, a web-based qualitative analysis software. The coding structure was systematically vetted by a third coder and three Community Scholars. Community Scholars were low-income, Black fathers who previously participated in fatherhood programming at the focal site, who were hired to ensure the study findings were closely tied to the lived experience of participants. At the final stage of analysis, a visually-depicted thematic coding structure was developed and vetted until consensus was reached. The use of a three-person coding team and the systematic vetting by Community Scholars, we enhanced the study's rigor through the use of triangulation (Johnson, Adkins, & Chauvin, 2020) and increasing trustworthiness by centering the community perspective in our analysis (Cresswell & Poth, 2018). For research question 1 among the implementation analyses, data from fathers and staff were analyzed together initially and then each theme and subtheme of the final structure was re-examined for congruence or divergence between fathers and staff. For research question 2 among the implementation analyses, only father focus group transcripts were analyzed.

##### Research Question 3

We used a mixed methods convergence design (Creswell, 2021) where qualitative data and quantitative data are merged to compare and draw inferences to answer Research Question 3 of the implementation analyses. Using the thematic structure derived from Implementation Research Question 1, we stratified excerpts into two groups using quantitative data: fathers reporting high-risk backgrounds and fathers who did not report high-risk backgrounds related to intimate partner violence and child maltreatment perpetration. A three-coder team using a joint-display re-examined the excerpts associated with the coding structure across these two groups to identify if any patterns emerged indicating differences. Specifically, we created a table grouping excerpts from fathers from the high-risk in one section and excerpts from fathers in the no-risk group in another section, across the thematic structure. We re-examined these excerpts within and across groups to identify patterns indicating differences in the mechanisms of impact. A three-coder team completed each stage of data analysis, with two coders examining patterns in the data separately and subsequently coming together for consensus, and the third coder reviewing and vetting the coding patterns developed by the two-coder team, and, finally, coming to consensus across all coders.

**Table IV.3. Covariates included in the impact analyses**

Covariate	Description of the covariate
Age	At Baseline, participants reported age (in years).
Race	At Baseline, participants reported race (Black = reference group, 1 = White, 2 = American Indian or Alaska Native, 3 = Asian, 4 = Native Hawaiian or other Pacific Islander, 5 = Other).
Education	At Baseline, participants reported the highest level of education achieved (high school diploma = reference, 1 = no degree, 2 = some college, 3 = college degree [certification, associates, bachelors, masters, graduate]).

## **E. Sensitivity analyses**

No sensitivity analyses were conducted.

## **F. Secondary analyses**

### Modeling Approach

For Research Question 1 among the secondary analysis, an LMM was used (described in Section IV.C) for all outcomes with three time points.

Research Question 2 among the secondary analysis examines outcomes with only two time points; therefore, we used a linear multiple regression model. For outcomes with only two time points, we calculated the difference on the outcome scores across the two time points for each individual and used this as the dependent variable. This model incorporates an intercept to capture the average difference across time conditional on model covariates. We include a binary intervention variable while controlling for key covariates: age, race, and education. By adjusting for these factors, we isolate the effect of the intervention on the outcome, reducing potential confounding and improving the accuracy of our estimates. Because this is a simpler modeling technique, we were not able to use REML with multiple linear regression and therefore relied on cases with complete data which reduced the analytic sample size for each outcome (i.e., difficulty paying bills, employment, job readiness, parent-child closeness and conflict, coparenting, and relationship quality, see Table IV.1).

For research question 3 among the secondary analysis, the sample was stratified by intimate partner violence (IPV) into a “No IPV” sample and an “IPV” sample. The LMM was used to estimate changes over three time points for both samples, and differences were examined across each set of analyses.

### Model Specification

To answer research questions 1-3 in the secondary analysis, we examined barriers using 1 outcome; fathering using 4 outcomes; quality of romantic relationships using 1 outcome; and economic stability using 3 outcomes (see Table III.2). All measures fell in the range of good (above .8) to excellent (above .9) reliability, except for the parent-child closeness and parent-child conflict that were questionable (above .6) that was retained but interpreted with caution.

In these models, the main independent variable was “treatment group” (1 = services-as-usual and mentoring, 0 = services-as-usual), with services-as-usual serving as the reference group, controlling for time correlated repeated measures, missing data, and potential confounding variables (see Table IV.3) in the LMM and potential confounding variables in the multiple regression models. The aim of this study was to examine whether (1) the estimated effect of the program components was statistically significantly greater at Program Exit compared to Baseline, and whether (2) the added component of mentoring resulted in statistically significant additive effect at Program Exit and (3) sustained effects at Six-Month Follow-Up compared to the effect of the comparison condition. As a result, we tested whether the differences in outcome means between the intervention and comparison groups were statistically significantly different from zero across time points. Findings were considered statistically significant based on  $p < .05$ . Given the lack of previous research examining the moderating effect of fathers’ IPV history on treatment effects, any findings that were significant based on  $p < .10$  were reported as significant.

## V. Findings

This chapter describes the key findings of the impact and implementation studies, organized by key findings following from the research questions.

### A. Results of the primary impact evaluation

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#### Key Findings Primary Analyses (RQ1)

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- **Fathers in both study groups experienced gains in relational health from Baseline to Program Exit**
  - **Mentoring did not have an additive effect on relational health, over and above the effects of services as usual, at Program Exit**
  - **Mentoring after Program Exit did not statistically significantly change relational health scores at Six-Month Follow-Up, suggesting no maintenance effect**
- 

Study findings from the primary analyses show that fathers increased on measures of **relational health** from Baseline to Program Exit regardless of whether they received mentoring. The potential additive effect of mentoring did not result in significantly different changes in relational health among fathers, above and beyond the gains resulting from services-as-usual, from Baseline to Program Exit. Additionally, continued mentoring for fathers in the treatment group resulted in no changes in relational health from Program Exit to the Six-Month Follow-Up, suggesting that mentoring was not robust enough to provide maintenance effects for relational health outcomes. See Tables V.1a1 and V.1a2. Examining the differences in slopes in Figure 2 suggests that fathers receiving mentoring may have experienced a buffering effect to treatment losses between Program Exit to Six-Month Follow-Up for self-efficacy, the number of people fathers could count on, and broad social support, though these effects did not reach statistical significance.

**Self-efficacy** among fathers in the study increased, with fathers in the comparison group reporting an average change of 2.02 (SE = 0.87) points from Baseline to Program Exit. This is a descriptive finding that indicates that fathers who were offered services as usual moved on a favorable trajectory. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. When examining post-hoc tests of differences in means over time within the comparison and intervention (added mentoring) groups, findings reveal that fathers receiving mentoring had greater changes in self-efficacy scores from Baseline to Program Exit by 2.78 (SE = .86) points ( $t(456) = 3.25$ ,  $p < .10$ ) than did those fathers in the comparison group. There were no significant differences in change over time on self-efficacy between groups from Baseline to Program Exit. Though fathers who received the additional mentoring component appear to maintain or even improve in self-efficacy after services-as-usual (Program Exit to Six-Month Follow-Up, see Figure 2), this interaction was not statistically significant. Together, these results suggest that fathers receiving services-as-usual increased in self-efficacy, but mentoring did not provide additive effects to services-as-usual.

Fathers' **broad social support** (including formal and informal support, other than family and close friends) among fathers in the study increased, with fathers in the comparison group reporting an average change of 3.26 (SE = 0.65) points from Baseline to Program Exit. This finding can be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. There were no differences on broad social support between groups from Baseline to Program Exit. When examining post-hoc tests of differences in means over time within groups, fathers receiving the additive component of mentoring increased broad social support scores from Baseline to Program Exit by 2.24 (SE = .64) points ( $t(464) = 4.98$ ,  $p < p.01$ ) and fathers receiving services-as-usual experienced an increase of 3.25 (SE = .65) points ( $t(460) = 3.49$ ,  $p < p.05$ ). Examining changes from Program Exit to Six-Month Follow-Up, we see that all fathers in the study reported an average additional .36 (SE = .72) points (for a total of 3.62, SE = 0.67, from

Baseline to Six Month Follow Up), and there were no differences between groups from Program Exit to Six-Month Follow-Up. The minimal changes in fathers' broad social support from Program Exit to Six-Month Follow-Up suggest that treatment effects were sustained six-months later, though these maintenance effects cannot be attributed to mentoring because group differences were not statistically significant from Program Exit to Six-Month Follow-Up. See Figure 2. Though not part our planned analysis, when examining mean differences from Baseline to Six-Month Follow-Up, there was a significant difference between groups regarding the additive component of mentoring: fathers in the added mentoring group reported an average of 2.04 (SE = .94) points change over time on broad social support, which was *lower* than fathers receiving services-as-usual ( $t(462) = -2.16, p < .05$ ). Examining post-hoc tests, fathers receiving the additive mentoring component reported an increase of 1.58 (SE = .67) points ( $t(466) = 2.36, p < .01$ .) from Baseline to Six-Month Follow-Up compared to fathers receiving services-as-usual reporting an increase of 3.61 (SE = .67) points ( $t(465) = 5.41, p = .33$ ). This suggests that the impact of mentoring on changes to removing barriers to social determinants of health over time may take longer (i.e., 6 months) to materialize.

