THE SUPPORTING
HEALTHY MARRIAGE EVALUATION

EARLY IMPACTS
ON
LOW-INCOME
FAMILIES

Supporting
Healthy
Marriage

The Supporting Healthy Marriage Evaluation:
Early Impacts on Low-Income Families

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Overview

The Supporting Healthy Marriage (SHM) evaluation was launched in 2003 to test the effectiveness of a skills-based relationship education program designed to help low-income married couples strengthen their relationships and, in turn, to support more stable and more nurturing home environments and more positive outcomes for parents and their children. The evaluation is led by MDRC, in collaboration with Abt Associates and other partners, and is sponsored by the Department of Health and Human Services.

The SHM program is a voluntary, yearlong, relationship and marriage education program for low-income, married couples who have children or are expecting a child. The program provides group workshops based on structured curricula; supplemental activities to build on workshop themes; and family support services to address participation barriers, connect families with other services, and reinforce curricular themes. The study's rigorous random assignment design compares outcomes for families who are offered SHM's services with outcomes for a similar group of families who are not offered SHM's services but can access other services. This report presents estimated impacts on the program's targeted outcomes about one year after couples entered the study.

Key Findings

- **The SHM program produced a consistent pattern of small positive effects on multiple aspects of couples' relationships.** Relative to the control group, the program group showed higher levels of marital happiness, lower levels of marital distress, greater warmth and support, more positive communication, and fewer negative behaviors and emotions in their interactions with their spouses. The consistency of results across outcomes and data sources (surveys and independent observations of couple interactions) is noteworthy.

- **Compared with individuals in the control group, program group members reported experiencing slightly less psychological and physical abuse from their spouses.** Men and women in the program group reported less psychological abuse in their relationships, and men in the program group reported that their spouses physically assaulted them less often, compared with their control group counterparts.

- **Men and women in the program group reported slightly lower levels of adult psychological distress (such as feelings of sadness or anxiety) than their control group counterparts.**

- **The program did not significantly affect whether couples stayed married at the 12-month follow-up point.**

This study provides some encouraging evidence that a couples-based, family-strengthening intervention can yield positive effects when delivered on a large scale to low- to modest-income couples with diverse backgrounds. The importance of the short-term impacts, however, will ultimately depend on whether the program yields positive impacts on marital stability and parents' and children's well-being over time. The effects of SHM on longer-term outcomes — including effects on divorce and separation, parenting, father engagement, and child well-being two and a half years after couples enrolled in the study — will be explored in subsequent reports.

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Executive Summary

The Supporting Healthy Marriage (SHM) evaluation was launched in 2003 using a rigorous research design to test the effectiveness of one possible approach to improving outcomes for lower-income parents and children: strengthening marriages as a foundation for supporting stable, nurturing family environments and the well-being of parents and children.[1] The Department of Health and Human Services, Administration for Children and Families (ACF), sponsored the evaluation as part of its family-strengthening research agenda. The evaluation is led by MDRC in collaboration with Abt Associates, Child Trends, Optimal Solutions Group, and Public Strategies as well as academic experts Thomas Bradbury, Philip Cowan, and Carolyn Pape Cowan.

SHM is motivated by two strands of research. One growing body of research shows that parents and children tend to fare better on a range of outcomes when they live in low-conflict, two-parent families; parent-child relationships are more supportive and nurturing when parents experience less distress in their marriages; and children are less likely to live in poverty when they grow up in two-parent families. A different strand of research points to the potential effectiveness of preventive, skills-based relationship education curricula for improving the quality of marriages. To date, this research has focused primarily on middle-income couples. Collectively, these findings have motivated policymakers to test strategies that could improve relationship stability and quality for low-income parents and, thereby, improve the outcomes for parents and their children.

This report presents the estimated 12-month effects of SHM on outcomes that were short-term targets of the intervention. These outcomes include marital stability, the quality of couple relationships, the quality of coparenting relationships, and men's and women's psychological distress. The effects of SHM on indirect or longer-term outcomes — including effects on divorce and separation, parenting, father engagement, and child well-being — will be explored in subsequent reports. A companion report to this one provides more detail on the SHM research sample and documents the implementation of the SHM program across eight local programs that are participating in this evaluation.[2]

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[1]Throughout this report, the terms "low-income," "low-to-modest income," and "lower-income" are used to refer to couples with family incomes that are below 200 percent of the federal poverty level.

[2]Jennifer Miller Gaubert, Daniel Gubits, Desiree Principe Alderson, and Virginia Knox, *The Supporting Healthy Marriage Evaluation: Final Implementation Findings* (Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation, Forthcoming, 2012).

Box ES.1

The SHM Program Model: Three Complementary Components

Relationship and marriage education workshops. The core SHM service, workshops were typically conducted with a range of 3 to 20 couples in a group setting in weekly sessions lasting 2 to 5 hours each. Longer than many marriage education services, SHM workshops typically lasted 6 to 15 weeks, for a total of 24 to 30 hours of curriculum.

Supplemental activities. These events built on and complemented the workshops, providing couples additional opportunities to learn and practice relationship skills and to build support networks with other married couples.

Family support services. Family support workers were the main link between couples and the program. They maintained contact over time, facilitated participation in the program by linking couples to needed community services, and worked in one-on-one settings to reinforce themes presented in the workshops.

The SHM Program Model

In eight locations across the United States, the SHM evaluation is testing a voluntary, yearlong program for low-income, married couples who, at study entry, had children or were expecting a child. The program included the three complementary components described in Box ES.1. The program's central and most intensive component was a series of relationship and marriage education workshops offered in the first four to five months of enrollment in the program. Longer than most marriage education services and based on structured curricula shown to be effective with middle-income couples, the workshops were designed to help couples enhance the quality of their relationships by teaching strategies for managing conflict, communicating effectively, increasing supportive behaviors, and building closeness and friendship. Workshops also wove in strategies for managing stressful circumstances commonly faced by lower-income families (such as job loss, financial stress, or housing instability), and they encouraged couples to build positive support networks in their communities. The eight local programs selected one of four curricula for their workshops. Complementing the workshops was a second component, which consisted of supplemental activities — educational and social events that were intended to build on and reinforce lessons from the curricula. The third component, family support services, paired couples with a specialized staff member who maintained contact with them and facilitated their participation in the other two program components. Because programs sought to keep couples engaged in services for one year, family support staff helped to meet family resource needs by connecting participants with other needed services, which also helped address participation barriers. Staff also reinforced the workshop themes and skills in their one-on-one meetings with couples.

An implementation analysis found that the full SHM program model was operated by the eight local programs participating in the study.[3] The average SHM operating cost per couple was $9,100, ranging from $7,400 to $11,500 per couple across the local programs. This cost reflects the intensity of a yearlong, multicomponent program model whereby substantial staff efforts focused on maintaining couples' engagement in the program. According to program information data, on average, 83 percent of couples attended at least one workshop; 66 percent attended at least one supplemental activity; and 88 percent attended at least one meeting with their family support workers. Once enrolled, couples participated in an average of 27 hours of services across the three components, including an average of 17 hours of curricula, nearly 6 hours of supplemental activities, and 4 hours of in-person family support meetings.

Intake and Characteristics of Couples in the Research Sample

To be eligible for the study, couples had to be low-income, report being married, be over age 18, and be either expectant parents or parents of a child under age 18 who lived in their home. They also had to understand one of the languages in which SHM services were offered (English or, in some locations, Spanish) and have no indication of domestic violence in the relationship.

From February 2007 to December 2009, a total of 6,298 couples meeting these eligibility criteria were recruited into the study and were randomly assigned into one of two research groups: (1) a program group, which was offered the package of SHM services, or (2) a control group, which was not provided SHM services but could receive other services available in the community.

At random assignment, the vast majority of couples (81 percent) were married.[4] This varied somewhat by location — in part, because some programs asked couples whether they considered themselves to be married rather than whether they were legally married, while other programs placed more emphasis on legal marriage as an eligibility criterion.

