

Offering one-on-one economic stability services as part of HMRE programming: Evidence from the Empowering Families program



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programming: Evidence
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Families program**

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Overview

Introduction

In recent years, many healthy marriage and relationship education (HMRE) programs serving couples with low incomes have offered participants economic stability services in addition to traditional HMRE programming focused on relationship skills. To add to the research literature on the effects of this approach, the Strengthening Relationship Education and Marriage Services (STREAMS) evaluation included an impact study of Empowering Families, an HMRE program with integrated economic stability services for couples with low incomes raising children together. The program was implemented by The Parenting Center, a community-based social services provider in Fort Worth, Texas. Empowering Families' core service was an eight-session workshop that taught relationship skills integrated with content on employment and financial literacy. The program supplemented this workshop with one-on-one employment counseling and financial coaching services.

Findings from the impact study indicated that Empowering Families improved couples' relationship quality and co-parenting and reduced their exposure to material hardship one year after entering the program, but it did not increase participants' earnings. This report expands on these findings by investigating how the one-on-one economic stability services contributed to the Empowering Families program's overall impacts.

Primary research question

This report addresses the following primary research question:

- How did one-on-one economic stability services contribute to the Empowering Families program's overall impact on the economic outcomes of participants?

Purpose

This report expands on findings from the Empowering Families impact report, which examined the program's overall impacts after one year (Wu et al. 2021). It explores the likely contribution of the program's one-on-one employment counseling and financial coaching services to impacts on economic outcomes most likely to be directly affected by these services. We conducted this analysis by comparing the outcomes of Empowering Families participants who engaged in one-on-one economic stability services to those in the control group who would have likely engaged in them if they had been offered access to the program. The report also provides information on participants' level of participation in one-on-one economic stability services and the costs of these services. Earlier reports provided detailed information on the program's design, implementation, and overall impact.

What we learned

We learned the following about Empowering Families' one-on-one employment counseling services:

- Among those who enrolled in the program, 33 percent of women and 28 percent of men met with an employment counselor. The cost of offering one-on-one employment counseling was about \$1,600 per couple—about 15 percent of the program's total cost per couple.
- Empowering Families had no impact on the outcomes most likely to be directly affected by one-on-one employment counseling—including monthly earnings and hours worked per week. In addition, there were no impacts on these outcomes among the roughly 3 in 10 participants who met with an employment counselor.

We learned the following about Empowering Families' one-on-one financial coaching:

- Among those who enrolled in the program, 52 percent of couples met with a financial coach. The cost of offering one-on-one financial coaching was just over \$500 per couple—about 5 percent of the program's total cost.
- Empowering Families improved the outcomes most likely to be directly affected by one-on-one financial coaching—including the frequency with which participants' experienced economic hardships and participants' perceptions of whether they were better off financially than they were a year ago. In general, the impacts on these outcomes were larger among couples who met with a financial coach.

Methods

We used a quasi-experimental approach to compare those in the Empowering Families program group who engaged in one-on-one economic stability services to those in the control group who would have likely engaged in them if they had been offered access to the program. The analysis makes use of program participation data, a baseline survey that was administered at the time of study enrollment, and a one-year follow-up survey.

Considerations for HMRE programs and research

We found that one-on-one employment services had relatively low take-up among Empowering Families participants. We also found that the cost of offering these services was substantial, representing about 15 percent of total program costs. In addition, when we examined labor market outcomes, we found no impact for the overall sample or for the subset of participants who received one-on-one employment counseling. These results suggest that the one-on-one employment counseling services offered by Empowering Families did not improve the labor market outcomes of participants. HMRE programs serving similar populations might want to take note of the low take-up of these services, the cost and complexity of implementing them, and the lack of evidence of their effects when considering incorporating one-on-one employment services into their program model.

When we examined one-on-one financial coaching, a different picture emerged. Take-up was still relatively low, but higher than the take-up for employment counseling. In addition, these services were substantially less expensive than employment counseling, representing less than 5 percent of total program costs. Moreover, when we looked at the outcomes most closely associated with financial coaching—economic hardship and money management skills—we found evidence of program impacts among the full sample. Further, our quasi-experimental analysis suggested that these impacts—particularly the impact on economic hardship measures—were larger for the couples who met with a financial coach. This suggestive evidence, along with the relatively modest cost of these services, supports the promise of offering financial coaching in HMRE programs serving couples with low incomes and suggests efforts to improve take-up of these services could be worthwhile.

Future research should examine whether other HMRE programs with strong financial literacy components have similar success in improving the economic well-being of their participants. In addition, because the Empowering Families study was not designed to isolate the effect of the one-on-one economic stability services, these results rely on a quasi-experimental approach to do so. Future random assignment studies of similar programs could be designed to measure the separate effect of one-on-one economic stability services without relying on quasi-experimental methods.

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Introduction

In recent years, healthy marriage and relationship education (HMRE) programs serving couples with low incomes have begun to offer their participants economic stability services to supplement instruction on relationship skills (Moore et al. 2018; Wu et al. 2021). These economic stability services can include employment services designed to help participants find and prepare for work and financial literacy services designed to teach participants how to manage their money. By offering these services, programs intend to improve couples' economic stability and material well-being. Improving these economic outcomes could in turn reduce a common source of stress and conflict in couple relationships, thereby improving their relationship quality and fostering conditions to make instruction on relationship skills more successful.

To add to the research literature on the effects of HMRE programs with integrated economic stability services, the Strengthening Relationship Education and Marriage Services (STREAMS) evaluation included an impact study of Empowering Families, an HMRE program with integrated economic stability services for couples with low incomes raising children together. The program was implemented by The Parenting Center, a community-based social services provider in Fort Worth, Texas. Empowering Families' core service was an eight-session workshop that taught relationship skills integrated with content on employment and financial literacy. The program supplemented this workshop with both one-on-one employment counseling and financial coaching services.

The Empowering Families study estimated impacts of the full program model using an experimental design in which couples eligible for program services were randomly assigned to one of two groups: (1) a program group that was offered participation in Empowering Families or (2) a control group that was not. The study team calculated program impacts by comparing the outcomes of couples assigned to the program group to those of couples in the control group. Findings from the impact study indicate that Empowering Families improved couples' relationship quality and co-parenting and reduced their exposure to material hardship one year after entering the program; it did not increase participants' earnings (Wu et al. 2021).

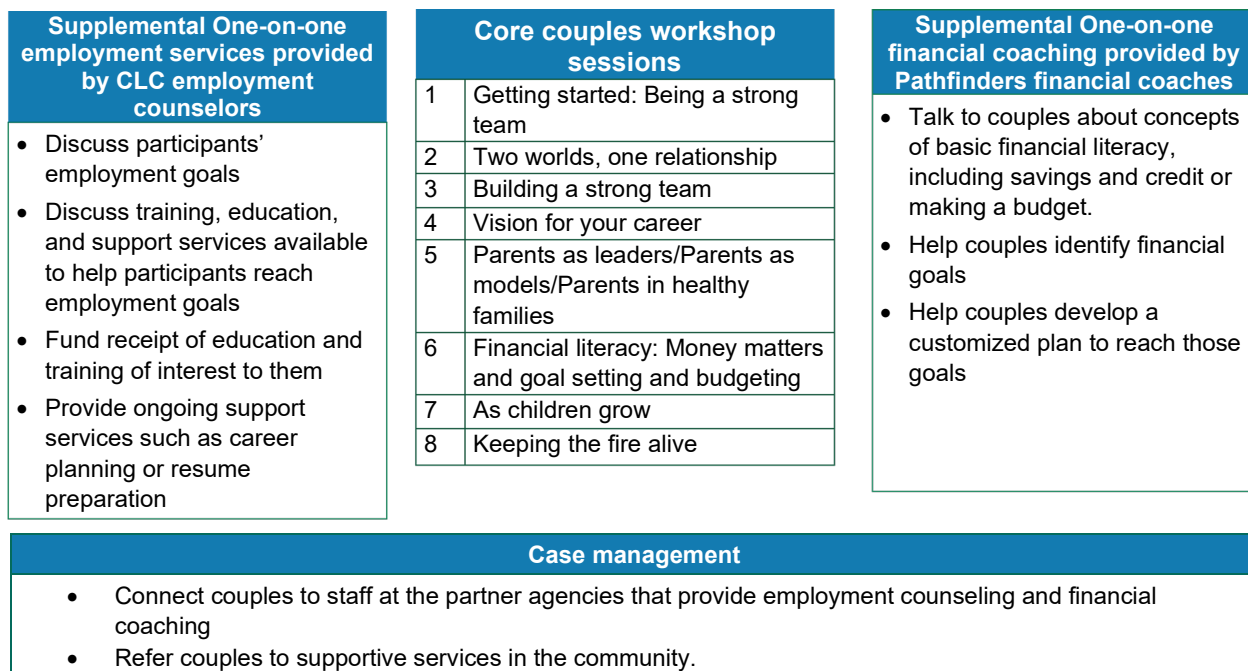
In this report, we expand on these findings by investigating how the one-on-one economic stability services contributed to these overall program impacts. We separately examine two services: employment counseling and financial coaching. We explore how often participants engaged in these services, the costs of these services, and their contribution to program impacts. To discern whether one-on-one employment counseling and financial coaching services were likely to have contributed to the program's overall effects, we use quasi-experimental techniques to examine impacts for the subset of participants who engaged in these services. In addition, we focus our analysis on the outcomes most likely to be directly affected by these services, such as earnings, money management skills, and material hardship.