**Empowerment** increased among fathers in the study, with fathers in the comparison group reporting an average change of over 16 points from Baseline to Program Exit. This is a descriptive finding that indicates the change over time for fathers offered services as usual. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. When examining post-hoc tests of differences in means over time within groups, fathers receiving the additive component of mentoring had significantly greater changes in empowerment scores from Baseline to Program Exit by 15.75 (SE = .32) points ( $t(490) = 49.11, p < .01$ ) and fathers receiving services-as-usual increased 16.06 (SE = .33) points ( $t(483) = 49.07, p < .01$ ). These numbers indicate no-between-group differences. The gains in empowerment were lost by the Six-Month Follow-Up, even for those fathers receiving mentoring services (see Figure 2). This suggests that fathers receiving services-as-usual increased in sense of empowerment, but continued mentoring after Program Exit did not support sustained effects of empowerment at Six-Month Follow-Up.

**Engagement** increased among fathers in the study, with fathers in the comparison group reporting an average change of nearly 16 points from Baseline to Program Exit. This is a descriptive finding, and we found no differences between groups. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. When examining post-hoc tests of differences in means over time within groups, no differences were found: fathers receiving the additive component of mentoring had experienced an increase in empowerment scores from Baseline to Program Exit by 15.48 (SE = .38) points, ( $t(492) = 41.36, p < .01$ ) and fathers receiving services-as-usual experienced an increase of 15.83 (SE = .38) points ( $t(485) = 41.18, p < .01$ ). The descriptive gains in empowerment were lost by the Six-Month Follow-Up, even for those fathers receiving mentoring services (see Figure 2). This suggests that fathers receiving services-as-usual increased in sense of engagement, but continued mentoring after Program Exit did not support sustained effects (i.e., maintenance) of engagement at Six-Month Follow-Up.

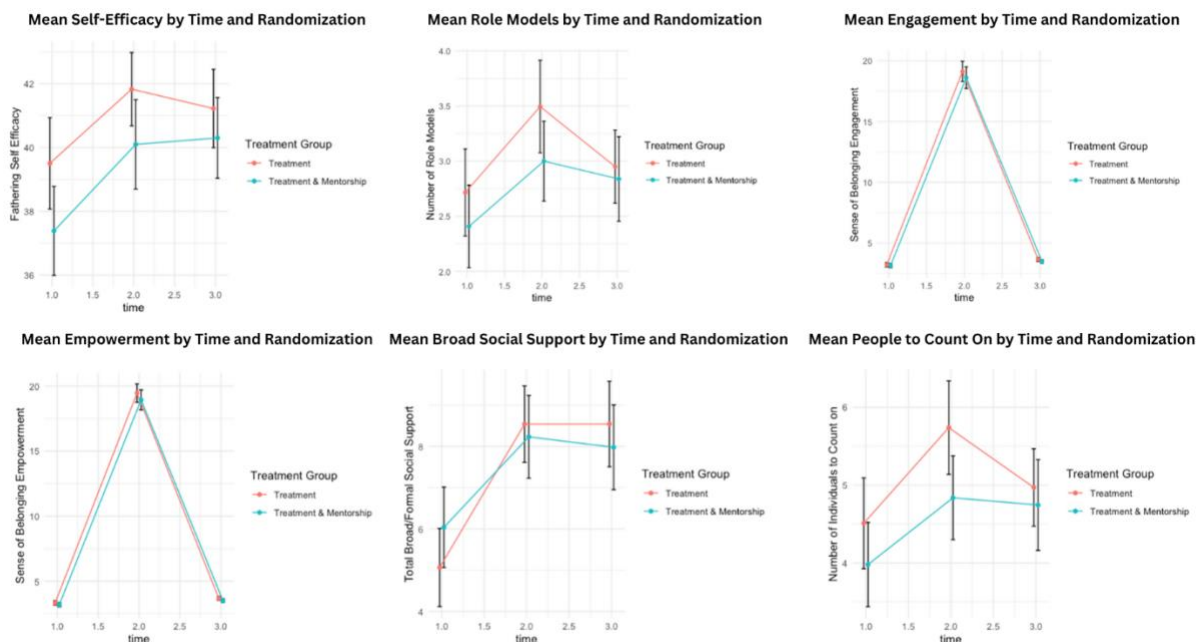
Among fathers in the study, **the number of people they felt they could count on** among fathers in the comparison group increased an average change of nearly 1 point ( $B = .96$  SE = .35) from Baseline to Program Exit, with no differences between groups. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. The changes from Baseline to Program Exit within each group were not significant. Though the decline in treatment gains from Program Exit to Six-Month Follow-Up appears to be more severe for the services-as-usual group (see Figure 2), there were no significant differences between or within groups from Program Exit to Six-Month Follow-Up suggesting mentoring provided no maintenance effects.

Fathers increased the number of **role models** they have over time for all fathers in the study, with fathers in the comparison group reporting an average change of .67 (SE = 0.25) points from Baseline to Program Exit, with no differences within or between groups. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. Though the decline in treatment gains from Program Exit to Six-Month Follow-Up appears to be more severe for the services-as-

usual group (see Figure 2), there were no differences between groups from Program Exit to Six-Month Follow-Up, suggesting mentoring provided no maintenance effects.

**Social network scores** did not change over time, suggesting that the program components had no influence on the number of family or close friends who the father sees or hears from, calls on regularly, or talks with about private matters. There were also no differences between fathers receiving additional mentoring compared to services-as-usual over time. Notably, the average number of friends and family members the father has connections with on a regular basis is just under 12 people (11.29, SE = 1.54), which is considered “socially isolated” using a clinical threshold, suggesting a potential area of need among low-income fathers.

**Figure 2. Mean differences of primary outcomes by time and randomization**



Note: Bars represent 95% confidence intervals. Scales differ across figures. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

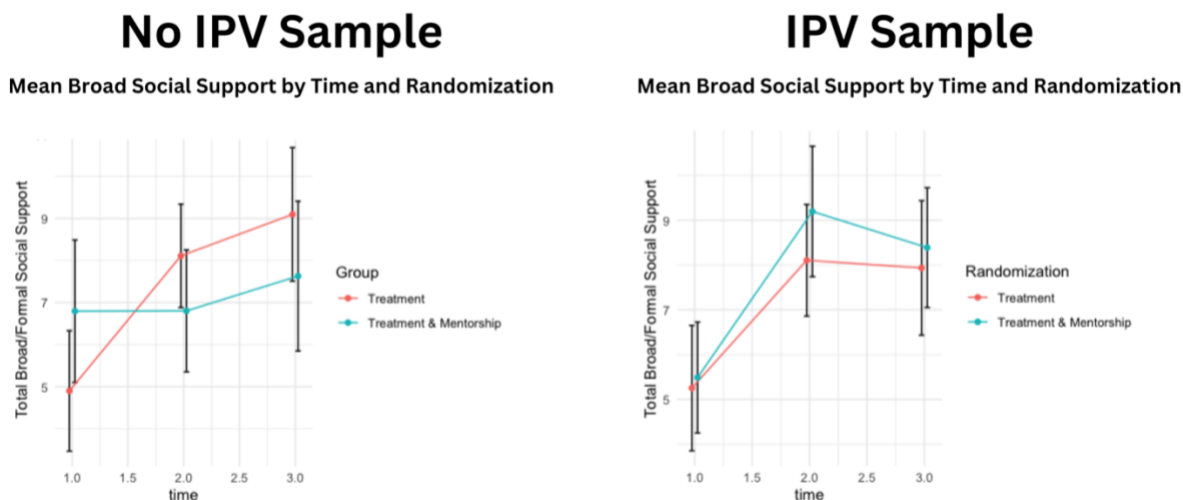
## Key Findings: Primary Analyses (RQ2)

- **Mentoring may be more helpful for fathers with higher-risk backgrounds for certain aspects of relational health, including broad social support and self-efficacy, but not for other forms of relational health (social network scores, the number of role models, the number of people they can count on, empowerment, and engagement)**

Among men with no history of IPV, the change in **broad social support** from Baseline to Program Exit was significantly different for fathers who received mentoring compared to fathers who did not receive mentoring—specifically, with these fathers increasing at a lower rate than fathers who received no mentoring. Their broad social support was an average of 3.34 points less (SE = 1.39,  $t(206) = -2.40$ ,  $p < .05$ ) than for the fathers in the services-as-usual group. When examining post-hoc tests of differences in means

from Baseline to Program Exit within groups, fathers in the services-as-usual group significantly increased their broader social network by an average of 3.35 (SE = .94,  $t(206) = -3.55$ ,  $p = .03$ ) points compared to fathers in the group with the additive mentoring component who did not report significant changes in broad social support. These differences were not evident for fathers with a history of IPV. Together, these findings suggest that mentoring may dampen the potential impact of treatment on increases in broader social networks (i.e., formal and informal supports) for fathers with no history of IPV. See Figure 3.