In terms of other characteristics, the couples in the SHM evaluation are quite diverse. At study entry, they had been married for about six years, on average. Most couples had low to modest incomes: 43 percent had incomes below the federal poverty level, and 39 percent had incomes between 100 percent and 200 percent of the threshold. About 43 percent of couples are Hispanic; 21 percent are white; 11 percent are black; and 25 percent are of another race or the spouses differ in racial or ethnic backgrounds. Couples had an average of two children. More

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[3]Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).
[4]The 12-month impact analysis includes couples who enrolled in the study, regardless of their marital status at study entry. As a sensitivity check, the impact estimates were also conducted excluding couples who were not married when they entered the study; those results (not shown) mirror the impact estimates presented in this report.

than a quarter were stepfamilies. Close to 80 percent of husbands and wives reported that they were happy with their marriages at the time they entered the study, but a little more than half reported thinking in the past year that their marriage was in trouble. About one-fourth of couples had at least one spouse who was experiencing psychological distress. Similarly, about one-fifth of couples had at least one spouse who reported a substance abuse problem.

Compared with nationally representative samples of low-income married couples with children, SHM couples were more likely to live in or near poverty and were substantially less likely to be happy with their marriages and more likely to think in the past year that their marriages were in trouble. In line with previous findings that couples who are unhappier in their relationships are at greater risk of marital disruption,[5] these comparisons suggest that the typical SHM couple was more vulnerable to relationship instability than an average low-income married couple with children in the United States.

The 12-Month Impacts of SHM

The first step in understanding the short-term effects of the SHM program is to examine its estimated impacts on service receipt.

- **As expected, program group couples received substantially more group relationship and marriage education services than control group couples (not shown).** As reported by study participants, about 89 percent of program group couples, compared with 24 percent of control group couples, reported receiving any relationship and marriage education services in a group setting since random assignment. About 42 percent of program group couples reported attending more than 10 group sessions, compared with less than 3 percent of control group couples.

Table ES.1 presents the estimated effects of SHM on core measures of the quality and stability of marital relationships, individual psychological distress, and coparenting outcomes, approximately 12 months after couples enrolled in the study. (Box ES.2 provides additional details about the table's impact estimates.) The results are summarized below.

- **The SHM program produced a consistent pattern of small but statistically significant positive effects on the quality of couples' marital relationships.** Approximately 12 months after study entry, program group members reported higher levels of marital happiness, lower levels of marital distress, greater warmth and support, more positive communication skills,

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[5]Benjamin R. Karney and Thomas N. Bradbury, "The Longitudinal Course of Marital Quality and Stability: A Review of Theory, Method, and Research," *Psychological Bulletin* 118, 1: 3-34 (1995).

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Table ES.1

Estimated Impacts on Primary Outcomes Based on the 12-Month Survey and Observed Couple Interactions

Outcome[a]	Program Group	Control Group	Difference (Impact)	Effect Size[b]
Relationship status and marital appraisals				
Married[c] (%)	90.0	89.3	0.8	—
Couple's average report of relationship happiness[d]	5.93	5.77	0.15	0.13 ***
Either spouse reports marriage in trouble (%)	47.7	52.9	-5.2	— ***
Reports of marital-quality interactions[e]				
Men's report of warmth and support	3.46	3.42	0.04	0.09 ***
Women's report of warmth and support	3.37	3.32	0.05	0.09 ***
Men's report of positive communication skills	3.24	3.19	0.05	0.08 ***
Women's report of positive communication skills	3.22	3.15	0.07	0.11 ***
Men's report of negative behavior and emotions	2.16	2.23	-0.07	-0.08 ***
Women's report of negative behavior and emotions	2.10	2.19	-0.09	-0.12 ***
Observed marital-quality interactions[f]				
Men's warmth and support	1.98	1.95	0.03	0.05
Women's warmth and support	1.98	1.98	0.00	0.00
Men's positive communication skills	5.57	5.49	0.08	0.10 *
Women's positive communication skills	5.76	5.68	0.08	0.09 *
Men's anger and hostility	1.25	1.28	-0.03	-0.05
Women's anger and hostility	1.37	1.42	-0.06	-0.10 *
Psychological abuse, physical assault, and infidelity				
Men's report of psychological abuse[e]	1.30	1.34	-0.04	-0.09 ***
Women's report of psychological abuse[e]	1.25	1.28	-0.04	-0.08 ***
Men's report of any physical assault (%)	11.3	13.4	-2.2	— **
Women's report of any physical assault (%)	8.6	9.2	-0.5	—
Men's report of any severe physical assault (%)	1.5	1.9	-0.3	—
Women's report of any severe physical assault (%)	1.6	1.6	0.0	—
Neither spouse reported infidelity (%)	92.4	91.3	1.1	—
Individual psychological distress and coparenting relationship[e]				
Men's psychological distress	1.85	1.90	-0.05	-0.06 **
Women's psychological distress	1.95	2.02	-0.07	-0.09 ***
Men's report of cooperative coparenting	3.45	3.43	0.02	0.03
Women's report of cooperative coparenting	3.33	3.30	0.02	0.04
Sample size				
Survey-reported outcomes				
Couples	2,650	2,745		
Men	2,415	2,504		
Women	2,575	2,668		
Observed outcomes (couples)[g]	695	702		

(continued)

Table ES.1 (continued)

and fewer negative behaviors and emotions in their interactions with their spouses, relative to control group members. Independent observations of couples interacting with each other also indicated that the program group, on average, showed more positive communication skills and less anger and hostility than the control group. Although the estimated effects are small, there is noteworthy consistency of results across several outcomes and the two data sources used at the 12-month follow-up point.

- **Compared with spouses in the control group, spouses in the program group reported experiencing slightly less psychological and physical abuse.** Men and women in the program group reported less psychological abuse in their relationships than their control group counterparts. In addition, fewer men in the program group reported that their spouses had physically assaulted them during the past three months, relative to men in the control group; the estimated effect for women is not statistically significant.

- **Men and women in the program group reported slightly lower levels of individual psychological distress than their counterparts in the control group.** Again, the estimated impacts on individual psychological distress (such as feelings of sadness or anxiety that interfered with daily activities) are

Box ES.2

How to Read Table ES.1

The "Difference (Impact)" and "Effect Size" columns of Table ES.1 show the estimated impacts — or the differences in mean values or percentages on outcomes between the program and control groups. For most of the outcomes in this table, impact estimates are shown in standardized effect sizes, which is the impact estimate divided by the standard deviation of the outcome of interest for the control group. For binary outcomes in this table, impact estimates are presented as percentage point differences between the program and control groups.

Effect sizes are one way to interpret the substantive significance of the impact estimates. The magnitude of effect sizes can be interpreted with respect to empirical benchmarks that are relevant to the intervention, target population, and outcome measures being considered,[*] but, in the absence of such information, one can broadly characterize the potential substantive significance of the impacts by using general rules of thumb suggested by Cohen, whereby effect sizes of 0.2 or less are considered "small"; an effect size of 0.5 is considered "moderate"; and effect sizes of 0.8 or above are considered "large."[†]

The number of asterisks shown in the table indicates whether a given estimated impact is statistically significant (or that the estimated impact is large enough that it is unlikely to be due to a program with no true effect). One asterisk corresponds with whether the estimated impact is statistically significant at the 10 percent level; two asterisks indicate statistical significance at the 5 percent level; and three asterisks indicate statistical significance at the 1 percent level.

NOTES: [*]Carolyn J. Hill, Howard S. Bloom, Alison Rebeck Black, and Mark W. Lipsey, "Empirical Benchmarks for Interpreting Effect Sizes in Research" (New York: MDRC, 2007).

 [†]Jacob Cohen, *Statistical Power Analysis for the Behavioral Sciences,* 2nd ed. (Hillsdale, NJ: Lawrence Erlbaum, 1988).

small in magnitude but reflect a pattern of positive effects from the SHM program.