We examine the contribution of these one-on-one economic stability services for two reasons. First, these services were a distinctive feature of the Empowering Families model. Prior HMRE programs had rarely offered such intensive one-on-one economic stability services to their participants. Second, these services were relatively expensive and somewhat challenging to implement (D'Angelo and Bodenlos 2020). Therefore, it is important to explore their likely contribution to the program's overall success. This information can guide future programs on whether they should consider replicating these program components and strive to achieve higher participation rates in them—or, conversely, consider investing less heavily in these one-on-one services.

Empowering Families’ services and engagement in them

Empowering Families included four program components: (1) an eight-session core couples workshop that integrated the Family Wellness HMRE curriculum with information about employment and financial literacy, (2) case management, (3) supplemental one-on-one employment counseling and additional employment supports for individual participants, and (4) supplemental one-on-one financial coaching for couples (Figure 1). Six of the eight core couple workshop sessions focused on relationships, parenting, and co-parenting; one session focused on employment and another focused on financial literacy. Each core workshop session lasted 2.5 hours. During the sessions on employment and financial literacy, facilitators worked to connect this economic stability content with core concepts from the Family Wellness curriculum (D’Angelo and Bodenlos 2020).

Figure 1. The Empowering Families program model



To deliver the program’s economic stability content, The Parenting Center partnered with two local organizations: (1) Community Learning Center (CLC), which provided expertise in employment services, and (2) Pathfinders, which brought expertise in financial literacy services. Staff from CLC and Pathfinders co-facilitated the core couple workshop sessions on employment and financial literacy. They also provided the supplemental one-on-one employment counseling and financial coaching.

Services provided through one-on-one employment counseling varied by participant based on their needs and interests. During each employment counseling session, employment counselors from CLC worked with participants to set employment goals and connect them to training, education, and job services. Employment counselors reviewed the participants’ education and employment history and assessed their eligibility for training programs and job placement. Employment counselors often suggested technical training programs available at CLC, or referred participants to CLC’s partner Tarrant County College for educational needs. The Parenting Center funded participation in these training and education programs for Empowering Families participants. Employment counselors also provided ongoing support services such as career planning or resume preparation.

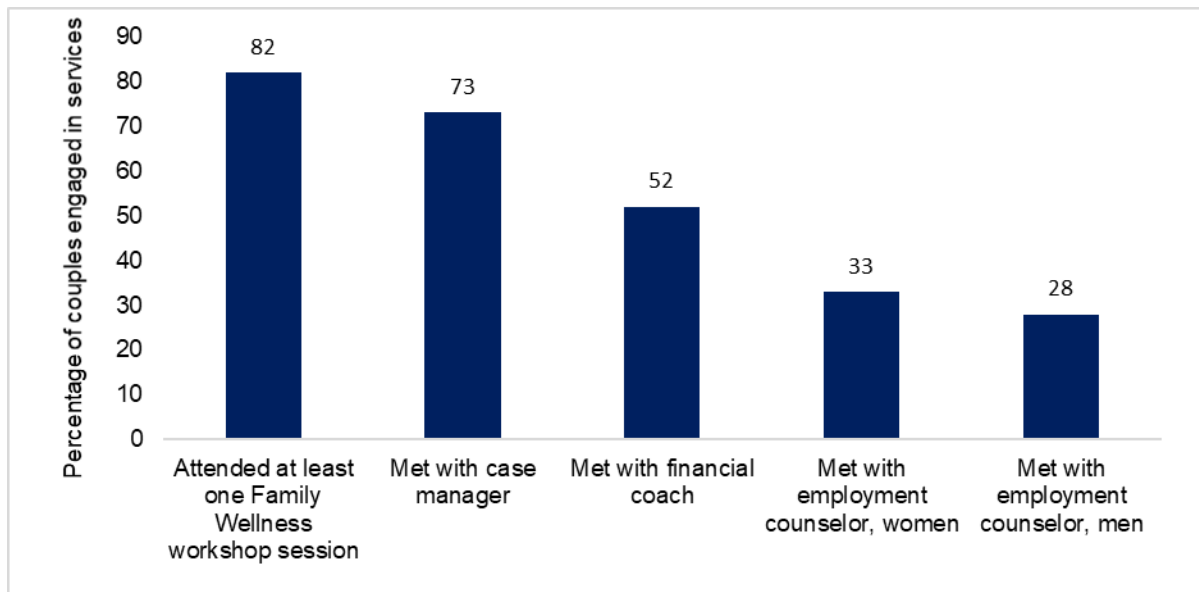
One-on-one financial coaching services were typically less intensive than those provided through one-on-one employment counseling. During financial coaching sessions, financial coaches from Pathfinders worked with couples to identify their financial goals, develop a customized plan, and teach couples skills about the basics of budgeting, saving, and credit. Couples who participated in four financial coaching sessions within 18 months could receive a savings match of up to \$100¹.

Levels of engagement with the core workshop were high: 82 percent of couples attended at least one Family Wellness workshop session (Figure 2). The number of participants in the supplemental one-on-one employment counseling and financial coaching services was substantially lower.

Program staff recognized that many participants would be satisfied with their current jobs or not looking for a job in the labor market because they were caring for children. For this reason, Empowering Families set a goal of providing one-on-one employment counseling to 40 percent of participants. Actual participation was somewhat below this goal; 33 percent of women and 28 percent of men enrolled in Empowering Families met with an employment counselor. Among those who did meet with an employment counselor, meetings were frequent, with women averaging 11 meetings and men averaging six meetings, including both in-person meetings and telephone check-ins.

Program leaders assumed all couples who enrolled in Empowering Families could benefit from the financial coaching services the program offered and thus aimed to have all couples receive this service. Couples could meet with their financial coach up to four times; however, Empowering Families assumed that couples would, on average, meet twice with their financial coach. In the end, 52 percent of couples who enrolled in Empowering Families met with a financial coach at least once. The average number of meetings with a financial coach (including those who did not meet with their coach at all) was 1.8, similar to the program's original estimate. Among those who actually met with a financial coach, couples averaged 3.5 meetings.

Figure 2. Engagement in Empowering Families activities



Source: Electronic attendance records entered by program staff.

¹ Savings matches cannot be funded with HMRE grants but may be funded through other sources.

The cost of providing one-on-one economic stability services

The total cost of the Empowering Families Program was about \$11,000 per couple (Wu et al. 2021). This cost is broadly similar to the costs of other HMRE programs for couples. Providing one-on-one economic stability services represented a substantial portion of the overall costs of Empowering Families—about 20 percent of the total (see the appendix for details on cost calculations). The costs of these one-on-one economic stability services are attributable primarily to the substantial additional staff time required to provide intensive one-on-one services.

The one-on-one employment counseling services were considerably more expensive than the one-on-one financial coaching services. One-on-one employment counseling accounted for about 15 percent of the program’s total costs, compared to about 5 percent for one-on-one financial coaching. This difference in cost between employment counseling and financial coaching services reflects The Parenting Center’s expectation that services provided during employment counseling would be more intensive than those provided during financial coaching. Given that these supplemental one-on-one services represent a substantial portion of overall costs—even when a relatively small proportion of participants engage in these services—it is important to look closely at the likely contribution of these services to the program’s overall impacts.

Methods for estimating effects among those who used one-on-one economic stability services

To explore the contribution of the one-on-one employment and financial coaching services to the overall impacts of Empowering Families, we would ideally estimate program effects among those participants who engaged in these services. However, descriptive analysis suggests that participants who engaged in the one-on-one services were different from those who did not. Specifically, at the time of enrollment they were more likely to identify as Hispanic, more likely to be married, and less likely to be socioeconomically disadvantaged. The appendix provides a more detailed discussion of these differences.