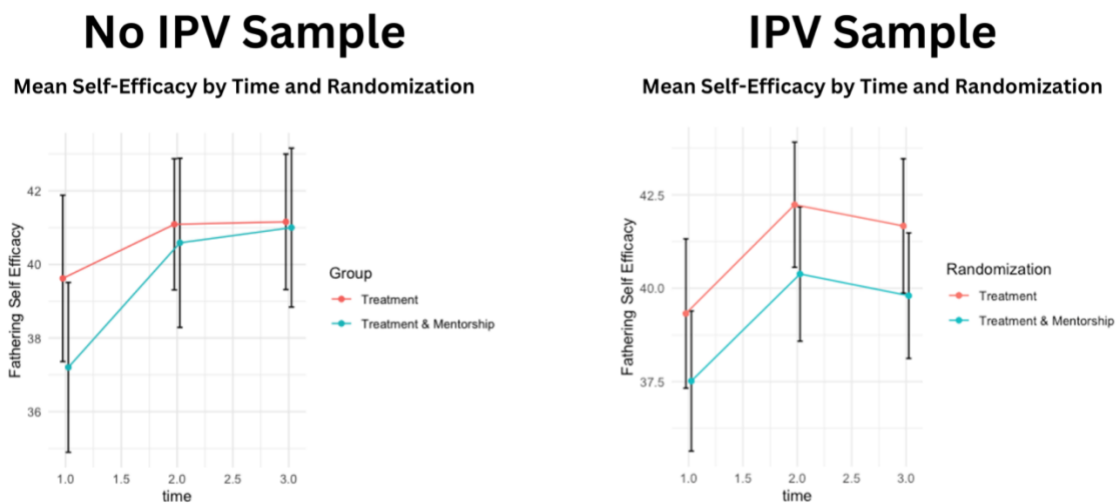
**Figure 3. Mean differences of broad social support by time and randomization across sub-samples**



Note: Bars represent 95% confidence intervals. Scales differ across figures. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

Men with a history of IPV experienced changes in their **self-efficacy**, and fathers with no reported history of IPV did not. Fathers with IPV histories increased self-efficacy scores from Baseline to Program Exit by an average of 2.02 (SE= .87,  $t(469) = 2.32$ ,  $p < .10$ ) points among the comparison group. It can also be thought of as the improvements that fathers in the intervention group would have experienced had they not received mentoring. Also, among fathers with a history of IPV, those receiving the added mentoring component reported a lower self-efficacy score at Baseline by 2.32 points (SE = .99,  $t(587) = -2.34$ ,  $p < .10$ ) compared to fathers receiving services-as-usual. Post-hoc tests show that fathers receiving the additive mentoring component had a significant increase in self-efficacy scores from Baseline to Program Exit by 2.78 points (SE = .86,  $t(465) = 3.25$ ,  $p < .10$ ) points compared to fathers with an IPV history receiving services as usual. There were no significant changes in self-efficacy among fathers with no IPV history. These findings suggest that services-as-usual and the added component of mentoring have a measurable effect on increasing self-efficacy over time among fathers with histories of IPV perpetration, but not with fathers who do not report IPV history. See Figure 4.

**Figure 4. Mean differences of self-efficacy by time and randomization across sub-samples**



Note: Bars represent 95% confidence intervals. Scales differ across figures. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

There were no statistically significant differences found for social network scores, the number of role models, the number of people they can count on, empowerment, and engagement for fathers with and without histories of IPV. This suggests that IPV is not a critical factor in the relation between treatment services and these outcomes.

**Table V.1a1. Differences in intervention estimated effects using data from Baseline to Program Exit to address primary research question 1**

Outcome measure	Differences in Intervention mean or %	Differences in Intervention standard error	Differences in Comparison mean or %	Differences in Comparison standard error	Differences in Intervention and comparison difference in means	p-value of test of differences of difference in means	Effect size
Fathering Self-Efficacy	2.78	0.86	2.02	0.87	0.76	0.53	.029
Sense of Belonging - Empowerment	15.75	0.32	16.06	0.33	-0.31	0.50	.030
Sense of Belonging - Engagement	15.48	0.38	15.83	0.38	-0.35	0.51	.029
Social Network Score	-.27	0.56	0.23	0.57	-0.51	0.53	.030
Broad/Formal Social Support	2.24	0.64	3.26	0.65	-1.01	0.27	.051
Number of Individuals to Count On	0.92	0.35	0.96	0.35	-0.04	0.93	.004
Number of Role Models	0.64	0.25	0.67	0.25	-0.03	0.93	.004

Source: Baseline and first follow-up surveys administered at services-as-usual completion.

Notes: Effect sizes are calculated using Hedges' g formula. See Table III.1 for a more detailed description of each measure and section IV.C in Chapter IV for a description of the impact estimation approach.

\*\*/\*/+ Differences are statistically significant at the 0.01/0.05/0.10 levels, respectively.

n.a. = not applicable.

**Table V.1a2. Differences in intervention estimated effects using data from Program Exit to Six-Month Follow-Up to address primary research question 1**

Outcome measure	Differences in Intervention mean or %	Differences in Intervention standard error	Differences in Comparison mean or %	Differences in Comparison standard error	Differences in Intervention and comparison difference in means	p-value of test of differences of difference in means	Effect size
Fathering Self-Efficacy	0.24	0.95	0.21	0.95	0.03	0.98	.001
Sense of Belonging - Empowerment	15.44	0.36	15.75	0.36	-0.31	0.54	.027
Sense of Belonging - Engagement	15.13	0.42	15.45	0.42	0.32	0.59	.024
Social Network Score	0.38	0.62	-0.97	0.63	1.35	0.13	.074
Broad/Formal Social Support	0.67	0.72	0.36	0.72	1.02	0.31	.047
Number of Individuals to Count On	0.34	0.39	0.48	0.39	-0.14	0.80	.012
Number of Role Models	0.25	0.27	0.32	0.28	-0.07	0.86	.008

Source: First follow-up surveys administered at services-as-usual completion and second follow-up survey administered at 6 months-post program enrollment.

Notes: Effect sizes are calculated using Hedges' g formula. See Table III.1 for a more detailed description of each measure and section IV.C in Chapter IV for a description of the impact estimation approach.

\*\*/\*/+ Differences are statistically significant at the 0.01/0.05/0.10 levels, respectively.

n.a. = not applicable.

## B. Results of the implementation evaluation

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### **Key Findings: Implementation Analysis (RQ1)**

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- **Safe space, skill building, empowerment, and support were “key ingredients” of services-as-usual and mentoring**
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#### **Research Question 1: Mechanisms of Impact (Intervention Characteristics)**

Program staff ( $n=8$ ) and participants ( $n=26$ ) described several mechanisms of impact in the services-as-usual components that were important to success across all program focal areas for fathers. First, the creation of safe space was a critical component of the program which allowed fathers to build trust and camaraderie with other participants and staff members. The team-orientation of the program which allowed all staff to work together to support fathers and the program’s curriculum focused on skill-building were instrumental mechanisms of impact across all program areas. Skill-building topics were focused on coping, goal-setting, communication, problem-solving, increased self-awareness, and improving relationships. These three mechanisms of impact promoted positive change across engaged fatherhood, healthy relationships, and economic stability (Voith et al., 2024).

Additionally, three key mechanisms of impact were identified specific to engaged fatherhood. The first mechanism was empowerment, defined as ways that the program promoted fathers to make positive change in their fathering skills and behaviors. Second, skill building and parenthood psychoeducation, or ways that the program taught or promoted mastery of skills for fathering, created changes in father’s engagement with their children. Finally, case management, or activities and structure provided by case managers to guide fathers towards personal goals, was a critical component of the program’s impact. For healthy relationships, program staff engaged in creative methods (e.g., connecting topics to current media examples) to engage fathers in topics related to healthy relationships, including psychoeducation and skill building specific to healthy relationships and therapeutic elements, which were program activities which promoted healing to support the fathers’ romantic relationships. Finally, program staff and fathers described two additional mechanisms of impact focused on economic stability. These included career support, which were activities or actions promoting employment, and financial assistance, or support to obtain monetary stability, which was primarily offered through case management.