- **SHM's estimated impacts are generally consistent across the eight local programs in the evaluation.** Although the estimated effects are larger in some programs than in others, the differences across programs are too small to conclude that they result from true differences in the programs' effectiveness rather than from chance variation.

- **Some evidence suggests that the positive estimated impacts of SHM are somewhat larger and more consistent for Hispanic couples and for couples with high marital distress at study entry.** There is some uncertainty, however, about whether the differences can be attributed to these specific

characteristics or to other differences across the groups. For example, Hispanic couples also reported higher levels of distress at study entry, and they were clustered in particular local programs, making it difficult to disentangle the factors that underlie estimated subgroup differences in program impacts.

Discussion

The SHM evaluation set out to develop, implement, and test a voluntary, yearlong, relationship and marriage education program designed for low-income married couples with children. The program aimed to strengthen the quality and stability of low-income parents' marriages and, in turn, to support stable and nurturing family environments, thereby improving outcomes for low-income parents and their children. The short-term results of the SHM evaluation provide some of the first evidence demonstrating positive effects from a couples-based, family-strengthening intervention that was delivered on a large scale to low-to-modest income couples with diverse backgrounds.

The impacts of the SHM program add new evidence to a mixed set of findings about family-strengthening interventions for lower-income families to date: the Building Strong Families evaluation suggests that it is challenging to affect the relationship outcomes of low-income unmarried parents of newborns,[6] but the Supporting Father Involvement (SFI) and Strong Bonds studies,[7] and now SHM, indicate that it is possible to strengthen marital relationships in racially and ethnically diverse families with low or modest incomes, at least in the short run.

Although consistent positive effects in the SHM results to date are encouraging, the estimated impacts are smaller than effects identified by prior studies in this area.[8] SHM's short-term estimated impacts might be small for a variety of reasons. It is possible that lower-income couples who face challenging life circumstances find it more difficult to implement the skills

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[6]Robert G. Wood, Sheena McConnell, Quinn Moore, Andrew Clarkwest, and JoAnn Hsueh, *Strengthening Unmarried Parents' Relationships: The Early Impacts of Building Strong Families* (Princeton, NJ: Mathematica Policy Research, 2010).

[7]Philip A. Cowan, Carolyn Pape Cowan, Marsha Kline Pruett, Kyle Pruett, and Jessie J. Wong, "Promoting Fathers' Engagement with Children: Preventive Interventions for Low-Income Families," *Journal of Marriage and Family* 71: 663-679 (2009); and Scott M. Stanley, Elizabeth S. Allen, Howard J. Markman, Galenda K. Rhoades, and Donnella L. Prentice, "Decreasing Divorce in Army Couples: Results from a Randomized Controlled Trial Using PREP for Strong Bonds," *Journal of Couple and Relationship Therapy* 9, 2: 149-160 (2010).

[8]Victoria L. Blanchard, Alan J. Hawkins, Scott A. Baldwin, and Elizabeth B. Fawcett, "Investigating the Effects of Marriage and Relationship Education on Couples' Communication Skills: A Meta-Analytic Study," *Journal of Family Psychology* 23, 2: 203-214 (2009); and Alan J. Hawkins, Victoria L. Blanchard, Scott A. Baldwin, and Elizabeth B. Fawcett, "Does Marriage and Relationship Education Work? A Meta-Analytic Study," *Journal of Consulting and Clinical Psychology* 76, 5: 723-734 (2008).

from the SHM curricula in their everyday lives and interactions, thereby diminishing the program's impacts. At the same time, the vast majority of studies (other than the Building Strong Families evaluation) were conducted with relatively small research samples, using a single curriculum, and under relatively controlled circumstances. Meta-analyses in other fields have found that these conditions tend to produce larger impacts, on average, than circumstances like the SHM evaluation, in which programs were delivered and tested on a large scale.[9] Indeed, it is not uncommon in large-scale program evaluation research to find statistically significant impacts that are only modest in size.

SHM's impacts are consistent across the local programs in the evaluation. This finding likely reflects that there were large differentials in the services received by program and control group members in all locations and that all the programs were able to implement the full SHM program model in adherence with program guidelines. Thus, even though there was some variation in implementation features, hours of couples' participation, characteristics of the host agencies, and average program costs per couple, this finding suggests that these differences were not large enough to generate significant differences in impacts across local programs.

As noted above, the average cost of delivering SHM services ranged from $7,400 to $11,500 per couple across the local programs. Future research could focus on testing lower-cost strategies of delivering marriage and relationship education services on a similar scale and identifying areas for cost reduction. The challenge, however, is to determine which elements of the program (such as staff-to-client ratios, duration of engagement, supports provided, and so on) could be trimmed without compromising the program's capacity to produce positive impacts.

In sum, SHM's short-term effects are small, but they are consistent across a range of outcomes and data sources. The short-term impacts occurred for multiple dimensions of marital functioning and adult psychological well-being — outcomes that have been associated with social and emotional outcomes for children. This points to the possibility of longer-term positive effects of the program on children's well-being. At the 12-month follow-up, however, the program did not significantly affect the likelihood that parents were still together or spouses' reports of infidelity or the quality of their coparenting relationships.

In line with some prior research, the short-term effects found here could either fade or grow over time. Indeed, some studies have reported short-term effects initially that seemed to fade soon after.[10] Other studies suggest that the effects of such programs may grow over time as

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[9]Mark W. Lipsey and David B. Wilson, "The Way in Which Intervention Studies Have 'Personality' and Why It is Important to Meta-Analysis," *Evaluation of the Health Professions* 24, 3: 236-254 (2001).
[10]Hawkins, Blanchard, Baldwin, and Fawcett (2008).

couples have more opportunity to assimilate and integrate the lessons learned from the curricula into their everyday lives and interactions with each other.[11] Thus, a key question for this evaluation looking forward is whether the accumulation of SHM's positive effects so far — even if small in magnitude, across multiple domains of marital functioning and adult psychological well-being — will be sufficient to yield positive impacts on marital stability and on parents' and children's adjustment and well-being over time.

The data in the SHM evaluation provide an unprecedented opportunity to investigate a range of questions related to marital and family processes among low-income, racially and ethnically diverse families. Subsequent reports using longer-term follow-up data collected approximately 30 months after couples entered the study will examine the effects of SHM on marital stability, parenting, father engagement, and parents' and children's adjustment and well-being, and other outcomes over a longer period.

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[11]Marc S. Schulz, Philip A. Cowan, and Carolyn Pape Cowan, "Promoting Healthy Beginnings: A Randomized Controlled Trial of a Preventive Intervention to Preserve Marital Quality During the Transition to Parenthood," *Journal of Clinical and Consulting Psychology* 74: 20-31 (2006).

Introduction to the
Supporting Healthy Marriage Evaluation

This report presents the 12-month impact findings from the Supporting Healthy Marriage (SHM) evaluation, begun in 2003 as part of the Department of Health and Human Services, Administration for Children and Families (ACF), family-strengthening research agenda. SHM is a rigorous evaluation of a couples-based intervention designed for lower-income married couples with children.[1] The evaluation is motivated by two distinct but related strands of research showing that:

- Parents and children tend to fare better on a range of outcomes when they live in low-conflict, two-parent families;[2] children are less likely to live in poverty when they grow up in two-parent families;[3] and parent-child relationships are generally more supportive and nurturing when parents experience less distress in their marriages.[4]

- Preventive, skills-based relationship education curricula have been shown to be effective for strengthening the quality of marriages.[5]

Collectively, these findings have motivated policymakers to test strategies that could improve relationship stability and quality for low-income parents and, thereby, improve the outcomes for parents and their children. Yet, as of 2003, virtually all prior evaluations were conducted with middle-class and predominantly white research samples and resulted in sparse information about how low-income parents — and, more importantly, their children — were ultimately affected by these interventions. This left open questions about whether such services could also be effective for low-income families with diverse racial and ethnic backgrounds.