Given these differences, we cannot estimate impacts for participants who engaged in the one-on-one services by comparing their outcomes to those of the control group as a whole. Comparing these participants to the full control group would lead to misleading results because differences in outcomes between the research groups could arise from initial differences in their characteristics, rather than reflecting the effect of the program. Therefore, to estimate program effects among those who received one-on-one economic stability services, we must find an appropriate comparison group that has similar baseline characteristics but did not receive program services. Specifically, we would like to compare those in the Empowering Families program group who engaged in one-on-one services to those in the control group who *would have* likely engaged in them if they had been offered access to the program.

To estimate these effects, we used quasi-experimental methods to create comparison groups. Specifically, we used propensity score matching to compare participants who engaged in at least one economic stability service to participants in the control group who had similar observed baseline characteristics. Using this method required us to estimate a predicted probability of using a service, or a propensity score, based on participants’ characteristics at the time they enrolled in the study. We estimated separate propensity scores for three sets of program participants: (1) women who engaged in one-on-one employment services; (2) men who engaged in one-on-one employment services; and (3) couples who engaged in one-on-one financial coaching. We used these propensity scores to create three matched comparison groups that we used to estimate impacts for those who received each of the corresponding

one-on-one economic stability services (employment counseling offered to women, employment counseling offered to men, and financial coaching offered to couples) by comparing their outcomes to the corresponding comparison group.

We found that there were no large differences in the key baseline characteristics for any of the matched comparison groups, suggesting that the groups were well matched. However, it is possible that the groups still differed on unmeasured characteristics, such as their level of motivation to improve their employment or financial situations. For this reason, the non-experimental estimation techniques provided less rigorous evidence of effectiveness than those based on an experimental design, and any causal claims should be interpreted with greater caution. We also used an alternative process for estimating these effects and found similar results (see the appendix for more information).

To help isolate the potential effects of the one-on-one economic stability services, we focused our analysis on the outcomes most likely to be directly affected by each service. Specifically, when examining program effects among men or women who received one-on-on employment counseling, we examined measures of connection to the labor market and labor market success, both of which were the focus of employment counseling. Similarly, when examining program effects on couples who received financial coaching, we examined measures of economic hardship and money management skills, which were focuses of financial coaching. As a benchmark, we first report the program’s impact on these outcomes for all study participants. If the one-on-one economic stability services are effective at improving economic outcomes, we would expect larger impacts on these outcomes for those who received these services than for the full sample.

Impacts related to one-on-one employment counseling services

As described in the impact report, Empowering Families improved relationship quality and other outcomes (Wu et al. 2021). However, it did not improve participants’ labor market outcomes—the outcomes most closely associated with employment services. Among all couples who enrolled in the program, there was no impact on connection to the labor market, monthly earnings, hours worked, or the likelihood of holding a job with fringe benefits (Table 1). These results were similar for women and men.

Table 1. Impacts of Empowering Families on labor market outcomes among all study participants

Outcome	Women			Men		
	Control group mean	Impact	Effect size	Control group mean	Impact	Effect size
Connection to the labor market						
Employed or taking steps to find a job (%)	71	1	0.03	95	0	0.02
Labor market success						
Monthly earnings (\$)	990	-94	-0.07	2,353	5	0
Hours worked per week	16	0	-0.01	34	-1	-0.04
Employment with fringe benefits (%)	26	1	0.02	52	-1	-0.02
Sample size	761			670		

Source: Baseline and one-year follow-up survey conducted by Mathematica; see Wu et al. (2021) for details.

Note: Impact estimates and control group means are regression-adjusted predicted values of outcomes. Sample sizes unweighted and varied by outcome. **/+ Impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test.

It is possible that Empowering Families had effects on these outcomes among participants who received more intensive employment services from the program—in particular, those who participated in the one-on-one employment counseling. However, when we used quasi-experimental methods to examine these impacts for the 33 percent of women and 28 percent of men who received one-on-one employment counseling, we found similar results. Specifically, we found no impact for these participants on their connection to the labor market, monthly earnings, hours worked, or likelihood of holding a job with fringe benefits (Table 2). These findings suggest that the one-on-one employment counseling services offered by Empowering Families were unlikely to have had their primary intended effect.

Table 2. Impacts of Empowering Families on labor market outcomes among women and men who received one-on-one employment counseling (quasi-experimental)

Outcome	Women			Men		
	Matched comparison group mean	Impact	Effect size	Matched comparison group mean	Impact	Effect size
Connection to the labor market						
Employed or taking steps to find a job (%)	67	0	0.01	95	1	0.08
Labor market success						
Monthly earnings (\$)	682	127	0.12	2,431	-67	-0.04
Hours worked per week	14	1	0.08	35	1	0.05
Employment with fringe benefits (%)	26	2	0.06	55	-2	-0.05
Sample size	239			204		

Sources: Baseline and one-year follow-up surveys conducted by Mathematica and electronic program attendance records; see Wu et al. (2021) for details.

Note: Impact estimates and matched comparison group means are regression-adjusted predicted values of outcomes. Sample sizes unweighted and varied by outcome**/+ Impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test.

Impacts related to one-on-one financial coaching services

As described in the impact report, Empowering Families had overall effects on measures of family economic well-being and money management skills—the outcomes most closely associated with financial coaching services (Wu et al. 2021). Specifically, among all couples enrolled in the program, Empowering Families reduced the average number of economic hardships experienced by couples during the follow-up period. This outcome is based on survey questions about six specific economic hardships that individuals may have experienced in the past year, such as going without medical care because of being unable to afford it or borrowing money from friends or family to make ends meet (Table 3). Among all couples who enrolled in the program, Empowering Families also improved several measures of money management skills, on average—particularly for women.

Table 3. Impacts of Empowering Families on family economic well-being and money management among all study participants

Measure	Control group mean	Impact	Effect size
Family economic well-being			
Family economic hardship scale (range = 0 to 6)	1.73	-0.20+	-0.13
Individual elements of the six-item hardship scale (%)			
Whether thought about going to the doctor, dentist, or hospital but decided not to because of the cost	42	-7*	-0.18
Whether asked to borrow money from friends or family	42	-8**	-0.18
Whether cut the size of their meals or skipped meals because they couldn't afford enough food	27	-2	-0.04
Whether moved in with other people because of financial problems	17	-2	-0.07
Whether sold or pawned their belongings or took a payday loan or auto title loan	22	1	0.03
Whether went without a phone because they could not afford it	24	-2	-0.05
Money management			
Better off financially now (%)			
Women	62	11**	0.32
Men	70	6	0.17
Paid a late fee on a bill or loan in the past three months (%)			
Women	40	-9*	-0.23
Men	31	-3	-0.10
Kept track of money and spending (%)			
Women	73	9**	0.31
Men	76	6+	0.21
Sample size			
Couple		774	
Women		765	
Men		673	

Source: Baseline and one-year follow-up survey conducted by Mathematica; see Wu et al. (2021) for details.

Note: Impact estimates and control group means are regression-adjusted predicted values of outcomes. Sample sizes unweighted and varied by outcome. ***/+ Impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test.

The one-on-one financial coaching offered by Empowering Families may have contributed to these effects. If so, impacts on these outcomes among the 52 percent of couples who met with a financial coach would likely be larger than those for the full set of couples offered Empowering Families. When we used quasi-experimental methods to estimate effects on these outcomes for this group, we found that these impacts were generally larger than they were for the full sample.

For example, the impact on the economic hardship scale for couples who met with a financial coach shown in Table 4 (-0.55), is larger in magnitude than the impact for all Empowered Families couples shown in Table 3 (-0.20). During the one-year follow-up period, couples who met with a financial coach experienced, on average, 1.15 of the six hardships included in the scale, compared with 1.70 for the matched comparison group, a reduction of about a third in the number of hardships experienced. We also saw larger and more frequently statistically significant effects on each of the six hardship items that make

up the economic hardship scale. Similarly, we saw larger effects for those who met with a financial coach relative to the full set of couples offered Empowering Families when we considered the participants who reported being better off financially now than they were a year ago (Tables 3 and 4). However, impacts on paying late fees and regularly keeping track of money and spending were not larger for couples who met with a financial coach. Even so, these findings are broadly consistent with the interpretation that one-on-one financial coaching services had its intended effects on these outcomes, particularly family economic well-being.