For fathers in the intervention group, we identified three primary mechanisms of mentorship success through qualitative inquiry with the mentor. These mechanisms were shared experience, trust, and support. When the mentor’s lived experience aligns with the fathers, it creates opportunity for connection, building trust, and serving as a model for fathers looking for change. Mentorship offered additional safe space for fathers to receive emotional and physical (e.g., transportation assistance, mentor presence at important events) support.

The primary limitation to these findings is that the mechanisms of impact were described through qualitative focus groups, which did not include all fathers in the program and therefore may not be representative of fathers in the program who were not included in the focus groups. Further, the challenges related to mentoring stem from access and opportunity, such as geographical limitations that hinder in-person interactions, which were preferred by the mentor over phone calls.

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## **Key Findings: Implementation Analysis (RQ2)**

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- **Structural barriers (previous incarceration and access to children), limited positive relationships, and personal motivation to be a better father and partner shaped fathers' experiences with services**
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### **Research Question 2: Strengths and Challenges among Fathers (Context)**

Fathers described three overarching themes related to fatherhood strengths: fatherhood approaches, factors that promote resilient fathering, and key qualities of fathering (Russell et al., 2023). Fatherhood approaches were strengths-based parenting approaches, such as being an active participant, being a protector and provider to their children, and accepting responsibility for their child. Fathers acknowledged the importance of using a child-centric approach to their relationship with their child, which prioritized the child's needs over their own needs. Fathers also discussed the importance of using themselves as a role model for their children. The second theme, factors that promote resilient fathering, was defined as characteristics or methods the father uses to overcome challenges as a parent. Examples of resilient fathering were using God as a strength and motivation to be a good father derived from their own father figures. Participating in the fatherhood program was seen as a way of investing in oneself because fathers dedicated time and energy to improving their relationship with their child. Key qualities of fathering was the final strength which was defined as characteristics and skills fathers believed were positive contributions to their children's lives; for example, having fun and a sense of humor, using patience, compassion, and strong communication with their child. There were also barriers to engaged fatherhood. First, lack of access to their child served as a large barrier for some fathers. Lack of access was attributed to custody issues, financial instability, strained relationship with the co-parent, and the Covid-19 pandemic, which occurred during this evaluation. Fathers and staff both identified a second barrier to fathers' engagement, which was unmet mental health needs. Examples included previous traumatic experiences, such as abuse, neglect or exposure to violence in prison, and maladaptive coping skills.

Fathers identified five strengths related to healthy relationships: conflict management strategies, teamwork in a relationship, motivation to have healthy relationships, healthy communication, and values of a healthy relationship. Relationship values included respect, loyalty, honesty, passion, understanding, and support. There were two primary barriers to achieving healthy relationships. Relationship strain was one barrier, defined as poor connection with partners, stemming from issues with trust, empathy, negativity, or poor communication. The second barrier was a lack of exposure to healthy relationship role models. Some fathers did not have opportunities to see or practice skills needed to develop healthy relationships with intimate partners and friends.

Fathers were motivated by children and family to gain and maintain economic stability, which was facilitated by financial knowledge (e.g., saving and budgeting) and maintaining employment. When these strengths were unhindered, fathers felt successful. However, there were notable barriers that fathers had to overcome to achieve economic stability. Barriers in this focal area were structural in nature, rather than individual-level barriers; for example, having a legal history or previous incarceration was a barrier to gaining employment. Another structural challenge was the slow and tedious nature of job seeking, which hindered father's immediate financial stability.

There are two primary limitations to note related to the context of father strengths and barriers. First, despite the reflexive practices applied throughout the analysis and interpretation of the qualitative findings, the strengths and barriers described above are rooted in the perspectives of both the research participants and this research team. Though some of the research team members did not have similar lived experiences of participants, the team was also comprised of three Community Scholars who shared lived experience with participants. Second, these findings may not be generalizable to other fatherhood programs whose primary demographic is different than fathers in this analysis, who were primarily Black, low-income fathers.

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## Key Findings: Implementation Analysis (RQ3)

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- **The source of change appeared to differentiate between fathers with high-risk compared to low-risk relationship backgrounds**
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### Research Question 3: Differences among Men with High-Risk Backgrounds (Context)

We identified key differences between fathers in the focus groups who reported intimate partner violence perpetration ( $n=9$ ) or history of child maltreatment ( $n=4$ ), compared to those without IPV or child maltreatment history, through open-coding of focus group transcripts. In excerpts on engaged childhood, fathers with a history of IPV or child maltreatment described how the program helped them understand the purpose and practice of discipline. High-risk fathers reported learning to shift from negative to positive discipline, using it as a tool to teach right from wrong. They also reflected on their parenting behaviors, focusing on change; for example, they described analyzing the root of their anger and developing skills to control their temper. Fathers in the low-risk group, by contrast, emphasized communication and conversation, aiming to strengthen interpersonal relationships with their children or partners. In excerpts on healthy relationships, one high-risk father with a history of IPV described how the program helped him change his behavior and avoid acting out toward his partner. Comparatively, low-risk fathers expressed a desire to improve relationships with current or future partners. All fathers highlighted the importance of a safe space within the program. However, high-risk fathers specifically noted that hearing other fathers' experiences inspired them to become better parents. The primary limitation of this analysis is the small number of fathers in the high-risk group.

### C. Results of the secondary analyses

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## Key Findings

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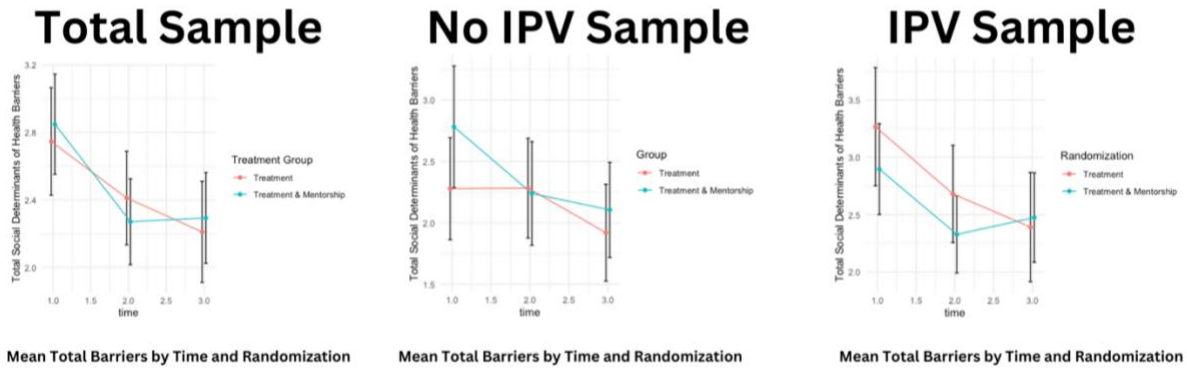
- **Fathers with high-risk relational backgrounds may stand to benefit more from services-as-usual and mentoring with key program goals related to barriers and fathering**
- 

### Removing Barriers

Among all fathers in the study, **total barriers** to social determinants of health (e.g., access to transportation, health care) and access to their children did not significantly change from Baseline to Program Exit. There were no significant differences when examining post-hoc tests of differences in means from Baseline to Program Exit and Program Exit to Six-Month Follow-Up within groups. Though the services-as-usual group appear to report lower barriers compared to those with the additive component of mentoring at the Six Month Follow Up (see Figure 5), there were no significant differences between or within groups from Program Exit to Six-Month Follow-Up. Though not part of the planned analysis, we did find that **total barriers** to social determinants of health and access to children decreased an average change of .53 (SE = 0.17) from Baseline to Six-Month Follow-Up for all fathers in the study regardless of their group assignment. These findings suggest that the reduction in barriers among fathers, regardless of treatment group, were sustained at a 6-month follow up.

Among fathers with a history of IPV, there was a significant reduction in **total barriers** from Baseline to Six-Month Follow-Up by .53 (SE = .17,  $p < .01$ ) points, with no significant differences between groups (i.e., no treatment effects). However, there were no significant changes in total barriers found for men in the low-risk (i.e., no IPV) group, suggesting that the fathers with high-risk backgrounds enrolled in program services (not mentoring) benefited more in terms of reducing barriers over time compared to low-risk background fathers. See Figure 5.