To address these questions, ACF contracted with MDRC and its research partners — Abt Associates, Child Trends, Optimal Solutions Group, and Public Strategies as well as academic experts Thomas Bradbury, Philip Cowan, and Carolyn Pape Cowan — to conduct the SHM evaluation as one part of its family-strengthening research agenda. The project developed,

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[1]Throughout this report, the terms "low-income," "low-to-modest income," and "lower-income" are used to refer to couples with family incomes that are below 200 percent of the federal poverty level.

[2]Beach (2001); Schultz, Cowan, and Cowan (2006); Neff and Karney (2004); Whisman (2001); Grych (2002); Cummings and Davies (2002).

[3]McLanahan and Booth (1989).

[4]Lindahl, Clements, and Markman (1997); Erel and Burman (1995).

[5]Blanchard, Hawkins, Baldwin, and Fawcett (2009); Hawkins, Blanchard, Baldwin, and Fawcett (2008); Reardon-Anderson, Stagner, Macomber, and Murray (2005).

implemented, and tested a voluntary yearlong relationship skills program that was designed to help low-income married couples with children strengthen their couple relationships and, in turn, support more positive outcomes for parents, more stable and nurturing home environments, and more positive outcomes for their children. Using a random assignment research design, half of the couples in the study sample were assigned to the program group, which could access SHM services, and the other half of the sample were assigned to the control group, which could not access SHM services but could receive other services available in the community. This design ensures that any differences between the research groups when couples first entered the study are due to chance and that any systematic differences that later emerged are most likely due to the program being studied.

The primary objectives of the SHM evaluation are (1) to determine the extent to which program services improve the stability and quality of marriages, other aspects of family functioning, and adult and child well-being; (2) to understand who is more likely or less likely to benefit from the program; and (3) to document how the eight local programs implemented the SHM model, the services that couples received, and how couples viewed the program. This report informs the first two objectives. A companion report documents the implementation experiences of the local SHM programs, informing the last objective.[6]

In this report, the estimated 12-month impacts of SHM are presented on a set of primary outcomes, which were chosen in a design phase prior to any analysis. The outcomes examined include the quality of couple relationships, marital stability, men's and women's psychological distress, and the quality of coparenting relationships. Most of these outcomes were expected to be directly affected by the program within 12 months. Results show that shortly after the SHM services ended, program participants reported, on average, higher levels of marital happiness and lower levels of marital distress and displayed, on average, more positive communication skills and fewer negative emotions and behaviors in their interactions with each other than control group members reported. Additional questions moving forward for this evaluation are whether these short-term impacts will translate into longer-term benefits for families and whether SHM program services will ultimately benefit children. The effects of SHM on longer-term outcomes — including effects on divorce and separation, parenting, father engagement, and child well-being — will be examined in subsequent reports.

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[6]Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

The SHM Program Model

The Supporting Healthy Marriage (SHM) program offered a voluntary package of services designed to serve low-income married couples with children.[7] Eight local programs in seven states participated in the evaluation. (See Table 1.) The programs were hosted by agencies diverse in their settings (including community-based multiservice organizations, large local institutions, and stand-alone for-profit organizations), diverse in their prior experience delivering marriage education services, and diverse in the populations that they served.

To be eligible for the study, couples had to be low-income,[8] married, over age 18, and expecting a child or parents of a child under age 18 living in their home.[9] Couples had to understand one of the languages in which services were offered (English or, in some locations, Spanish) and have no indication of domestic violence in the relationship. Programs were required to work with local domestic violence service agencies to develop enrollment screening tools and response protocols.

Three Components of the Program Model

In designing the program model, input was sought from academic scholars and experts from the field of relationship and marriage education. This input was used to develop relationship skills education services that (1) focused on topics of importance for the quality and stability of marital relationships, based on prior research, and (2) had been tested with middle-income couples but were adapted for a low-income audience. The result was a program model that consisted of three main components delivered over a 12-month period, with the most intensive services occurring in the first four to five months of the program, as shown in Figure 1. The three main components of the program model are curriculum-based relationship and marriage education skills workshops in small groups, supplemental activities, and family support services.

Curriculum-based relationship and marriage education skills workshops in small groups. Workshops constitute the central service component of the program. Local programs

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[7]This section draws on Knox and Fein (2009) and Miller Gaubert et al. (2010). For details about the SHM program model and implementation, see Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

[8]For the purposes of local programs' recruitment efforts, "low-income" was defined as having annual family income of less than $50,000 — slightly more than 200 percent of the federal poverty level for a family of four. Three programs located in urban areas — the Bronx and two programs in the Seattle area (referred to as Seattle and Shoreline throughout this report) — were allowed to recruit families with up to $60,000 in income. This change took place early in the evaluation.

[9]Couples were not required to provide proof of income or proof of marriage at random assignment.

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Table 1

Selected Characteristics of Local SHM Programs

Program Characteristic	Bronx	Oklahoma City	Orlando	Pennsylvania[a]	Seattle	Shoreline[b]	Texas[a]	Wichita
				Program Location				
Host agency	University Behavioral Associates (UBA)	Public Strategies, Inc.	University of Central Florida (UCF)	Community Prevention Partnership of Berks County	Becoming Parents Program, Inc.	Center for Human Services (CHS)	Texas Department of Health and Human Services	Catholic Charities
Organizational setting	Hospital	For profit	University	Community-based nonprofit	For profit	Community-based nonprofit	Community-based nonprofit	Community-based nonprofit
Languages used in program	English	English, Spanish	English	English, Spanish[c]	English	English, Spanish	English, Spanish	English
Target group within SHM population	None	Expectant and new parents[d]	None	None	Expectant and new parents[d]	None	None	None
Relationship and marriage education curriculum[e]	LCLC	BPP	FOF	WOR	BPP	LCLC	WOR	WOR
Length[f] (hours)	24	30	30	28	30	24	28	28
Length of weekday workshops (weeks)	10	10	12	15	9	12	15	11
Length of Saturday workshops (weeks)	1[g]	6	6	7 or 15	6	12	Not offered	1[g]

NOTES: [a]The Pennsylvania program offered services in Bethlehem and Reading; the Texas program offered services in El Paso and San Antonio, TX.

[b]The Shoreline program was located in a suburb of Seattle.

[c]Reading offered its program exclusively in Spanish, and Bethlehem offered its program in English and Spanish.

[d]Couples were eligible for the program if they were expecting a baby or had an infant younger than 3 months old.

[e]The relationship and marriage education curricula are as follows: LCLC = Loving Couples, Loving Children; BPP = Becoming Parents Program; FOF = For Our Future, For Our Family; WOR = Within Our Reach.

[f]Curriculum length is as stated by curriculum developers.

[g]All relationship and marriage education workshops in these sites began with a six-hour session held on a Saturday; the remaining sessions were held on weeknights for two hours.

Box 1

Marriage Education Curricula Used in Local SHM Programs

Four curricula were used by local SHM programs:*

Within Our Reach (adapted from the Prevention and Relationship Enhancement Program, or PREP) is the curriculum used by the SHM programs in Pennsylvania, Texas, and Wichita. See Stanley and Markman (2008).

For Our Future, For Our Family (adapted from Practical Application of Intimate Relationship Skills, or PAIRS) is the curriculum used by the SHM program in Orlando. See Gordon, DeMaria, Haggerty, and Hayes (2007).

Loving Couples, Loving Children (adapted from Bringing Baby Home) is the curriculum used in the Bronx and Shoreline SHM programs. See Loving Couples Loving Children, Inc. (2009).

Becoming Parents Program (based on PREP and adapted from an earlier version of Becoming Parents) is the curriculum used by SHM providers in Oklahoma City and Seattle. See Jordan and Frei (2007).

NOTE: *For information on how curricula were selected and adapted, see Knox and Fein (2009).