Table 4. Impacts of Empowering Families on family economic well-being and money management among couples who met with a financial coach (quasi-experimental)

Measure	Matched comparison group mean	Impact	Effect size
Family economic well-being			
Family economic hardship scale (range = 0 to 6)	1.70	-0.55**	-0.37
Individual elements of six-item hardship scale (%)			
Whether thought about going to the doctor, dentist, or hospital but decided not to because of the cost	38	-0.08+	-0.22
Whether asked to borrow money from friends or family	40	-0.14**	-0.38
Whether cut the size of their meals or skipped meals because they couldn't afford enough food	26	-0.05	-0.15
Whether moved in with other people because of financial problems	11	-0.02	-0.07
Whether sold or pawned their belongings or took a payday loan or auto title loan	25	-0.11**	-0.33
Whether went without a phone because they could not afford it	22	-0.10**	-0.30
Money management			
Better off financially now (%)			
Women	62	18**	0.53
Men	69	10*	0.33
Paid a late fee on a bill or loan in the past three months (%)			
Women	36	-8	-0.22
Men	26	-5	-0.18
Kept track of money and spending (%)			
Women	81	5	0.22
Men	78	6	0.26
Sample size			
Couples		385	
Women		375	
Men		346	

Sources: Baseline and one-year follow-up surveys conducted by Mathematica and electronic program attendance records; see Wu et al. (2021) for details.

Note: Impact estimates and matched comparison group means are regression-adjusted predicted values of outcomes. Sample sizes unweighted and varied by outcome. ***/+ Impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test.

Discussion

Empowering Families was a program operated by The Parenting Center in Fort Worth, Texas that offered HMRE and economic stability services to couples with low incomes raising children together. The program's economic stability services addressed both employment and financial literacy. The Parenting Center included these services in their program model because the agency viewed them as addressing a pressing need among the families they served and because they considered the relationship and economic circumstances of these families to be closely intertwined (D'Angelo and Bodenlos 2020). Earlier HMRE programs had offered relatively light touch economic stability services and had had limited success in improving couples' economic outcomes (Moore et al. 2018). For this reason, Empowering Families aimed to offer a more intensive set of economic stability services than had been provided by these earlier programs. One-on-one employment counseling and financial coaching—offered as a supplement to Empowering Families' core group workshop, which included both HMRE and economic stability content—served as an important element of this more intensive approach.

In this report, we examine the contribution that one-on-one economic stability services may have had in Empowering Families' overall impact on the economic outcomes of participants. We focus on one-on-one economic stability services for two reasons. First, they were a distinctive feature of Empowering Families and have typically not been included in other HMRE programs. Second, these services require considerable effort and cost to implement. As part of our analysis, we looked at take-up rates and costs for these one-on-one services. In addition, to explore the potential effects of these services, we used quasi-experimental methods. This approach estimates program impacts for those who used these services on outcomes that were most likely to be directly affected by those services.

We found that one-on-one employment services had relatively low take-up among Empowering Families participants. Only about three in 10 program participants received these services, somewhat below the 40 percent target set by the program. We also found that, despite the relatively low take-up, the cost of offering these services was substantial, representing about 15 percent of total program costs and adding about \$1,600 per couple to the overall cost of the program. In addition, when we examined labor market outcomes, we found no impact for the overall sample or for the subset of participants who received one-on-one employment counseling. This latter result was based on quasi-experimental analysis. Therefore, readers should interpret these findings with some caution. Even so, these results suggest that the one-on-one employment counseling services offered by Empowering Families did not improve the labor market outcomes of participants. HMRE programs serving similar populations might want to take note of the low take-up of these services, the cost and complexity of implementing them, and the lack of evidence of their effects when considering incorporating one-on-one employment services into their program model.

When we examined one-on-one financial coaching, a different picture emerged. Take-up was still relatively low for these services, but higher than the take-up for employment counseling. Just over half of couples who enrolled in Empowering Families met with a financial coach. In addition, these services were substantially less expensive than employment counseling, representing less than 5 percent of total program costs and adding just over \$500 per couple to the overall cost of the program. Moreover, when we looked at the outcomes most closely associated with financial coaching—economic hardship and money management skills—we found evidence of program impacts among the full sample. Further, our quasi-experimental analysis suggested that these impacts—particularly the impact on economic hardship measures—were larger for the couples who met with a financial coach. This suggestive evidence, along with the relatively modest cost of these services, supports the promise of offering financial coaching in

HMRE programs serving couples with low incomes and suggests efforts to improve take-up of these services could be worthwhile.

These results are based on the experiences of participants from one HMRE program. Future research should examine whether other HMRE programs with strong financial literacy components have similar success in improving the economic well-being of their participants. In addition, because the Empowering Families study was not designed to isolate the effect of the one-on-one economic stability services, these results rely on a quasi-experimental approach to do so. Future random assignment studies of similar programs could be designed to measure the separate effect of one-on-one economic stability services without relying on quasi-experimental methods.

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Technical Appendix

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This technical appendix provides methodological details on the analysis presented in the main body of the report, along with additional results. It is organized into four sections. The first section briefly describes data used in both the report and this appendix. The second section summarizes how we estimated costs of one-on-one employment counseling and financial coaching services, respectively. The third section describes how propensity score–based approaches address analytic issues that alternative approaches cannot and then provides an explanation of the methodology used in this analysis. The final section presents the impact estimates of Empowering Families among study participants who received one-on-one economic stability services.

Data used for the analysis

The analysis presented in this report and the appendix relied on two data sources from the main impact study (Wu et al. 2022):

- 1. Baseline and one-year follow-up surveys.** Staff from Mathematica’s survey center administered a baseline survey to each member of the couple by telephone during the program intake appointment. About 12 months after study enrollment, the study team attempted to contact couples in both research groups to complete a one-year follow-up survey, either online or by telephone. The survey collected information on each member of a couple’s demographics, family backgrounds, relationship status and quality, children, employment, and well-being.
- 2. nFORM system data.** Empowering Families program staff entered attendance data into ACF’s nFORM computer system, which was designed to capture data on participant random assignment, attendance, and participation in program services.

Estimating costs of one-on-one economic stability services

The study team collected data on the resources required to deliver the Empowering Families program and estimated the cost of Empowering Families at \$10,844 per couple (Wu et al. 2021). Among the costs included in the estimate are contracted services resulting from the partnerships with CLC and Pathfinders. Contracted employment services from CLC accounted for 20 percent of total program costs whereas those related to financial literacy services from Pathfinders accounted for 6 percent of total costs.

We broke out contractor costs associated with providing couple workshop content on economic stability versus providing one-on-one services based on estimates of service hours by type of services as derived from the nFORM system data. These estimates suggest that, for employment services, 25 percent of service hours went to providing employment content for couple workshops and 75 percent to one-on-one employment counseling. For financial literacy services, these values were 27 and 73 percent, respectively. We applied these percentages to the contracted service cost to derive the cost of one-on-one economic stability services. For example, we estimated that one-on-one financial counseling represents 4 percent of total program costs based on the product of 6 percent (financial literacy services as a percentage of total program costs) and 73 percent (one-on-one services as a percentage of financial literacy service hours).

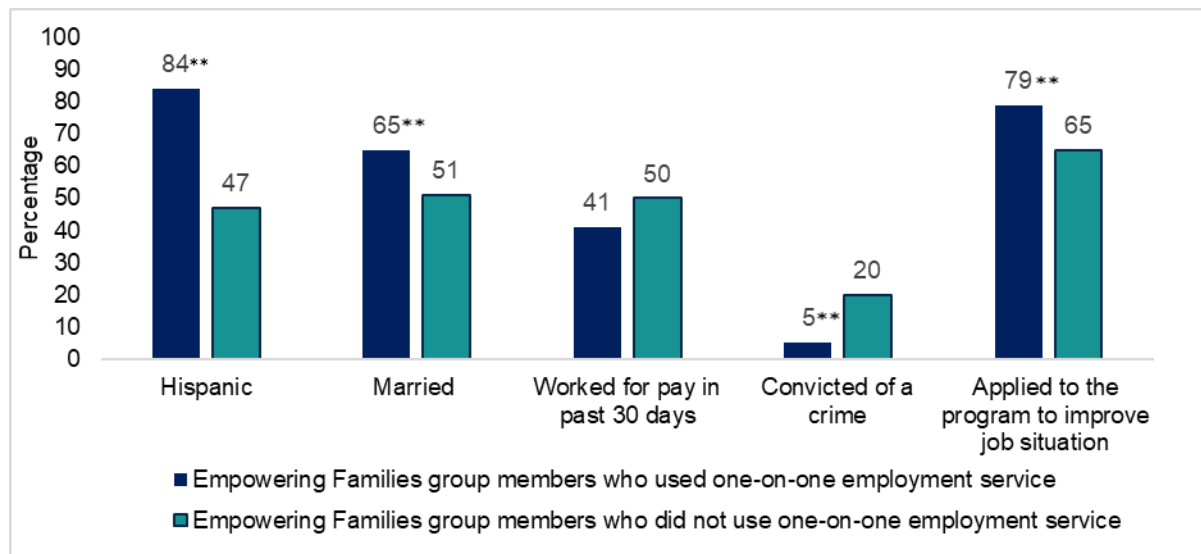
Estimating impacts among participants who used one-on-one economic stability services