**Figure 5. Mean differences of total barriers by time and randomization across full and sub-samples**

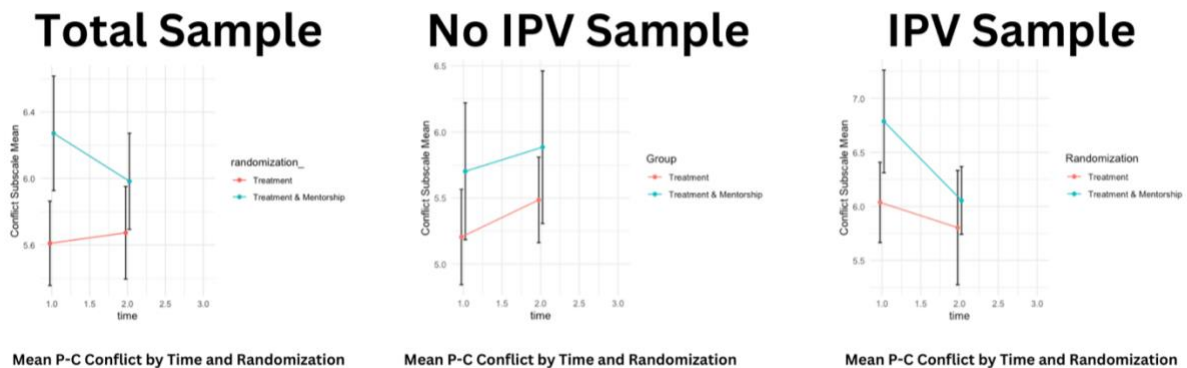


Note: Bars represent 95% confidence intervals. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

**Fathering**

Among all fathers in the study, **parent-child conflict** scores increased 3.5 points (SE = 1.25) from Baseline to Program Exit when holding all covariates constant. Fathers receiving the additive mentoring component in the full sample had significantly lower scores in parent-child conflict by 1.08 points (SE = 0.53) at Program Exit compared to fathers only receiving services-as-usual, when controlling for all other covariates. When examining these associations stratifying the sample by IPV background, this treatment effect of mentoring held for fathers with a history of IPV, but not for fathers without a history of IPV ( $p < .10$ ). Because this outcome was not measured at Six-Month Follow-Up, we are unable to determine any sustained effects of mentoring on parent-child conflict at a six-month follow up. These results suggest that the additive effect of mentoring during the time of service-as-usual significantly improved father’s relationship with his child, though this measure had less than desirable reliability (Child  $\alpha = .61$ , Child 2  $\alpha = .74$ ) and therefore should be interpreted with some caution. See Figure 6.

**Figure 6. Mean differences of parent-child conflict by time and randomization across full and sub-samples**

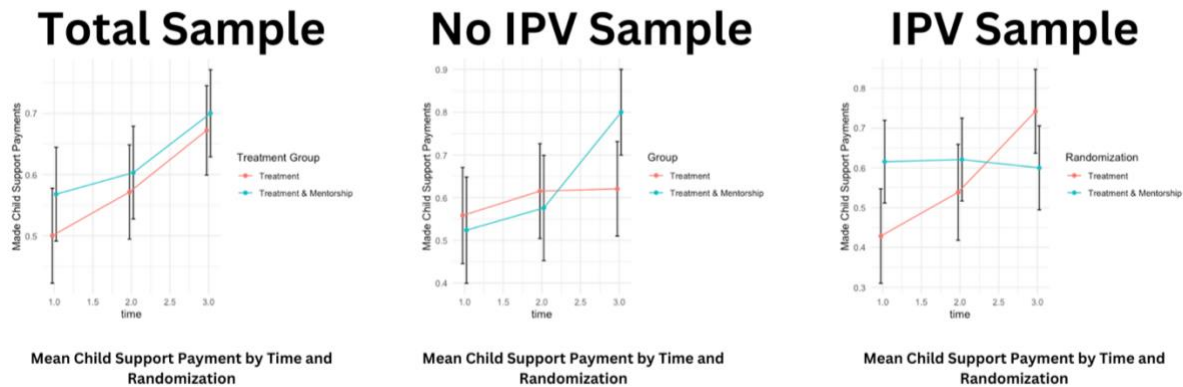


Note: Bars represent 95% confidence intervals. Scales differ across figures. P-C = parent-child. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

Among all fathers in the program with a child support order, there were no significant changes in making a child support payment from Baseline to Program Exit; however, the average number of fathers indicating they **successfully paid their child support payments** significantly increased by .18 (SE = .05) points at the six-

month follow-up (from Baseline to Six-Month Follow-Up). Examining differences across high vs. low-risk backgrounds, fathers with an IPV history had significantly greater changes in child support payments, while fathers with no reported IPV history did not have a significant changes in child support payments from Baseline to Six-Month Follow-Up. These findings suggest that services-as-usual, regardless of mentoring, has a slight positive impact on child support payments among fathers with higher-risk backgrounds. Notably, this sample size is very small due to skip-logic and is not representative of the whole sample. See Figure 7.

**Figure 7. Mean differences of child support payment by time and randomization across full and sub-samples**



Note: Bars represent 95% confidence intervals. Scales differ across figures. Treatment = Services-As-Usual; Treatment + Mentorship = Services-As-Usual + Mentoring. Time 1 = Baseline, Time 2 = Program Exit, Time 3 = Six-Month Follow-Up.

## Key Findings

- **The addition of mentoring did not have an impact on changes in economic stability, healthy romantic relationships, and some fathering outcomes**

### Father

We did not find any significant changes in **parent-child closeness** and **co-parenting** from Baseline to Program Exit, or **child support efforts** from Baseline to Program Exit. Changes in **child support efforts** were significant from Program Exit to Six-Month Follow-Up, with fathers receiving additive mentoring decreasing in their efforts and fathers in the services-as-usual group increasing in their efforts. Also, no differences emerged when examining IPV history. Parent-child conflict was significant and results are described above.

### Partner

We did not find any significant changes in fathers' **quality of romantic relationships**, from Baseline to Program Exit. Also, no differences emerged when examining IPV history. Because the sample sizes for this analysis were very small (due to skip logic, in which the father had to be in a current relationship), the analysis is likely underpowered.

### Provider

No treatment effects from the services-as-usual or the additive component of mentoring were found on fathers' **difficulty paying bills**, **employment**, and **job readiness** changes from Baseline to Program Exit when controlling for education, age, and race. There were no differences found when examining changes across fathers with an IPV history compared to fathers with no reported IPV history for each of these outcomes.

**Table V.2a Post-intervention estimated effects using data from Baseline to Program Exit to address the secondary research questions with LMM**

Outcome measure	Differences in Intervention mean or %	Differences in Intervention standard error	Differences in Comparison mean or %	Differences in Comparison standard error	Differences in Intervention and comparison difference in means	p-value of test of differences of difference in means	Effect size
Barriers	0.52	0.17	0.26	0.17	-0.26	0.27	.052
Child support yes	-0.01	0.06	-0.04	0.06	-0.03	0.73	.023
Child support efforts	-0.02	0.10	-0.10	0.01	-0.08	0.54	.038

Source: Baseline and first follow-up surveys administered at services-as-usual completion.

Notes: Effect sizes are calculated using Hedges' g formula. See Table III.1 for a more detailed description of each measure and section IV.C in Chapter IV for a description of the impact estimation approach.

\*\*/\*/+ Differences are statistically significant at the 0.01/0.05/0.10 levels, respectively.

n.a. = not applicable.

LMM = Linear Mixed Modeling

**Table V.2b Post-intervention estimated effects using data from Program Exit to Six-Month Follow-Up to address the secondary research questions with LMM**

Outcome measure	Differences in Intervention mean or %	Differences in Intervention standard error	Differences in Comparison mean or %	Differences in Comparison standard error	Differences in Intervention and comparison difference in means	p-value of test of differences of difference in means	Effect size
Barriers	-0.00	0.18	0.27	0.19	0.27	0.31	.049
Child support yes	-0.03	0.06	-0.14	0.06	-0.11	0.25	.076
Child support efforts	-0.10	0.11	0.23	0.11	0.33	0.04*	.133

Source: First follow-up surveys administered at services-as-usual completion and second follow-up survey administered at 6 months-post program enrollment.

Notes: Effect sizes are calculated using Hedges' g formula. See Table III.1 for a more detailed description of each measure and section IV.C in Chapter IV for a description of the impact estimation approach.

\*\*/\*/+ Differences are statistically significant at the 0.01/0.05/0.10 levels, respectively.

n.a. = not applicable.

LMM = Linear Mixed Modeling.

**Table V.3 Intervention estimated effects using data from Baseline to Program Exit to address secondary research questions using multiple regression**

Outcome measure	Intervention Estimate (B)	Standard error	T-value	Effect size
Healthy relationship index	1.28	0.77	1.67	0.38
Parenting attitudes about relationship with child				
Closeness subscale	0.22	0.48	0.45	0.05
Conflict subscale	-1.08	0.53	-2.03*	-0.21
Co-parenting	-2.84	2.73	-1.04	-0.09
Employment	0.10	0.10	0.97	0.08
Job readiness	-0.82	0.57	-1.44	-0.13
Challenge paying bills	-.004	0.23	-0.16	-0.01

Source: Baseline and first follow-up surveys administered at services-as-usual completion.