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selected one of four curricula that were adapted specifically for this study. (See Box 1.) Each curriculum incorporated multiple themes and activities designed to help couples decrease negative interactions (by emphasizing communication skills and conflict management) and increase supportive interactions (by encouraging supportive behaviors, shared goal setting, working as a team, and spending time together as a couple and a family in order to build closeness and positive connections), as well as to build a greater understanding of marriage. The curricula vary, however, in the emphasis placed on each of these skills. Workshops also wove in information on managing stressful circumstances commonly faced by lower-income families (such as job loss, financial stress, or housing instability), and they encouraged couples to build positive support networks in their communities. The curricula used a mix of teaching styles, combining presentations and lecturing styles with discussions, group and couple activities, time for individual reflection, and videos or other ways to demonstrate skills. Longer than many relationship education workshops, SHM offered between 24 and 30 hours of curriculum (as stated by the curriculum developers) in small-group settings over a period of 6 to 15 weeks.

Supplemental activities. Under the SHM program model (Figure 1), supplemental activities offered couples additional opportunities to attend educational and social events, to practice skills from the workshops, and to build supportive networks with other married couples in the program. Activities reinforced curriculum themes while offering a range of events from seminars on financial management and parenting issues to date nights and family outings. After

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Figure 1

The SHM Program Model and Theory of Change

SHM Program Model

Couples are offered SHM services over 12 months and receive assistance with transportation and child care and modest incentives to encourage participation in SHM activities.

Relationship and Marriage Education Workshops

Couples:
- Learn skills that support healthy marriages, such as communication, conflict resolution, building positive connections, and managing life stressors
- Practice new skills through interactive, fun activities
- Interact with and learn from other married couples

Family Support Services

Couples:
- Have frequent contact with staff, who help support attendance and address participation barriers
- Access needed community resources
- Practice relationship skills one-on-one

Supplemental Activities

Couples:
- Attend educational and social events to practice relationship skills and gather needed resources
- Continue building connections with other married couples

Marital Relationships

Marital appraisals

Quality of marital interactions

Marital stability

Individual and Family Well-Being

Each spouse's psychological well-being

Quality of coparenting relationship

Family's economic circumstances

Mother's and father's involvement and parenting behaviors

Child and adolescent well-being

Key Moderators

- Strengths and vulnerabilities of each spouse
- Prior marital relationship and family structure
- Children's characteristics
- Sociodemographic characteristics
- External influences and macrocontexts

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the workshops ended, supplemental activities were the primary SHM service component and were offered until a couple's one-year anniversary of enrollment in the program.

Family support services. Pairing couples with specialized staff members, family support services were included in the program model (Figure 1) and had three goals: to maintain contact with couples, in order to facilitate their participation in the other two program components; to help couples reduce family stressors and address family needs by linking them to community resources; and to reinforce key workshop themes in one-on-one meetings with couples. Each couple was paired with a staff person who was responsible for maintaining contact between the couple and the program. Staff also arranged child care and transportation assistance when the couple was attending SHM services, and they provided emergency assistance, which also helped to address participation barriers.

Overview of Costs and Program Participation

The average cost of operating local SHM programs was $9,100 per couple. This ranged from $7,400 per couple in Wichita to $11,500 per couple in Oklahoma City. The calculations are based on costs that the programs incurred while providing SHM services to couples served during a steady state of implementation.[10] The costs reflect the intensity of a yearlong, multi-component program model and a substantial emphasis on staff efforts to engage couples in services once they were enrolled.

At the outset of the SHM evaluation, the primary questions were whether low-income couples would be interested enough in this type of program to enroll and whether services would be attractive enough to keep them coming over time. The programs succeeded in enrolling over 6,000 couples into the study and in engaging both men and women in program services, in compliance with the SHM model's guidelines to serve couples rather than individuals. According to the program management information system, on average, 83 percent of program group couples attended at least one workshop; 66 percent attended at least one supplemental activity; and 88 percent attended at least one meeting with their family support worker. Once enrolled, couples participated in an average of 27 hours of services across the three components, including an average of 17 hours of curricula, nearly 6 hours of supplemental activities, and 4 hours of in-person family support meetings. This provides evidence that the programs were able to operate the full SHM program model in a variety of contexts with

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[10]For more information on how the estimates of program operating costs per couple were calculated, see Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

diverse populations. A more detailed analysis of the implementation of the SHM program is presented in the companion report.[11]

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[11]Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

The SHM Evaluation Design

To estimate the effect, or impact, of the Supporting Healthy Marriage (SHM) program, a random assignment research design was used. Couples meeting the program's eligibility criteria were randomly assigned to either:

- **The program group.** These couples were offered the package of SHM program services and were able to receive curriculum-based relationship and marriage education workshops, family support services, and supplemental activities.

- **The control group.** These couples were not provided SHM services, but they could receive other services available in the community.

The use of a random assignment research design means that the SHM program and control groups are expected to be similar when they first entered the study.[12] Hence, any subsequent differences in outcomes between the two groups after random assignment can reliably be attributed to the SHM program. Because control group members could receive any other relationship education services that were available in the community, this study's impact estimates represent the added value of offering couples the package of SHM program services, above and beyond the services that couples and families might normally receive.

As noted above, random assignment occurred after couples were recruited, after eligibility for the program was determined, and after both members of the couple consented to undergo random assignment and to participate in the evaluation.[13] Couples were excluded from the SHM program and the evaluation and were referred to other services if, at the time of enrollment, there was an indication of domestic violence in the relationship.[14]

Random assignment began in February 2007 in the local SHM program run in Oklahoma City, and it ended in the last programs in December 2009. The initial goal of the local programs was to enroll 800 couples in the study; Oklahoma used supplemental state funds to enroll 1,000 couples by the end of the recruitment period. As is reported in the study's first implementation report, the local programs used several methods to recruit sample members into

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[12]For comparisons of the baseline characteristics of program group and control group couples among the full SHM sample, see Hsueh et al. (Forthcoming, 2012), Appendix C.

[13]For details about the intake and baseline data collection procedures for enrolling in the SHM study, see Hsueh et al. (Forthcoming, 2012), Appendix A.

[14]Programs were required to work with local domestic violence service agencies to develop enrollment screening tools and response protocols.

the study.[15] Local programs established networks of referral partners and sent staff into the community to do face-to-face outreach, in addition to using more traditional outreach methods like flyers, brochures, and mass media advertisements. Despite the wide variety of recruitment strategies used, the research sample — as in other studies of voluntary programs — includes couples who were motivated to volunteer for program services and who, therefore, may be a select group among low-income married couples.

Conceptual Framework of the SHM Project

In designing the evaluation, the research team considered the basic conceptual model illustrated in Figure 1 for how the SHM program could affect couples, families, and, ultimately, children. (Boldface labels in the figure denote the primary outcomes that are examined in this report.) The model draws on a wealth of prior marital and family process research and developmental theory, and it provides a framework for linking the SHM program to various outcomes that are important for adult well-being and for child development and well-being.

As the figure illustrates, the core SHM services were designed to help married low-income couples learn relationship skills to directly improve the quality of their marital relation-ships. Couples' relationships could also be affected by referrals to outside services aimed at reducing individual or family challenges that could place stress on families. Overall quality of marital relationships is conceptualized as consisting of two key dimensions, which prior marital and family process research has linked with marital stability: the emotional and behavioral aspects of marital interactions (quality of marital interactions) as well as spouses' appraisals of their marital relationships and functioning (that is, couples' satisfaction and marital happiness and distress).[16] As such, improvements in marital relationships theoretically would be evidenced by the following:

- **More positive emotions and behaviors in interactions,** such as clearer and more empathetic communication, more effective conflict resolution skills, and higher levels of warmth, support, and emotional and physical intimacy

- **Fewer negative emotions and behaviors in interactions,** such as fewer an-tagonistic, hostile, or abusive behaviors during disagreements and lower lev-els of sexual and emotional infidelity

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[15]For more information on the recruitment of sample members, see Miller Gaubert et al. (2010).
[16]Bradbury, Fincham, and Beach (2000); Fincham, Stanley, and Beach (2007); Karney and Bradbury (1995).