Empowering Families program group members who used supplemental one-on-one economic stability services had different characteristics from those who did not

The central challenge in estimating the effect of Empowering Families among study participants who used one-on-one employment counseling or financial coaching services is to identify appropriate comparison groups. Identification is difficult because engagement in supplemental one-on-one economic stability services was not a matter of random assignment but instead resulted from study participants' choices and situations. Descriptive analysis provides evidence that Empowering Families group members who used either one-on-one employment counseling for individuals or financial coaching services for couples exhibited different characteristics from those who did not. In Figures A.1a and A.1b, we present selected characteristics at study enrollment by gender and by status of participation in one-on-one employment counseling services. Overall, less socioeconomically disadvantaged participants were more likely to turn to one-on-one employment counseling services.

Program group members who used employment services were more likely to be Hispanic and married than were those who did not use these services. On the baseline survey, they also reported being more likely than those who did not use employment services to have applied to the program to improve their job situation. In addition, they were less likely to have been convicted of a crime. These differences were statistically significant. Further, men who participated in one-on-one employment counseling services were more likely to be employed than those who did not, with a significant difference at the 5 percent level. An opposite trend obtained among women, although the difference was not statistically significant. The difference may indicate that women used one-on-one employment counseling services to get a job, whereas men may have used the services to get a better job. Given the gender differences in participants' baseline characteristics, we conducted all analyses for one-on-one employment counseling services separately by gender.

Figure A.1a. Baseline characteristics of women by use of one-on-one employment counseling services



Sources: Baseline survey conducted by Mathematica and nFORM system.

Note: **/+ Statistically significantly different from the “Did not use one-on-one employment service” group at the .01/.05/.10 level.

Figure A.1b. Baseline characteristics of men by use of one-on-one employment counseling services

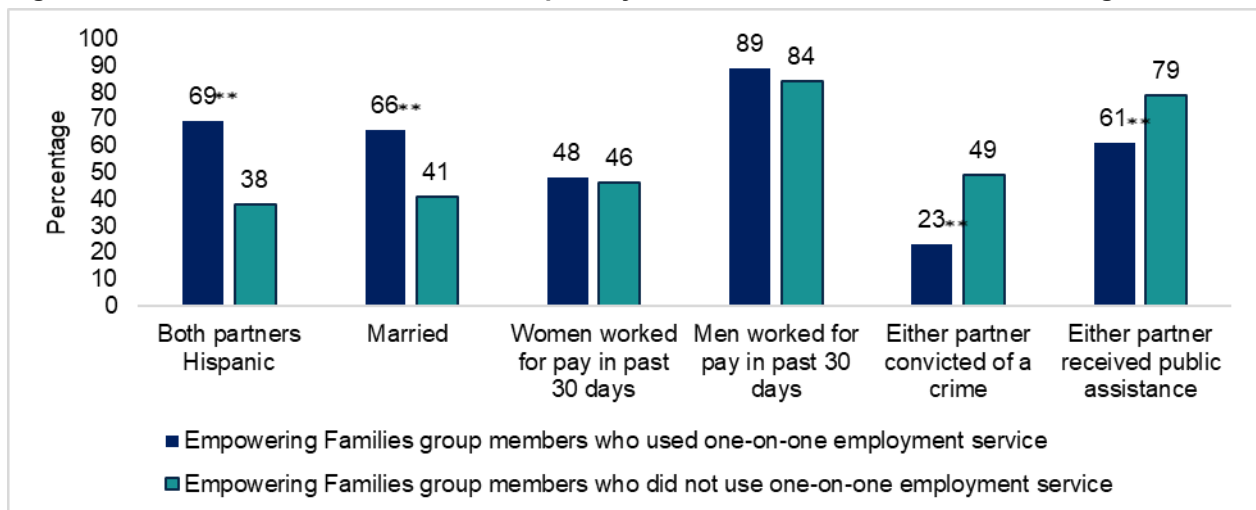


Sources: Baseline survey conducted by Mathematica and nFORM system.

Note: **/+ Statistically significantly different from the “Did not use one-on-one employment service” group at the .01/.05/.10 level.

In Figure A.2, we show selected couple characteristics at study enrollment by status of participation in one-on-one financial coaching services among Empowering Families program group couples. Couples that used one-on-one financial coaching were more likely than those that did not use those services to be Hispanic and married and less likely to have been convicted of a crime or received public assistance. These differences were statistically significant at the 1 percent level. Not surprisingly, although participants’ employment status and motivation for enrolling in the Empowering Families program were associated with their use of employment counseling, these factors were not associated with couples’ participation in financial coaching services. The different focus of employment counseling and financial coaching services corresponded to differences in participant baseline characteristics.

Figure A.2. Baseline characteristics of couples by use of one-on-one financial coaching services



Sources: Baseline survey conducted by Mathematica and nFORM system.

Note: **/+ Statistically significantly different from the “Did not use one-on-one employment service” group at the .01/.05/.10 level.

Potential approaches to estimating impacts among participants who used one-on-one economic stability services

Given that the use of economic stability services among Empowering Families program members was not random and members who used the services had different characteristics than those who did not, it is inappropriate to compare outcomes for program group members who used one-on-one economic stability services to those of the control group. Therefore, to estimate program effects among those who used supplemental economic stability services, we must find an appropriate comparison group that likely *would have* used the services if offered. For each type of service, we used the quasi-experimental approach of propensity score matching to identify comparison group members from the control group with baseline characteristics similar to those of Empowering Families group members who used the services. We used the following two propensity score methods: the first was our main estimation technique as reported in the main body of this report, and the second was a consistency and robustness check²:

- A traditional matching approach, in which individuals and couples that used one-on-one employment counseling or financial coaching services are matched to similar individuals and couples in the control group, with the outcomes of the two groups compared to estimate program effects
- A “likely user” approach, in which a group of “likely users” is identified within each research group, followed by a comparison of the outcomes of the two groups to estimate impacts

Both methods involve estimating a predicted probability of receiving one-on-one employment counseling or financial coaching services, or a propensity score, based on individuals’ or couples’ characteristics at the time they enrolled in the Empowering Families program. We created binary indicators of receiving any employment counseling or financial coaching services and used the indicators as dependent variables for three distinct propensity score models among (1) women who used one-on-one employment counseling services; (2) men who used one-on-one employment counseling services; and (3) couples that used one-on-one financial coaching services.

In the traditional approach to propensity score matching, we matched program group individuals and couples that used services to individuals and couples in the control group with similar propensity scores. This method should generate two research groups that are similar in their observed initial characteristics. However, it is possible that the groups still differ on unmeasured characteristics, such as their level of motivation to improve their employment or financial well-being.

Whereas the traditional approach matches each user member from the Empowering Families program group to a single member from the control group, the likely user method creates subgroups of couples with high propensity scores within both the Empowering Families program and control groups. This approach preserves the Empowering Families program study’s experimental framework. This is because the predicted probability of participation is based entirely on initial characteristics and avoids the biases by unobservable traits or by participants’ later choices that are present in traditional matching approaches.

² For this analysis, we did not use the Bloom adjustment, which is another common approach. This approach inflates the “intent-to-treat” estimates by the inverse of the proportion of program group participants who actually received treatment by assuming that the impact of the program for nonparticipants is zero. This assumption is not appropriate in our study’s context because nearly all participants had some level of engagement in the Empowering Families program even if they did not receive one-on-one economic stability services.

However, if the propensity score model cannot accurately predict who is a likely user, then likely users in the program group might be a substantially different set of members from those who actually used a service. In this case, the likely user method produces rigorous estimates of the impact on likely users, but the estimates of the effects of the Empowering Families program on those who actually used the service are not accurate.