Notes: Effect sizes are calculated using Hedges' g formula. See Table III.1 for a more detailed description of each measure and section IV.C in Chapter IV for a description of the impact estimation approach. For sample size for each outcome, see Table "Individual sample sizes for intervention status"

\*\*/\*/+ Differences are statistically significant at the 0.01/0.05/0.10 levels, respectively.

n.a. = not applicable.

## VI. Summary and conclusions

This chapter describes the interpretation of findings, implications, considerations, and limitations of the intervention evaluation.

### A. Implications

#### **Services-As-Usual and the Additive Effect of Mentoring on Relational Health**

Relational health focuses on the importance of establishing and maintaining meaningful relationships, emphasizing the value of interactions and connections as one of the few levers with consistent evidence that can buffer or even counter the adverse outcomes among individuals facing higher levels of adversity (Bethell et al., 2019). Amplifying relational health among socioeconomically disadvantaged fathers through services-as-usual and an additional mentoring component is novel, with this randomized control trial among the first to examine the impacts of the mentoring on relational health among this population. The aim of this study was to examine whether (1) the estimated effect of the program components was statistically significantly greater at Program Exit compared to Baseline, and whether (2) the added component of mentoring resulted in statistically significant additive effect at Program Exit and (3) sustained effects at Six-Month Follow-Up compared to the effect of the comparison condition.

Fathers receiving Passages' services as usual increased their relational health between Baseline and Program Exit, though the additive component of mentoring did not have an impact on these changes. Fathers' relational health improved for individual-level aspects like fathering self-efficacy, feeling a sense of belonging in their community (i.e., empowerment and engagement), and increasing his formal and informal social support networks (i.e., broad social support, number of individuals to count on). Relational health is predicated on safe, stable, and nurturing relationships, which align with the "key ingredients" identified by fathers and staff in the implementation analysis (i.e., safe space). Together, these findings suggest that a feeling of "safe space" may be an underlying mechanism promoting fathers' ability to meaningfully grow their relational health in community with other fathers. Relational health in the form of regular contact and communication from family and close friends (i.e., social network score), however, did not have any significant changes, suggesting that either the components of services-as-usual or the length of service provision (e.g., dosage) may be insufficient to meaningfully impact the number of close friends and family with whom fathers regularly interact with.

Interestingly, fathers' gains in empowerment and engagement were the largest compared to other forms of relational health, with a complete loss of treatment gains by the Six-Month Follow-Up. In the implementation study, we found that "empowerment" was considered a key ingredient to fathers' success, with the group-dynamic (e.g., a sense of brotherhood) being a key driver of this. Together, these results suggest that services-as-usual, likely the group dynamic among fathers that was fostered by the program facilitators, was effective in enhancing fathers' empowerment and engagement, but that a one-to-one relationship in the form of mentoring could not maintain these considerable gains.

The impact of mentoring as an additive program component was not powerful enough to increase gains over and above those gained by the components comprising services-as-usual. However, in the context of existing research, the longitudinal changes found among all fathers in the study is promising for future programs aiming to enhance relational health among fathers, especially those with higher levels of trauma and adversity in childhood and adulthood.

#### **Sustained Effects of Mentoring on Relational Health**

It is common in intervention research to see some loss of treatment effects after programming. To examine the potential buffering effects against treatment losses, this study examined the changes between Program Exit and Six-Month Follow-Up.

The sustained effects of mentoring were predominately non-significant across outcomes; however, when examining risk-backgrounds among fathers, some key differences emerged. In particular among relational

health outcomes, the growth in broader social networks was dampened among fathers with no-IPV history, while fathers with an IPV-history appeared to benefit from growth in self-efficacy. In the implementation analysis, we identified in an interview with the mentor that a shared lived experience was essential for fostering connection and trust, ultimately facilitating positive change among fathers. These differences among fathers' risk-background may point to the congruence or incongruence of shared lived experience between the mentor and fathers as it relates to IPV perpetration. Moreover, the implementation analysis also revealed a different source of motivation for change across fathers with differing risk-backgrounds, with high-risk fathers aiming to reduce negative behavior and low-risk fathers wanting to enhance positive-behavior. Together, these findings suggest that programs may consider screening fathers' lived experience and pairing them with mentors who match that experience most closely to have the most powerful impacts.

### **High-Risk Backgrounds on Secondary Outcomes**

Among secondary outcomes, fathers receiving mentoring who also had a higher-risk relational background appeared to see improved outcomes in a few areas. Fathers with an IPV-background receiving mentoring, had significant reductions in parent-child conflict scores (by Program Exit) and improvements in child support payments (by Six-Month Follow-Up). Similarly to relational health, these findings and the implementation findings suggest that programs with a mentoring component may consider screening and pairing fathers with mentors to create a stronger alignment of lived experience to promote positive fathering outcomes. Finally, regardless of mentoring, fathers with an IPV background had significant reduction in barriers compared to fathers with no-IPV backgrounds. Considering that IPV background had some effect on program impacts, fatherhood programs should consider accommodating programming for fathers who screen positive for this history beyond a referral to best serve fathers with high- and low-risk relational backgrounds.

## **B. Limitations and future directions**

### **Strengths & Limitations**

Despite numerous challenges in fathers' lives, this study was able to maintain low attrition rates at Program Exit. At Six-Month Follow-Up, the attrition rate exceeded the "low" attrition threshold by 0.6 using the conservative estimate. Given the follow-up time frame, the proximity to the threshold, and the challenges shaping participant lives (e.g., risk of re-incarceration), we opted to use the flexible threshold at Six-Month Follow-Up. Due to the repeated measures design (i.e., comparative interrupted time series) where all groups were formed in an RCT and a low risk of bias due to compositional change determined in our equivalence analysis, this study met WWC standards without reservation (WWC, 2022; pg. 92).

The use of Linear Mixed Modeling and the low attrition across timepoints was a strength of this study, in particular because of the LMM's ability to model both between and within differences and the use of an estimation technique that draws on all available data, rather than deleting cases with missing data. The secondary outcomes with two time points were, however, limited to multiple regression and relied only on cases with complete data. As a result, the analyses for healthy relationship index (for romantic partners), parent-child closeness/conflict (fathering), and employment, job readiness, and challenges paying bills (for economic stability) were likely underpowered.

A programmatic limitation also qualifies the findings related to mentorship in this impact study. The program relied primarily on only one mentor to deliver the mentoring component of the program. With a broader set of mentors, we could be more confident in attributing the mentoring to that program component, rather than the individual delivering it.

### **Future Directions**

This study showed that low-income fathers receiving services-as-usual increased their relational health, but mentoring did not have additive effects at Program Exit and limited sustained effects at Six-Month Follow Up. Future studies should explore associations between relational health and parent-child relationship and romantic relationship outcomes. Furthermore, future research should examine how certain life experiences

shape the impact of mentoring on fathers, as results in this study suggested that shared life experiences (or lack thereof) may be associated with treatment impact. Finally, most of this study's secondary analyses focusing on fathering, healthy relationship and economic stability outcomes were likely underpowered. Future research should examine potential treatment impacts on these outcomes with larger sample sizes.

### **C. Other lessons learned**

Programmatically, there are several key takeaways that stem from this study's findings. First, building trust among fathers in a group-delivery was identified as a critical aspect of building relational health among fathers for services-as-usual. Future practitioners should consider how to effectively build trust among their respective populations, with attention to any differences among their target population that may hinder trust-building. Second, mentoring had limited effectiveness as an additive component broadly, but measurable impact was found with some relational health and fathering outcomes. Notably, shared lived experience may be critical for mentoring to be most effective. Finally, intimate partner violence is acknowledged but not well addressed among fathering programs (i.e., screening and referral, minimal related program content); this study's findings show that it can make a difference in terms of treatment gains for fathers. Program developers should consider building more modules on promoting healthy romantic relationships and eliminating harmful behavior for current or past relationships, so that these harmful behaviors do not interrupt treatment effects in other areas such as parenting.