- **More positive appraisals of marital quality,** such as higher levels of marital satisfaction and lower levels of marital distress by program group couples relative to their counterparts in the control group

Marital appraisals might be affected directly by the SHM program, but they could also be indirectly affected through changes in spouses' marital expectations. For example, all the curricula taught couples that relationships can be improved through each spouse's own efforts, that marital disagreements are normal, and that many couples face challenges at different times in their relationships. In addition, the discovery that one's spouse is committed enough to the relationship to attend this type of program might also affect a participant's appraisals of the relationship. Even though the program's impacts on marital appraisals are generally expected to be positive, the program could also have countervailing effects on marital appraisals, if changes in spouses' marital expectations are not accompanied by concomitant changes in the way that spouses actually interact with each other.

In turn, the effects on the quality of the marital relationship could lead, over time, to increased marital stability or lower rates of separation and divorce among program participants. Some aspects of family functioning — such as the quality of the coparenting relationship (or how parents work together in their shared parenting roles) and spouses' mental health and well-being — may also be directly affected in the short term. Accordingly, such outcomes are examined as part of this analysis of the effectiveness of the SHM program at the 12-month follow-up point.

Other aspects of family functioning, — such as parenting behaviors, levels of fathers' engagement and involvement, and families' economic security (primarily due to reduced rates of family disruption), as well as child well-being — would more likely unfold over a longer period of time. Accordingly, those aspects will be examined in subsequent reports using data from a longer-term follow-up collected about 30 months after couples entered the study. It is expected that the effects of the SHM program on these outcomes are indirect and would be evident only if the program first leads to improvements in the marital relationship outcomes examined in this report.

Lastly, Figure 1 highlights that a combination of strengths and constraints within individuals, families, and contexts is capable of shaping marital and family relationships and adult and child well-being.[17] Among these factors are sociodemographic characteristics, couples' initial relationship quality, strengths and vulnerabilities of each spouse, stressors and supports

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[17]Bradbury and Karney (2004); Cowan and Cowan (2000).

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[17]Bradbury and Karney (2004); Cowan and Cowan (2000).

available in the community, and child characteristics — all of which could moderate the effects of the SHM program.

Data Sources Used in This Report

This report is based on data collected from three key sources:[18]

- **Baseline instruments, including a self-administered questionnaire and baseline and child information forms,** were completed by all husbands and wives prior to random assignment, when couples applied for the SHM program. The self-administered questionnaire was completed separately by each spouse at baseline, and both spouses generally completed the remaining forms together. The baseline information is used to describe the research sample, to improve the precision of the estimated program impacts, and to form subgroups.

- **A follow-up survey interview** was conducted separately with husbands and wives about 12 months after couples first applied for the program, regardless of whether or not their marriages were intact. The 12-month follow-up interviews aimed to capture study participants' reports on the main outcomes of interest. This information is critical for gauging the effects of the SHM program in that it allows an understanding of how husbands and wives in both the program group and the control group view the quality of their marital interactions and relationships. The response rates for the follow-up interview are 80 percent for husbands and 85 percent for wives.

- **Videotaped observations of couple interactions** were collected for a subset of couples across both research groups. Complementing information collected by the 12-month survey interviews, the videotapes provide an independent assessment of how couples interact with each other. They are coded using the Iowa Family Interaction Ratings Scale (IFIRS).[19] The videotapes are intended to capture whether and how program participants are able to integrate the relationship and communication skills that are primary foci of the SHM curricula into their interactions. In order to select this sample, an equal number of couples in each of the local SHM programs were flagged to participate in the videotaped observations; couples with infants and with preadolescent and

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[18]Detailed descriptions of these data collection components, samples, response rates, and available measures are presented in Hsueh et al. (Forthcoming, 2012), Appendix B.
    [19]Melby et al. (1998).

adolescent focal children were oversampled.[20] In each of the local SHM programs, about 100 program group and 100 control group couples were videotaped. The response rate for the videotaped observations is 62 percent.

Thus, the observational and self-reported data provide different lenses into the lives of couples and families participating in this study and how the SHM program might influence the quality of their relationships across a variety of contexts and over time.

Characteristics of Couples in the SHM Evaluation

- **Couples in the SHM evaluation are a diverse group: most are low-income, and many are Hispanic and have immigrant backgrounds.[21]**

As shown in Table 2, about 43 percent of couples are Hispanic (of which at least 40 percent of couples had one spouse who is an immigrant to the United States); 21 percent are white; 11 percent are black; and 25 percent are couples of another race/ethnicity or couples who differ in racial/ethnic background.[22] At study entry, most of the couples had low to modest incomes, but there was some diversity in their socioeconomic status: about 43 percent had incomes below the federal poverty level, and 39 percent had incomes between 100 percent and 200 percent of the poverty level. The spouses in about half the couples both had at least a high school diploma. The average age of individuals across programs was 31 at study entry.

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[20]For each couple, a child under age 14 living at home (including a yet-unborn child) when couples first entered the study was selected to be the "focal child." This child is the focus of survey questions related to parenting practices, father engagement, and child development and well-being as well as of videotaped observations of coparenting and parent-child interactions collected at the 12-month follow-up point. Because couples in the Oklahoma City and Seattle programs were eligible only if they were expecting a baby or had an infant younger than 3 months at study entry, this child was selected as the focal child. In the other local SHM programs, the focal child was selected at random.

[21]For definitions of the background characteristics used to describe the SHM sample, see Appendix A. For a detailed discussion of the characteristics of the SHM sample, see Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

[22]Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. The "other/multiracial" category includes couples who are of different race/ethnicity (70 percent), couples in which at least one spouse has more than one race/ethnicity (15 percent), couples in which both of these conditions are true (8 percent), and couples who both self-identified as only Asian, Pacific Islander, Native American, or Other (8 percent).

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Table 2

Demographic and Socioeconomic Characteristics of Couples in the Full SHM Sample at Study Entry

				Program Location					
Characteristic[a]	Bronx	Oklahoma City	Orlando	Pennsylvania	Seattle	Shoreline	Texas	Wichita	Overall
Socioeconomic characteristics									
Race and ethnicity (%)									
Both spouses Hispanic	41.7	23.7	40.2	88.3	9.2	50.6	92.0	6.6	43.4
Both spouses African-American, non-Hispanic	36.0	8.5	13.6	1.9	14.0	3.2	0.6	11.5	11.2
Both spouses white, non-Hispanic	0.9	40.4	17.7	1.9	27.0	22.4	1.5	46.4	20.5
Other/multiracial	21.3	27.0	28.4	7.9	49.7	23.8	6.0	35.6	24.8
Both spouses have at least a high school diploma (%)	39.9	60.9	72.0	30.5	49.4	40.8	46.5	56.4	50.3
Average age (years)	35.6	27.5	31.5	33.2	27.0	32.4	33.5	31.2	31.4
Income 100% to less than 200% of FPL (%)	29.8	40.2	58.9	37.1	33.9	40.8	37.8	34.7	39.4
Income less than 100% of FPL (%)	42.0	24.9	30.3	51.9	51.8	41.4	49.2	55.5	42.8
Family characteristics									
Expecting a child (%)	8.6	79.0	8.5	7.7	98.1	12.9	7.9	14.0	30.4
Average number of children in the household	2.0	1.2	2.3	2.5	1.2	2.2	2.4	2.4	2.0
Married at the time of random assignment (%)	68.8	96.4	98.1	71.2	50.7	73.5	89.4	89.4	80.9
Average number of years married	7.4	3.9	5.6	9.1	2.8	6.9	9.0	5.1	6.2
Stepfamily (%)	40.2	13.9	25.2	30.8	16.5	20.6	25.5	42.8	26.4
Marital appraisals (%)									
Men report happy or very happy in marriage	74.9	90.9	82.2	77.7	88.9	76.1	77.2	74.2	80.5
Women report happy or very happy in marriage	70.5	88.1	78.9	70.1	91.2	70.0	65.4	65.0	75.1
Men report marriage in trouble	62.9	35.0	57.7	51.3	44.4	56.9	66.3	69.0	55.2
Women report marriage in trouble	64.4	33.4	58.5	52.5	46.8	58.7	70.7	74.4	57.1
Adult well-being (%)									
Either spouse has psychological distress	23.8	10.6	18.9	30.3	17.0	26.2	32.5	32.6	23.5
Either spouse reports substance abuse problem	28.1	13.7	12.3	18.5	24.2	24.2	25.7	21.9	20.8
Sample size (couples)	799	1,001	801	677	678	782	800	760	6,298

SOURCE: MDRC calculations based on the SHM Baseline Information Forms.