Although the traditional and likely user approaches differ, both rely on the extent to which the propensity models identify sample members who would choose to receive one-on-one employment or financial coaching services if offered the opportunity. When using the propensity scores in a traditional matching approach, models with greater predictive power provide more confidence that the treatment group users are truly comparable to the control group members to whom they are matched. As noted, the likely user approach also depends on a highly predictive propensity model; without one, the estimated impacts are attenuated. Therefore, the credibility of the estimates depends on how well the probability of participation can be estimated. If the predictive power of the propensity model is high, then the two approaches yield similar results that are likely to reflect the Empowering Families program's effects on those who used either service. Conversely, if the propensity model has little predictive power, these approaches tend to yield different results, neither of which is likely to represent the program's effects for users (Schochet and Burghardt 2007). Therefore, an examination of the degree to which results from these two methods are similar can suggest the level of confidence associated with the estimates.

Propensity score model estimation

To estimate study participants' propensity scores, we followed the estimation procedure used in the Building Strong Families study (Moore et al. 2012), the Parents and Children Together study (Covington et al. 2020), and the Career STREAMS report (Goesling et al. 2022). To build the propensity score model for each sample, we used a multistage process to identify and select a wide range of possible predictors of service usage. First, we included all demographic, socioeconomic, and relationship variables used as baseline controls³ in the Empowering Families main impact study, which calculated "intent-to-treat" (ITT) impact estimates. The ITT estimates measure impacts among everyone eligible for services, regardless of whether individuals used them. Next, we included a subset of measures with strong theoretical connections with service receipt, such as whether sample members had been convicted of a crime, had unstable housing, or had reliable transportation at study enrollment. Finally, after selecting this initial set of predictor variables, we chose additional strong "candidate predictors" whose connection with service receipt was more ambiguous, such as whether sample members worked full- or part-time at study enrollment and their motivation for program participation. To do so, we estimated a logistic regression model with the measure of specific one-on-one services take-up as the dependent variable and the initial set of predictors as independent variables; we then estimated the residual. Next, we added the candidate variables with the strongest correlation with the residual to the next run of the logistic regression. The process continued until we selected three candidate variables in a row that had *p*-values above .25. At that

³ The impact estimation model of the Empowering Families main impact study included three types of covariates. First, we included a covariate to account for the fact that random assignment was typically conducted separately for English-speaking and Spanish-speaking couples. Second, we included baseline versions of all primary outcomes that were available, such as relationship status and quality, coparenting quality, and earnings at baseline. Third, the estimation included covariates to account for statistically significant differences in the baseline characteristics of the Empowering Families and control group sample members, including women's employment and earnings in the past 30 days and the relationship happiness measure at baseline. This third category did not add other controls because it included all baseline versions of primary outcomes (see Wu et al. 2022 for details).

point, we removed those final three candidate variables and considered the set of baseline control, theoretical, and candidate predictor variables as final (Table A.1).

We then ran a logistic regression model to regress the one-on-one service take-up measure on the predictor variables. We used only members in the Empowering Families program group and the coefficients from the regression, in combination with individual baseline characteristics, to predict the likelihood of service usage (or propensity scores) for both the Empowering Families program group and control group members. Given our sample size and number of predictors, we faced the potential risk of “overfitting” our analytic sample (wherein our estimation model fits the data too closely and prevents generalizability). Thus, we created 10 predictive subsamples of the data and used a split-sample approach to estimate propensity scores (Harvill et al. 2013). This approach estimates propensity scores for participants within subgroup by using only the data from sample members not within that subgroup.

Table A.1. List of all predictor variables included in propensity score model estimation for both traditional and likely user matching approaches (percentage unless otherwise specified)

Baseline characteristics	Whether a characteristic is included in propensity score estimation for		
	One-on-one employment counseling services		One-on-one financial coaching services
	Women	Men	Couple
Demographic and socioeconomic characteristics			
Age (years)	Yes	Yes	Yes
Race and ethnicity			
Hispanic	Yes	Yes	Yes
Black, non-Hispanic	Yes	Yes	Yes
Other	No	No	Yes
Foreign-born	No	Yes	Yes
Speaks Spanish at home	Yes	Yes	Yes
Had at least a high school diploma or GED	Yes	Yes	Yes
In school at baseline	Yes	Yes	Yes
Depressive symptoms (range = 0 to 24)	Yes	Yes	Yes
Any reliance on SNAP, TANF, or other public assistance	Yes	No	Yes
Unstable housing	Yes	No	Yes
Convicted of a crime	Yes	Yes	Yes
Couple’s relationship status, quality, and coparenting quality			
Married	Yes	Yes	Yes
Romantically involved	Yes	Yes	Yes
Relationship quality			
Avoidance of destructive conflict behaviors (range = 1 to 4)	Yes	Yes	Yes
Relationship happiness (range = 0 to 10)	Yes	Yes	Yes
Support and affection (range = 1 to 4)	Yes	Yes	Yes
Couple had at least one child together (%)	No	No	Yes
Partner had a child with another partner (%)	Yes	Yes	Yes

Baseline characteristics	Whether a characteristic is included in propensity score estimation for		
	One-on-one employment counseling services		One-on-one financial coaching services
	Women	Men	Couple
Couple was expecting a child (%)	Yes	No	Yes
Quality of coparenting relationship (range = 1 to 5)	Yes	Yes	Yes
Age of youngest child (years)	Yes	No	No
Employment-related characteristics			
Employment status			
Only self employed	Yes	Yes	Yes
Only partner employed	Yes	Yes	Yes
Both self and partner employed	Yes	Yes	Yes
Earnings in past 30 days (\$)	Yes	Yes	Yes
Worked more than 30 hours per week	No	No	Yes
Employment challenges making it very hard or extremely hard to find and keep a good job:			
Not having reliable transportation	No	No	No
Not having the right clothes for work	No	Yes	No
Not having good enough childcare or family help	Yes	Yes	No
Not having the right skills or education	Yes	No	No
Having substance use or mental health problems	No	Yes	No
Employment challenges composite (sum)	No	No	Yes
Motivation to participate			
To improve job situation	Yes	Yes	Yes

Note: To create couple-level constructs of individual response items, we averaged continuous variables at the couple level and used binary variables to create constructs that captured whether either or both partners within a couple had a particular characteristic. Reliance on public assistance includes receipt of at least one of 10 forms of public assistance in the month before study enrollment. The most common were Supplemental Nutrition Assistance Program (SNAP); food stamps or Women, Infants, and Children (WIC); and Temporary Assistance for Needy Families (TANF). We averaged employment challenge items at the couple level, with the employment challenges composite representing the sum of individual responses to employment challenge questions.

Creation of comparison groups

As discussed in the previous section, the traditional matching and likely user approaches used the same propensity scores. The central difference between the approaches is the way we used the scores to construct research groups.

Traditional matched comparison groups

For the traditional matching approach, we matched each Empowering Families group member to a “comparison group member” from the control group with the most similar propensity score generated during the previous estimation procedure. Under this “nearest neighbor” matching approach, it is possible

for the same comparison group member to be matched to more than one treatment group member. In fact, this matching method resulted in matched comparison group sample sizes that were smaller than treatment group sample sizes. For example, we matched 143 women who used one-on-one employment counseling services within the treatment group to 98 women within the comparison group (Table A.2). To account for the differences in sample sizes across the matched research groups, we calculated match weights by using Empowering Families program nonresponse weights. If a matched comparison group member matched more than once, that member received correspondingly greater weight in the analysis, such that the weight was equal to the total of the matched treatment members' nonresponse weights and the weighted total sample size was equal for the program and matched comparison groups of the original experimental design.

Using standardized difference (ASD) statistics and statistical significance (p -values⁴), we compared 30 characteristics between the Empowering Families program and comparison group members used in the traditional propensity score matching analyses. We found (1) that the two research groups were well matched on key observable baseline characteristics (the main impact study's baseline demographic, socioeconomic, and relationship covariates previously described as well as race and ethnicity, foreign-born, and education covariates; $p > .1$, ASD < 0.25) and (2) that the groups largely had few statistically significant imbalances (Tables A.2 and A.3). We included as covariates within our impact estimates a couple of employment challenge-related characteristics that remained statistically significantly different between groups (e.g., a criminal record or lack of employment documentation).

⁴ We also examined the balance based on effect size. Given the skewed distribution of many covariates, effect size balance for both the traditional matching and likely attender approaches was not always consistent, with balance results based on p -value and ASD. As described later in the impact estimation procedure, we also tested covariate selection based on effect size versus p -values. The results are available from authors upon request.