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## **VIII. Appendices**

- A. Logic Model**
- B. Data and Study Sample** [Tables B.1 and B.2, and CONSORT diagram, here]
- C. Attrition and baseline equivalence** [Table C.1a-C1c. here]

## Appendix A: Logic Model for STEPS Extraordinary League of Fathers

	<b>INPUTS</b>	<b>ACTIVITIES</b>	<b>OUTPUTS (#fathers p/year)</b>	<b>PRIMARY OUTCOMES</b>	<b>SECONDARY OUTCOMES</b>
<b>PARENT</b>	<ul style="list-style-type: none"> <li>&gt;Curriculum Facilitators</li> <li>&gt;Fatherhood Coaches</li> <li>&gt;24/7 <i>Dad AM</i> curriculum</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Skills-based fatherhood classes</li> <li>&gt;Cohort-based discussions</li> <li>&gt;Counseling and mentoring</li> </ul>	<ul style="list-style-type: none"> <li>&gt;200 enrolled</li> <li>&gt;140 graduate</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Improved quality of father-child engagement</li> <li>&gt;Increased child support payments</li> <li>&gt;Enhancing relational health</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Improved family functioning</li> <li>&gt;Improved adult well-being</li> </ul>
<b>PARTNER</b>	<ul style="list-style-type: none"> <li>&gt;Community Partners</li> <li>&gt;<i>Understanding Domestic Violence</i> curriculum</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Teach communication and conflict resolution skills</li> <li>&gt;Domestic Violence Education</li> <li>&gt;Referrals as necessary</li> </ul>	<ul style="list-style-type: none"> <li>&gt;200 screened for DV</li> <li>&gt;170 receive DV curriculum</li> <li>&gt;40 referrals for DV counseling</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Improved co-parenting skills</li> <li>&gt;Improved healthy relationship skills</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Improved couple relationships</li> <li>&gt;Improved co-parenting</li> </ul>
<b>PROVIDER</b>	<ul style="list-style-type: none"> <li>&gt;Job Coaches</li> <li>&gt;<i>Money Smart</i> curriculum as needed</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Job Skills Taught</li> <li>&gt;Job-Driven Employment</li> <li>&gt;GED and certificate/vocational education</li> </ul>	<ul style="list-style-type: none"> <li>&gt;140 receive employment assessment to determine needs prior to working with an employment coordinator</li> <li>&gt;70 hired</li> <li>&gt;20 vocational certificate</li> <li>&gt;10 GED</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Increased financial responsibility</li> <li>&gt;New job skills</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Reduced Poverty</li> <li>&gt;Fathers gain and retain jobs</li> </ul>
<b>ALL</b>	<ul style="list-style-type: none"> <li>&gt;Father Support Mentors</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Mentoring fathers</li> </ul>	<ul style="list-style-type: none"> <li>&gt;100 enrolled</li> <li>&gt; 40 complete</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Enhancing relational health</li> </ul>	<ul style="list-style-type: none"> <li>&gt;Enhances father-child engagement</li> <li>&gt;Improved co-parent relationship</li> </ul>

Note. PARENT = Responsible Fatherhood; PARTNER = Healthy Relationships; PROVIDER = Economic Stability; ALL = all authorized activity areas

## Appendix B: Data and Study Sample

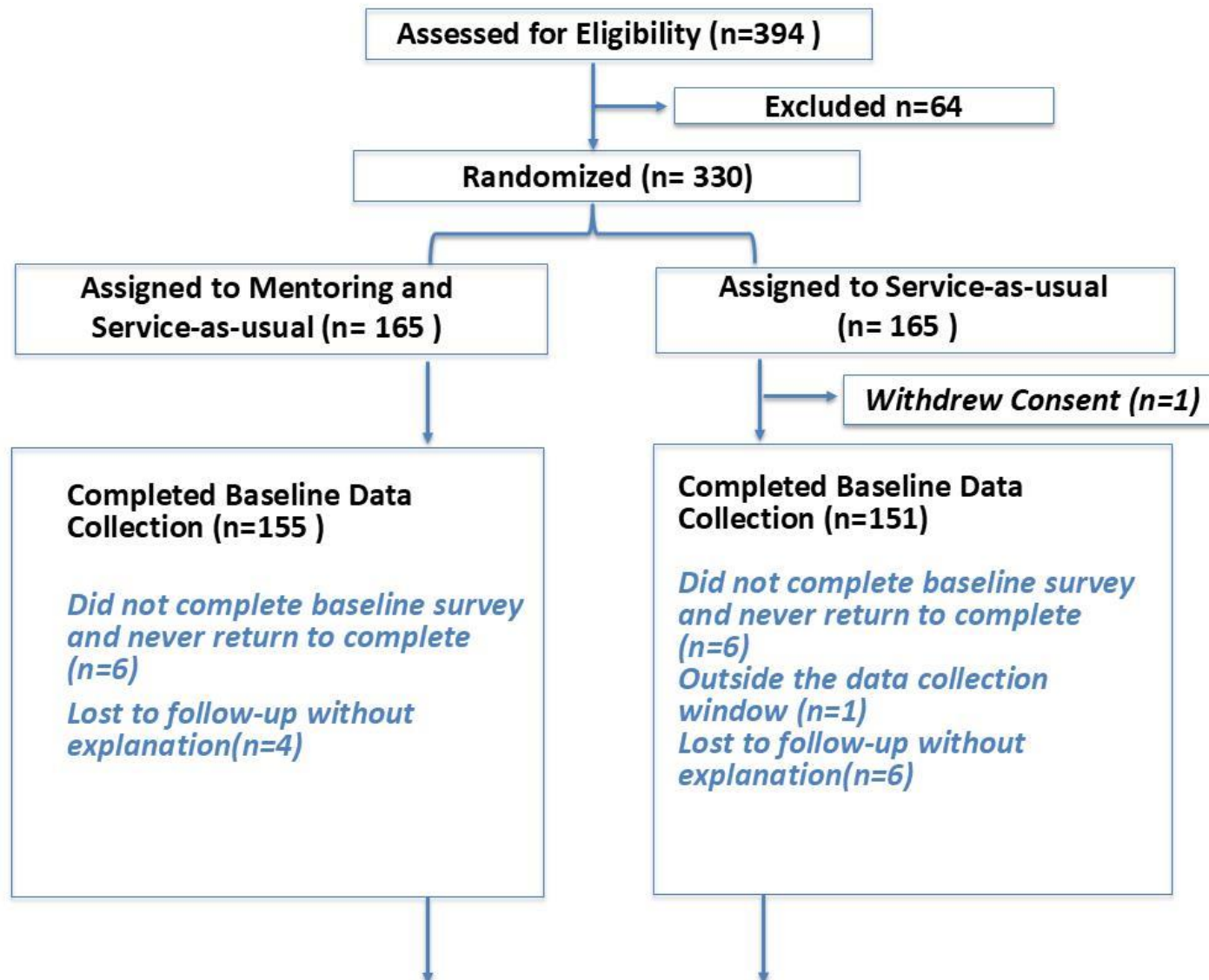
**Table B.1. Key features of data collection for the impact analysis**