NOTES: Rounding may cause slight discrepancies in sums and differences.

[a]Appendix Table A.1 explains how these characteristics are defined.

The majority of couples (81 percent) were married when they enrolled in the evalua-tion;[23] this ranged from 51 percent in Seattle to 98 percent in Orlando.[24] Couples in the study had been married for about six years, on average. All of those who enrolled were parents or expectant parents. Couples had, on average, two children. More than a quarter were stepfami-lies. Close to 80 percent of husbands and wives reported that they were happy with their marriages, but a little more than half reported thinking in the past year that their marriage was in trouble. About one-fourth of couples had at least one spouse who was experiencing psychologi-cal distress, and about one-fifth of couples had at least one spouse who reported having a substance abuse problem.

- **The characteristics of couples in the SHM evaluation varied substantial-ly across local programs.**

The Texas and Pennsylvania programs enrolled primarily Hispanic couples (92 percent and 88 percent, respectively), but there was more racial and ethnic diversity in other programs. The percentage of couples, for example, falling in the other or mixed race/ethnicity category varied across programs and ranged from 8 percent in Pennsylvania to 50 percent in Seattle. The percentage of couples in which both spouses had at least a high school diploma ranged from 31 percent in Pennsylvania to 72 percent in Orlando. The percentage of couples with incomes less than 100 percent of the federal poverty level ranged from 25 percent in Oklahoma City to 56 percent in Wichita, while the percentage of couples with incomes between 100 percent and 200 percent of the federal poverty level ranged from 30 percent in the Bronx to 59 percent in Orlando. Oklahoma City and Seattle targeted new and expectant parents, so all the families in these programs were either expecting a child or had an infant, and couples in these programs were younger, on average, than couples in the other programs. The characteristics of couples' marital relationships also varied considerably by program, as did the percentage of couples who were married at study entry, as discussed above. The average length of marriage ranged from

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[23]This information comes from a retrospective question, which was a late addition to the SHM 12-month survey. Fifty-nine percent of couples in the SHM research sample were asked whether they were married at enrollment; those who were not asked this question were clustered primarily in Oklahoma and Texas. The percentages in Table 2 reflect the responses only of couples who were asked the question at the 12-month follow-up. The overall percentage is weighted by local program sample sizes. The 12-month impact analysis includes couples enrolled in the study, regardless of their marital status at study entry. As a sensitivity check, the impact estimates were also conducted excluding couples who reported that they were not married when they entered the study; those results (not shown) mirror the impact estimates presented in the body of this report.

[24]At the time of enrollment, SHM programs asked couples whether they were married but did not ask for proof of marriage. Some programs, such as Seattle's, asked couples whether they considered themselves to be married, rather than whether they were legally married, while other programs placed more emphasis on legal marriage as an eligibility requirement.

three to four years in Seattle and Oklahoma City to nine years in Pennsylvania and Texas. More husbands and wives in Oklahoma City and Seattle reported that they were happy in their relationships than in the other programs.

- **Compared with married couples with children in the United States, SHM couples were more likely to be low-income.**

According to the American Community Survey (ACS), the median annual family income for all married couples with children in the United States in 2008 was $78,000. Of those families, 6.5 percent lived in poverty, and 15.4 percent were considered to be low-income.[25] In contrast, couples in the SHM evaluation were substantially more likely to be low-income. As discussed above, 43 percent of SHM couples lived in poverty, and 82 percent of couples were low-income.

- **Compared with national samples of low-income married couples with children, more couples in the SHM evaluation reported that their marriages were in trouble.**

Comparisons between the SHM sample and low-income couples in the United States can also provide helpful context. Two nationally representative surveys that include low-income married respondents and that ask some similar questions to the SHM baseline form are the Survey of Marriage and Family Life (SMFL)[26] and the National Survey of Families and Households (NSFH).[27] Compared with these two national survey samples of low-income

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[25]The sample used for this comparison includes married couples in the 2008 American Community Survey (ACS) who had one or more child under the age of 18 living in the household.

[26]Data in the SMFL were collected by Paul Amato, Alan Booth, David Johnson, and Stacy Rogers; see Booth, Amato, Johnson, and Rogers (2002). The SMFL sample consists of 2,100 individuals who were married, living with their spouse, and age 55 or younger; one individual per household was interviewed. The sample is weighted to represent the 2000 U.S. population of married individuals under 55. Descriptive characteristics of low-income married couples with children in the SMFL (defined as all married couples in the SMFL who had a child under age 18 and who had family incomes that were less than 200 percent of the federal poverty level) are shown in Appendix Table A.2. This information was drawn from unpublished calculations conducted by Paul Amato solely for the purposes of this report.

[27]The NSFH is a longitudinal data set collected by the University of Wisconsin; for more information, see http://www.ssc.wisc.edu/nsfh/. The NSFH sample includes 13,007 households; of these, 9,637 are part of the main cross-section, and the rest are an oversampling of African-Americans, Puerto Ricans, Mexican Americans, single-parent families, families with stepchildren, and cohabiting or recently married couples. The NSFH includes three waves of survey interviews, with the first wave taking place in 1987 and 1988. Interviews were attempted with both spouses, and the sample is weighted to represent the U.S. population. In Appendix Table A.2, descriptive characteristics of low-income married couples with children in the NSFH are shown. This information is drawn from unpublished calculations conducted by the authors of this report. The sample for these calculations included all married (spouse-present) couples in Wave 1 who had a child under age 18 and who had family incomes of less than 200 percent of the federal poverty level in the NSFH.

married couples with children (Appendix Table A.2), SHM couples were slightly younger and had younger children in their household. SHM couples were married only six years on average, compared with 13 years for the SMFL sample and 11 years for the NSFH sample. Slightly more SHM sample members had at least a high school diploma or General Educational Development (GED) certificate than the NSFH sample members.

Couples in the SHM sample reported being less happy with their marriages than couples in the national samples, and a higher percentage of SHM couples reported thinking that their marriage was in trouble during the past year. Only 29 percent of SHM men reported being very happy with their marriages, compared with 48 percent of men in the SMFL and 47 percent of men in the NSFH. Approximately 55 percent of men in the SHM sample reported thinking during the past year that their marriage was in trouble, compared with 32 percent of men in the SMFL and 24 percent in the NSFH. Results for women are similar (Appendix Table A.2).

Taken together, the characteristics presented here paint a complex portrait of couples who enrolled in the SHM evaluation. They were lower-income and unhappier in their relationships than most married couples with children in the United States. Reflecting previous findings that couples who are unhappier in their relationships are at greater risk of marital disruption,[28] the typical SHM couple may be more vulnerable to relationship instability than the average low-income couple in the nation. This may reflect that the research sample consists of couples who volunteered for a relationship-strengthening program.

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[28]Karney and Bradbury (1995).

Impacts on Services Received by Couples
in the SHM Program Group and
Those in the Control Group

As with any voluntary program, couples in the Supporting Healthy Marriage (SHM) program group may not actually have used all the services that were offered. On the other hand, couples in the control group may have used services like those offered by SHM, but from other community resources. If this were the case, the difference in services received by couples in the program group and those in the control group could be small, making it difficult to draw conclusions about the effectiveness of the SHM program.