Table A.2. Baseline characteristics of the Empower Families group members who used one-on-one economic stability services and the comparison groups constructed using the traditional matching approach (percentage unless otherwise specified)

	Employment counseling services				Financial coaching services	
	Women		Men		Couple	
	Empowering Families	Matched comparison	Empowering Families	Matched comparison	Empowering Families	Matched comparison
Demographic and socioeconomic characteristics						
Average age (years)						
Women	34.79	35.09	n.a	n.a	34.08	34.65
Men	n.a	n.a	35.56	35.71	36.06	36.26
Race and ethnicity						
Hispanic ^b	84	83	73	72	69	67
Black, non-Hispanic ^b	13	11	23	25	16	20
Other ^b	3	6	4	3	15	13
Foreign-born ^b	74	73	63	53	51	48
Speaks Spanish at home ^b	76	74	61	53	55	49
Had at least a high school diploma or GED ^b	74	70	68	65	51	55
Depressive symptoms (range = 0 to 24)						
Women	5.24	5.64	n.a	n.a	5.85	5.10
Men	n.a	n.a	4.44	4.35	4.24	3.59
Any reliance on SNAP, TANF, or other public assistance ^c	50	58	49	48	61	67
Convicted of a crime ^c	5	5	19	22	23*	27
Couple's relationship status, quality, and coparenting quality						
Married ^a	65	59	61	68	66	60
Relationship quality ^a						
Avoidance of destructive conflict behaviors (range = 1 to 4)	2.69	2.59	2.61	2.59	2.52	2.58
Constructive conflict behaviors (range = 1 to 4)	3.10	3.09	3.12	3.15	3.07	3.14
Relationship happiness (range = 0 to 10)	8.33	8.33	8.18	8.30	8.01	8.23
Support and affection (range = 1 to 4)	3.34	3.33	3.36	3.31	3.29	3.31
Quality of coparenting relationship (range = 1 to 5) ^a	4.33	4.34	4.35	4.29	4.21	4.32
Employment-related characteristics						
Worked for pay in past 30 days						

Offering one-on-one economic stability services as part of HMRE programming

	Employment counseling services				Financial coaching services	
	Women		Men		Couple	
	Empowering Families	Matched comparison	Empowering Families	Matched comparison	Empowering Families	Matched comparison
Women	42	51	n.a	n.a	49	51
Men	n.a	n.a	92	92	88	89
Both partners	n.a	n.a	n.a	n.a	41	48
Earnings in past 30 days (\$)						
Women	459	612	n.a	n.a	637	740
Men	n.a	n.a	2,064	2,028	1,989	2,005
Worked more than 30 hours per week						
Women	20	28	n.a	n.a	28	31
Men	n.a	n.a	80	82	76	73
Employment challenges making it very hard or extremely hard to find and keep a good job ^a :						
Not having reliable transportation	24*	14	18	14	7	3
Not having the right clothes for work	8*	2	9	4	0	0
Not having the required documentation for employment	22	27	22*	11	5	6
Not having good enough child care or family help	38	39	14	8	8*	3
Having a criminal record	9*	3	14	14	2	2
Not having the right skills or education	22	15	15	13	4	4
Having substance use or mental health problems	9	6	6	7	0	0
Employment challenges composite (sum; range 0–7) ^d	1.33	1.05	0.98	0.70	1.01	0.93
Motivation to participate						
To improve job situation ^a	79	77	82	80	55	54
Sample size						
	143	98	119	87	238	149

Sources: Baseline surveys conducted by Mathematica and nFORM system.

Note: **/*/+ Within-sample group mean differences statistically significant at the .01/.05/.10 level, respectively, two-tailed Welch t-test for continuous variables and chi-square test for categorical variables. Percentages may not sum to 100 because of rounding. For Couple sample, ^a denotes couple-level averages; ^b denotes that a characteristic is present for both partners; ^c denotes that a characteristic is present for either partner; and ^d the employment challenges composite is the sum of responses to employment challenge questions, averaged at the couple level.

Likely user matched comparison groups

Whereas the traditional approach matched each attender couple from the Empowering Families program group to participants from the control group, the likely attender method created subgroups of participants with high propensity scores within both the Empowering Families program and control groups. This approach creates groups solely on the basis of pre-intervention characteristics, thus avoiding the threat of bias introduced by unobservable traits that is characteristic of traditional matching approaches. Using the generated propensity score values, we set a likely user “cutoff value” such that the number of Empowering Families program members above the propensity score cutoff value was the same as the actual number of users. We set the cutoff value by sample, ensuring that the numbers of likely users and actual users were identical within each sample. This matching method resulted in final matched comparison group sample sizes that were nearly identical to sample sizes of the treatment group that used services. For example, we matched 143 women who used one-on-one employment counseling services within the treatment group to 135 women within the matched comparison group (Table A.4). We then calculated match weights by using Empowering Families program nonresponse weights.

Overall, 55 percent of couples that responded to the follow-up survey used one-on-one financial coaching services. Among couples identified as likely users, that rate was 66 percent (Table A.3). Among couples not categorized as likely users, only about two-thirds as many (40 percent) used those services. We observed a similar pattern for one-on-one employment counseling services. Overall, about 30 percent of sample members used that service; among likely users, however, the rate was higher (60 and 47 percent for women and men, respectively). The results show that the model had substantial, though far from perfect, predictive power, leading to the expectation that estimates generated with this method might somewhat underestimate the true impact of service usage.

Table A.3. Actual service usage rates of the Empowering Families program group members, by likely user status (percentages)

	All Empowering Families group members	Sample included in likely user analysis	Sample excluded from likely user analysis
Women who used employment counseling services	33.73	60.14	20.28
Men who used employment counseling services	31.40	47.06	24.23
Couples that used financial coaching services	54.59	66.39	40.40

Source: nFORM system.

Note: Likely users consist of program group couples with the highest propensity scores. The “All Empowering Families group members” usage rates are for all randomized participants who responded to the follow-up survey. We calculated the rates for likely users by using the sample that responded to the follow-up survey, applying nonresponse weights to make that sample representative of the full baseline sample.

Using standardized difference (ASD) statistics and statistical significance (*p*-values), we compared 30 characteristics between the Empowering Families program and comparison group members in the likely user analyses. We found (1) that the groups were well matched on key observable baseline characteristics (the main impact study’s baseline covariates, race and ethnicity, foreign-born, and education covariates; *p* > .1, ASD < 0.25) and (2) that the groups largely had few statistically significant imbalances, as shown in Table A.4. We included as covariates in our impact estimates any characteristics that were statistically significantly different between groups.

Table A.4. Baseline characteristics of the Empower Families program members who used one-on-one economic stability services and the comparison groups created using likely user approach (percentage unless otherwise specified)

	Employment counseling services				Financial coaching services	
	Women		Men		Couple	
	Empowering Families	Matched comparison	Empowering Families	Matched comparison	Empowering Families	Matched comparison
Demographic and socioeconomic characteristics						
Average age (years)						
Women	34.49	35.06	n.a	n.a	34.58	35.46
Men	n.a	n.a	35.98	35.65	36.69	37.25
Race and ethnicity						
Hispanic ^b	100+	98	86	89	83	84
Black, non-Hispanic ^b	0	1	13	10	5	8
Other ^b	0	1	1	1	12	9
Foreign-born ^b	93	89	75	76	64	64
Speaks Spanish at home ^b	99	97	75	81	70	63
Had at least a high school diploma or GED ^b	72	78	67	65	45	46
Depressive symptoms (range = 0 to 24)					45	46
Women	3.66*	4.82	n.a	n.a	5.45	5.33
Men	n.a	n.a	4.06	3.79	4.09	3.39
Any reliance on SNAP, TANF, or other public assistance ^c	42*	56	42	45	10	14
Convicted of a crime ^c	1	1	7	6	53	60
Couple's relationship status, quality, and coparenting quality						
Married ^a	74	72	66	74	75	79
Relationship quality ^a						
Avoidance of destructive conflict behaviors (range = 1 to 4)	2.82	2.76	2.65	2.70	2.60	2.58
Constructive conflict behaviors (range = 1 to 4)	3.08	3.10	3.09+	3.19	3.04	3.08
Relationship happiness (range = 0 to 10)	8.64	8.51	8.30	8.43	8.20	8.36
Support and affection (range = 1 to 4)	3.41	3.35	3.40	3.44	3.33	3.32
Quality of coparenting relationship (range = 1 to 5) ^a	4.42*	4.30	4.40	4.35	4.25	4.23
Employment-related characteristics						
Worked for pay in past 30 days						

Offering one-on-one economic stability services as part of HMRE programming

	Employment counseling services				Financial coaching services	
	Women		Men		Couple	
	Empowering Families	Matched comparison	Empowering Families	Matched comparison	Empowering Families	Matched comparison
Women	35	39	n.a	n.a	44+	53
Men	n.a	n.a	94	97	95	95
Both partners	n.a	n.a	n.a	n.a	40+	49
Earnings in past 30 days (\$)						
Women	334	404	n.a	n.a	600	769
Men	n.a	n.a	2,276	2,406	2,412	2,286
Worked more than 30 hours per week						
Women	14	17	n.a	n.a	24	30
Men	n.a	n.a	87	85	87	85
Employment challenges making it very hard or extremely hard to find and keep a good job ^a :						
Not having reliable transportation	20*	11	19	12	4	2
Not having the right clothes for work	5	4	6	5	0	0
Not having the required documentation for employment	22	26	25*	14	7	6
Not having good enough child care or family help	34	41	19*	9	6	4
Having a criminal record	6	4	10	8	1	0
Not having the right skills or education	18	14	14	13	3	2
Having substance use or mental health problems	6	4	3	5	1	0
Employment challenges composite (sum; range 0–7) ^d	1.11	1.04	0.97+	0.66	0.92+	0.77
Motivation to participate						
To improve job situation ^a	85	81	88	88	61	54
Sample size						
	143	135	119	98	238	205

Sources: Baseline surveys conducted by Mathematica and nFORM system.