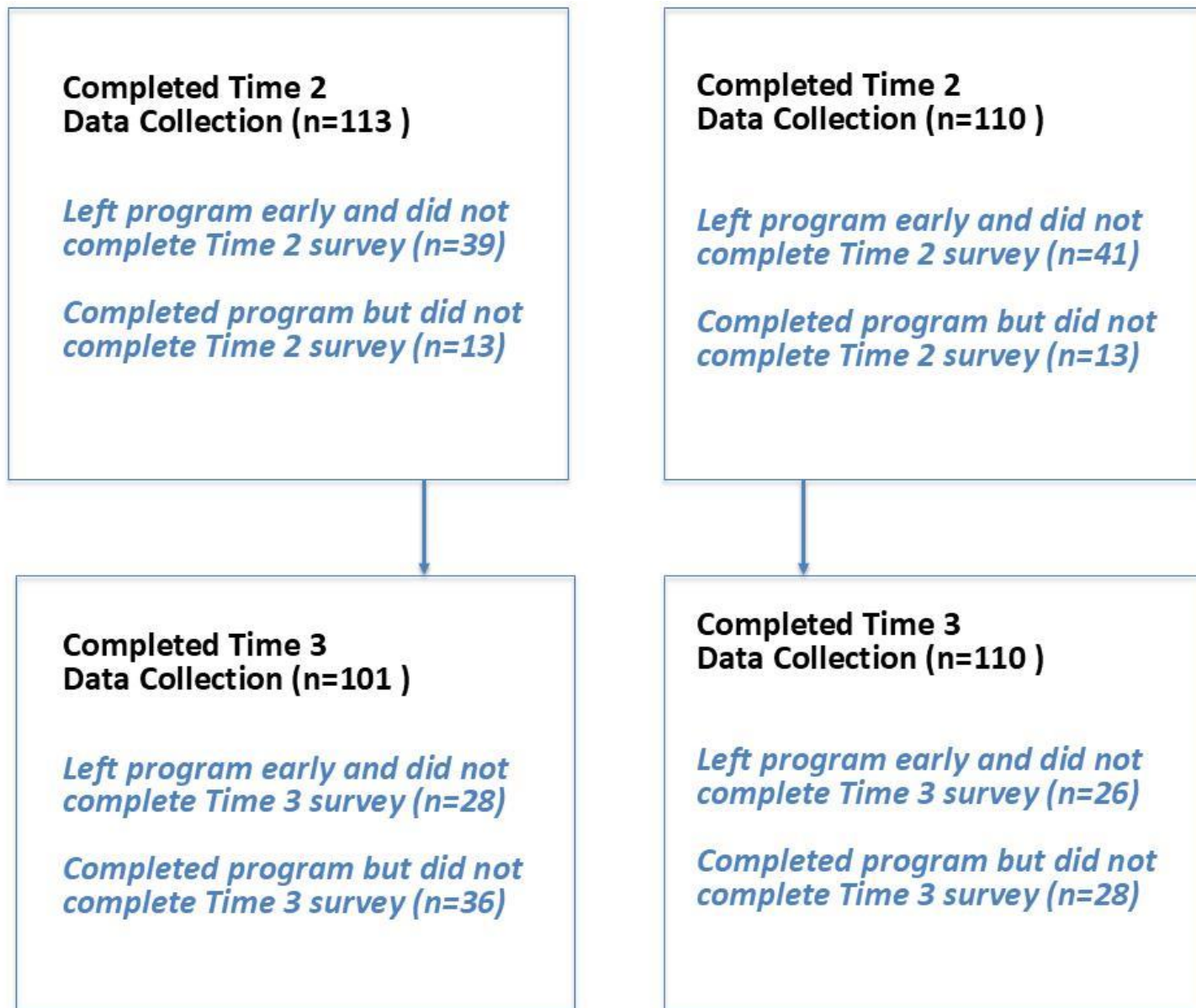
Study group	Data source	Timing of data collection	Mode of data collection	Parties responsible for data collection	Start and end date of data collection
Intervention	nFORM entrance and exit surveys	Baseline: Enrollment (baseline) Program Exit: End of services-as-usual (1 month after day-program; 7 weeks after night-program)	In-person online survey (Baseline and Program Exit)	Program staff	August 2022 through March 2024
	Local evaluation survey	Baseline: Enrollment (baseline) Program Exit: End of services-as-usual (1 month after day-program; 7 weeks after night-program) Six Month Follow-Up: 6-Months Post Enrollment	In-person online survey (Baseline and Program Exit) Phone or email contact with online survey (Six Month Follow-Up)	Program staff (Baseline and Program Exit) Evaluation Staff (Six Month Follow-Up)	August 2022 through August 2024
Comparison	nFORM entrance survey	Baseline: Enrollment (baseline) Program Exit: End of services-as-usual (1 month after day-program; 7 weeks after night-program)	In-person online survey (Baseline and Program Exit)	Program staff	August 2022 through March 2024
	Local evaluation survey	Baseline: Enrollment (baseline) Program Exit: End of services-as-usual (1 month after day-program; 7 weeks after night-program) Six Month Follow-Up: 6-Months Post Enrollment	In-person online survey (Baseline and Program Exit) Phone or email contact with online survey (Six Month Follow-Up)	Program staff (Baseline and Program Exit) Evaluation Staff (Six Month Follow-Up)	August 2022 through August 2024

**Table B.2. Key features of data collection for the implementation analysis**

Implementation element	Research question	Data source	Timing and frequency of data collection	Party responsible for data collection
Intervention Characteristics	What are the mechanisms of impact (i.e., the key factors that promote positive change) in the STEPS League of Extraordinary Fathers programs, specific to men's engaged fatherhood, healthy partnerships, and economic stability?	Semi-structured focus group or interview transcripts	One time after approximately 75% of services-as-usual completed by fathers (7 focus groups); One time with program support staff (2 focus groups; 1 interview); Focus groups occurred between July and December 2021; Interview with Fatherhood Support Mentor occurred November 2024	Study staff
Context	What are the strengths and barriers/challenges (i.e., risk factors) to engaged fatherhood, healthy partnerships, and economic stability for fathers enrolled in the program?	Semi-structured focus group transcripts	One time after approximately 75% of services-as-usual completed by fathers (7 focus groups); Occurred between July and December 2021	Study staff
Context	Do the men in high-risk subgroups (i.e., fathers who reported intimate partner violence perpetration or child maltreatment) differ in their report of mechanisms of impact?	Semi-structured focus group transcripts; local evaluation survey; program records	One time after approximately 75% of services-as-usual completed by fathers (7 focus groups); One time with program support staff (2 focus groups); Focus groups occurred between July and December 2021  Local evaluation and program record collected one time at baseline (pre-program services)	Study staff Program staff

## CONSORT diagram





## Appendix C: Baseline Equivalence

### C.1. Baseline equivalence assessment

Table C.1a. Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing relational health outcome measures at Baseline

Baseline measure	Intervention mean	Intervention standard deviation	Comparison mean	Comparison standard deviation	Difference in means	p-value of test of difference in means	Effect size
Age	37.05	8.81	38.04	8.87	0.111	0.370	0.112
Race	N(%)	n.a.	N(%)	n.a.	n.a.	0.603	n.a.
Black	49 (31.0%)		54 (34.4%)				
Other	109 (69.0%)		103 (65.6%)				
Education Level	N(%)	n.a.	N(%)	n.a.	n.a.	0.550	n.a.
High School	79 (50.0%)		74 (47.8%)				
Other	79 (50.0%)		82 (52.2%)				
Fathering self-efficacy	37.15	9.17	39.61	9.27	0.266	0.019	0.267
Sense of Belonging - Empowerment	3.58	2.38	4.14	4.20	0.147	0.147	0.164
Sense of Belonging - Engagement	3.45	2.12	4.06	4.34	0.180	0.111	0.179
Social Network Score	11.45	6.73	12.05	7.03	0.087	0.438	0.087
Number of Individuals to Count On	4.02	3.52	4.67	3.89	0.185	0.121	0.175
Number of Role Models	2.44	2.43	2.78	2.62	0.137	0.224	0.135
Broad/Formal Social Support	6.22	6.36	5.43	6.69	0.121	0.285	-0.121
Sample size	158	n.a.	157	n.a.	n.a.	n.a.	n.a.

Notes: Effect sizes are calculated using Hedges' g formula.

n.a. = Not applicable.

\*\*Differences are statistically significant at the 0.05

**Table C.1b. Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing relational health outcome measures at Program Exit**

<b>Program Exit measure</b>	<b>Intervention mean</b>	<b>Intervention standard deviation</b>	<b>Comparison mean</b>	<b>Comparison standard deviation</b>	<b>Intervention and comparison difference in means</b>	<b>p-value of test of difference in means</b>	<b>Effect size</b>
Fathering self-efficacy	40.32	8.52	40.89	8.00	0.069	0.579	0.069
Sense of Belonging - Empowerment	16.62	7.45	15.93	7.59	0.079	0.526	-0.092
Sense of Belonging - Engagement	16.31	7.85	15.63	7.86	0.086	0.493	-0.087
Social Network Score	11.24	6.30	11.67	6.33	0.067	0.593	0.068
Number of Individuals to Count On	4.68	3.58	5.40	3.71	0.199	0.115	0.198
Number of Role Models	2.89	2.48	3.25	2.59	0.143	0.254	0.142
Broad/Formal Social Support	7.77	6.49	8.21	5.64	0.072	0.564	0.072
Sample size	128	n.a.	127	n.a.	n.a.	n.a.	n.a.

Notes: Effect sizes are calculated using Hedges' g formula.

n.a. = Not applicable.

\*\*Differences are statistically significant at the 0.05

**Table C.1c. Summary statistics of key baseline measures and baseline equivalence across study groups, for individuals completing relational health outcome measures at Six-Month Follow-Up**

<b>Six Month Follow-Up measure</b>	<b>Intervention mean</b>	<b>Intervention standard deviation</b>	<b>Comparison mean</b>	<b>Comparison standard deviation</b>	<b>Intervention and comparison difference in means</b>	<b>p-value of test of difference in means</b>	<b>Effect size</b>
Fathering self-efficacy	40.63	8.58	42.22	7.06	0.202	0.209	0.203
Sense of Belonging - Empowerment	3.58	0.91	3.81	0.96	0.244	0.135	0.246
Sense of Belonging - Engagement	3.58	0.98	3.71	1.10	0.130	0.424	0.125
Social Network Score	11.79	6.88	13.00	6.75	0.178	0.279	0.178
Number of Individuals to Count On	4.97	3.72	5.15	3.19	0.050	0.758	0.052
Number of Role Models	2.96	2.35	3.14	2.17	0.08	0.637	0.080
Broad/Formal Social Support	8.47	6.82	8.64	6.75	0.04	0.884	0.025
Sample size	76	n.a.	75	n.a.	n.a.	n.a.	n.a.

Notes: Effect sizes are calculated using Hedges' g formula.

n.a. = Not applicable.

\*\*Differences are statistically significant at the 0.05