Note: **/*/+ Within-sample group mean differences statistically significant at the .01/.05/.10 level, respectively, two-tailed Welch t-test for continuous variables and chi-square test for categorical variables. Percentages may not sum to 100 because of rounding. For Couple sample, ^a denotes couple-level averages; ^b denotes that a characteristic is present for both partners; ^c denotes that a characteristic is present for either partner; and ^d the employment challenges composite is the sum of responses to employment challenge questions, averaged at the couple level.

Estimating impacts among participants who used one-on-one economic stability services

To estimate the impacts of Empowering Families among participants who used each type of economic stability service (employment counseling services or financial coaching services), we compared the outcomes of the matched groups for each method. That is, for the traditional matching method, we compared the outcomes of program group members who used the service and their matched comparison group; for the likely user method, we compared the outcomes of program and control group members who were identified as likely users of the service. We estimated the impacts of Empowering Families among study participants who used one-on-one economic stability services by using methods similar to those used for the Empowering Families main impact study, relying on a multivariate weighted-least-squares regression model (see Wu et al. 2022 for further details on outcome variable and nonresponse weight construction). In addition to considering the choice of covariates used when estimating ITT impacts, we included any imbalanced covariates identified during our propensity estimation procedure.

To verify that the findings from our analysis were not overly sensitive to specific covariates included within the model, we also tested different iterations of imbalanced covariate inclusion within the regressions. The first iteration of the model included covariates from the main impact model and any unbalanced imbalanced characteristics. The second iteration included additional covariates that were theoretically important. To adjust for the observed differences between the research groups for both iterations, we tested two covariate selection methods. We included any imbalanced characteristics from the propensity score estimation as covariates in the impact estimation models based on (1) $p < .1$; or (2) effect size $> .05$. Results were generally robust with different covariate selection specifications. To enable comparison to the ITT results from the main report, the impacts in the following section reflect propensity score-weighted models using covariates from the main impact model and any unbalanced characteristics based on p -values.

Impacts related to one-on-one economic stability services

Empowering Families did not affect connection to the labor market or overall labor market success among participants who used one-on-one employment counseling

For the impacts among men and women who used one-on-one employment counseling services, we generally found that the pattern of results resembled the findings from the main impact study that focused on ITT estimates (Table A.5). Effect sizes remained relatively small when we restricted the analysis to members who used or were likely to use one-on-one employment counseling services. The smaller sample size also reduced the statistical power of the analysis and corresponding precision of the impact estimates. Even so, we found that the members who used one-on-one employment counseling services and the matched comparison groups all reported similar labor market outcomes one year after study enrollment. Estimated impacts were similar for both propensity score-based matching approaches. These findings suggest that the one-on-one employment counseling services offered by Empowering Families were unlikely to have had their primary intended effect.

Table A.5. Impacts of Empowering Families on labor market outcomes among women and men who used one-on-one employment counseling services

Outcomes	Traditional matching			Likely user approach			Impact among members eligible for services
	Matched comparison	Impact	ES	Matched comparison	Impact	ES	ES
Connection to the labor market							
Employed or taking steps to find a job (%)							
Women	67	0	0.01	52	6	0.15	0.03
Men	95	1	0.08	97	1	0.21	0.02
Labor market success							
Monthly earnings (\$)							
Women	682	127	0.12	542	19	0.02	-0.07
Men	2,431	-67	-0.04	2,601	171	0.09	0.00
Hours worked per week							
Women	14	1.35	0.08	11	1.59	0.10	-0.01
Men	35	0.91	0.05	37	0.34	0.02	-0.04
Employment with fringe benefits (%)							
Women	26	2	0.06	15	1	0.06	0.02
Men	55	-2	-0.05	58	-6	-0.15	-0.02
Sample size							
Women		239			275		761
Men		204			215		670

Sources: Baseline and one-year follow-up survey conducted by Mathematica and nFORM system.

Notes: **/+ impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test. Impacts among members eligible for service estimates were first reported in Wu et al. (2022); see that report for more details on their estimation. ES = effect size, calculated by using Hedge's g for continuous variables and the Cox equation for binary variables.

The Empowering Families program improved family economic well-being among couples that used one-on-one financial coaching services

For the impacts among couples that used financial coaching services, we found that Empowering Families reduced the number of economic hardships experienced among couples that used financial coaching services compared to the matched comparison group (Table A.6). Estimated impacts were similar for both propensity score-based matching approaches. Moreover, even though we restricted the analysis to couples that used one-on-one financial coaching services, these effect sizes (ES = -0.37 based on traditional matching; -0.16 based on likely user approach) were somewhat larger than findings from the ITT analysis (-0.13). We also see some larger and more frequently statistically significant effects on the six hardship items that make up the economic hardship scale based on the traditional matching approach. The estimated impacts on individual hardship items based on likely user approach were more similar to findings from the ITT analysis.

Further, we see larger effects for those who met with a financial coach relative to the full sample on the proportion who report that they are now better off financially than they were a year ago. This finding pertains to both propensity score-based matching approaches. However, impacts on paying late fees and regularly keeping track of money and spending were not larger for couples that met with a financial

coach. Even so, these findings are broadly consistent with the interpretation that one-on-one financial coaching services had their intended effects on these outcomes, particularly family economic well-being.

Table A.6. Impacts of Empowering Families on family economic well-being and money management outcomes among couples that met with a financial coach

Outcomes	Traditional matching			Likely user Approach			Impact among members eligible for services
	Matched comparison	Impact	ES	Matched comparison	Impact	ES	ES
Family economic well-being							
Family economic hardship scale (range = 0 to 6)	1.70	-0.55	-0.37**	1.31	-0.22	-0.16+	-0.13+
Individual elements of six-item hardship scale (%)							
Whether thought about going to doctor, dentist, or hospital but decided not to because of cost	38	-0.08	-0.22+	42	-12	-0.31*	-0.18*
Whether asked to borrow money from friends or family	40	-0.14	-0.38**	29	-6	-0.16**	-0.18**
Whether cut the size of their meals or skipped meals because they couldn't afford enough food	26	-0.05	-0.15	20	0	0.01	-0.04
Whether moved in with other people because of financial problems	11	-0.02	-0.07	9	-2	-0.08	-0.07
Whether sold or pawned their belongings or took a payday loan or auto title loan	25	-0.11	-0.33**	14	-0	-0.01	0.03
Whether went without a telephone because they could not afford it	22	-0.10	-0.30**	13	-3	-0.11	-0.05
Money management skills							
Better off financially now (%)							
Women	62	18	0.53**	66	12	0.36**	0.32**
Men	69	10	0.33*	72	7	0.21	0.17
Paid a late fee on a bill or loan in past three months (%)							
Women	36	-8	-0.22	37	-10	-0.29**	-0.23*
Men	26	-5	-0.18	27	-2	-0.08	-0.10
Kept track of money and spending (%)							
Women	81	5	0.22	72	9	0.30*	0.31**
Men	78	6	0.26	80	-2	-0.07	0.21+
Sample size							
Couple		385			442		787
Women		375			434		764
Men		346			400		670

Sources: Baseline and one-year follow-up survey conducted by Mathematica and nFORM system.

Notes: **/+ Impact estimates are statistically significant at the .01/.05/.10 level, respectively, two-tailed test. ES = effect size, calculated by using Hedge's g for continuous variables and the Cox equation for binary variables.

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