As a first step in understanding the effects of the SHM program on various outcomes of interest, impacts on service receipt for the overall sample as reported by study participants are examined. (See Table 3. Box 2 explains how to read the estimated impact tables in this report.)

- **The SHM program group received significantly more relationship skills education in group settings than the control group. The majority of control group couples reported never receiving any relationship-related services.**

Program group couples participated in relationship services in a group setting at a much higher rate than control group couples (Table 3). About 89 percent of program group couples reported receiving any group-based relationship services, compared with 24 percent of control group couples. This is not surprising, given that group-based workshops in relationship skills education were the primary component of the SHM program. Furthermore, program group couples reported receiving a higher dosage of such services. About 42 percent of program group couples reported attending more than 10 sessions, compared with less than 3 percent of control group couples. Control group couples were more likely than program group couples to report that they participated in zero or one session.[29]

It is also possible that control group members would seek out alternative relationship services, such as one-on-one marriage or relationship counseling, because they could not participate in SHM. To explore this possibility, impacts on the receipt of one-on-one marriage

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[29]An analysis of data from the SHM management information system (MIS data) shows that most spouses attended SHM sessions together (Miller Gaubert, Gubits, Alderson, and Knox, Forthcoming, 2012). For impacts on participation outcomes analyzed by local program, see Hsueh et al. (Forthcoming, 2012), Appendix H, which shows few significant differences in impacts by local program.

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Table 3

Estimated Impacts on Couples' Participation in Relationship Services and Referrals Since Random Assignment

Outcome[a]	Program Group	Control Group	Difference (Impact)	Standard Error[b]
Receipt of group relationship services[c] (%)				
Number of times attended			***	
0	10.9	76.3	-65.4	—
1	2.8	9.1	-6.3	—
2-5	12.9	6.8	6.1	—
6-10	31.8	5.2	26.6	—
More than 10	41.6	2.6	39.0	—
Receipt of one-on-one relationship services[d] (%)				
Number of times attended				
0	79.8	81.8	-1.9	—
1	2.5	3.0	-0.5	—
2-5	9.7	8.6	1.2	—
6-10	5.7	4.7	1.0	—
More than 10	2.2	1.9	0.3	—
Referrals of either spouse for (%)				
Parenting classes and/or child care	44.3	37.0	7.3 ***	1.3
Assistance with issues related to work readiness and/or financial security	69.4	74.8	-5.4 ***	1.2
Assistance with issues related to mental health and/or substance abuse	23.6	21.0	2.5 **	1.1
Sample size (couples)	2,650	2,745		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: To assess differences across research groups, chi-square tests were used for categorical outcomes. For other outcomes, estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

   Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
   Rounding may cause slight discrepancies in sums and differences.
   [a]For detailed notes about the construction of these outcomes, see Hsueh et al. (Forthcoming, 2012), Appendix E.
   [b]A dash indicates that the standard error was not calculated for categorical outcomes.
   [c]õGroup relationship servicesö includes marriage or relationship skills education services that are conducted in a group session and received with a spouse.
   [d]õOne-on-one relationship servicesö includes services received outside SHM with or without a spouse.

Box 2

How to Read the Estimated Impact Tables in This Report

The effects, or impacts, of the SHM program are estimated by comparing outcomes for the program group and the control group. These comparisons are made with regression models that adjust for the background characteristics of the sample members.

The impact estimates presented in this report are often referred to as õintent-to-treatö impact estimates, because all couples assigned to the program group and all couples assigned to the control group ô regardless of whether or how long they were engaged in SHM services ô are included in the impact analysis. The core set of impact estimates presented in this report use data pooled across all eight SHM local programs. Impacts were also estimated separately for each local SHM program as well as for subgroups of couples defined by three characteristics at study entry: level of marital distress, income relative to poverty level, and race/ethnicity.

The impact tables in this report present a series of numbers that are helpful for interpreting the estimated impacts of the SHM program. The first two columns of numbers are the regression-adjusted mean values or percentages for the program group and the control group for each outcome. In Table 3, for example, 41.6 percent of the program group reported attending group relationship services more than 10 times, compared with 2.6 percent of the control group.

The numbers in the column õDifference (Impact)ö display the estimated impacts, or the differences in mean values or percentages on the outcome of interest between the program group and the control group. In Table 3, for instance, the estimated impact on attending group relationship services more than 10 times is 39.0 percentage points (41.6 percent in the program group minus 2.6 percent in the control group).

The impact estimates are translated into standardized effect sizes by dividing the impact estimate by the standard deviation of the outcome of interest for the control group. Effect sizes are one way to interpret the substantive significance of the impact estimates. The magnitude of effect sizes can be interpreted with respect to empirical benchmarks that are relevant to the intervention, target population, and outcome measures being considered,* but, in the absence of such information, one can broadly characterize the potential substantive significance of the impacts by using general rules of thumb suggested by Cohen, whereby effect sizes of 0.20 or less are considered õsmallö; an effect size of 0.50 is considered õmoderateö; and effect sizes of 0.80 or above are considered õlarge.ö[A] Effect sizes for binary outcomes are not presented in this report because percentage point impacts are readily interpretable.

The number of asterisks shown in the tables indicates whether a given estimated impact is statistically significant (or that the estimated impact is large enough that it is unlikely to be due to a program that had no true effect). One asterisk indicates statistical significance at the 10 percent level; two asterisks, at the 5 percent level; and three asterisks, at the 1 percent level. (Similarly, the appendix tables that examine impacts for local SHM programs or for subgroups use daggers to show significant differences across groups.) The standard errors in the tables are estimates of the variability (or statistical imprecision) of the impacts of the SHM program; larger standard errors indicate greater uncertainty about the magnitude of the impact estimates.

NOTES: *Hill, Bloom, Black, and Lipsey (2007).
   [A]Cohen (1988).

or relationship services were also examined, using information gathered by the survey at the 12-month follow-up point (Table 3); the estimated effects on the number of times that people attended one-on-one relationship services are not statistically significant. Furthermore, approximately 82 percent of the control group did not receive any one-on-one relationship services, suggesting that control group members did not attend services that were an alternative to SHM.

- **The SHM program had mixed impacts on whether either spouse consulted with anyone about parenting classes or child care, work readiness or financial issues, and mental health or substance abuse.**

Lastly, because SHM's family support services were envisioned as a mechanism for linking couples with other social services as needed, the impacts of the SHM program on couples' referrals for assistance with issues related to parenting, child care, employment, finances, and mental health or substance abuse were also examined. The findings in this area are mixed (Table 3). Program group couples were more likely than control group couples to consult with someone about parenting classes or issues related to mental health or substance abuse, but control group couples were more likely to consult with someone about work readiness or financial issues.

Short-Term Impacts on Marital and Coparenting Relationships and on Adult Psychological Distress

As discussed above and summarized in Box 3, the Supporting Healthy Marriage (SHM) impact analysis was limited to a small set of outcomes that are likely to be affected at the 12-month follow-up. A central aim of the SHM program was to improve the quality of marital relationships and, in turn, the stability of couples' marriages (Figure 1, above). Accordingly, the SHM curricula focused on communication and conflict resolution skills and on building positive connections between spouses, including deeper understanding of each other's perspectives, as a means of improving not only the way couples interacted with each other but also their appraisals of their marital relationships.

To examine the short-term impacts of the SHM program in this area, the research team selected a core set of measures identified by the literature as being key indicators of the quality of marital interactions and appraisals of marital relationships, using the 12-month survey data. (Box 4 describes how the primary self-reported outcomes are defined.) This section presents the estimated effects on those outcomes at the 12-month follow-up point. Subsequent reports will examine the longer-term impacts of SHM on such outcomes as parenting, fathers' engagement, and child well-being.

Impacts on Marital Status and Appraisals of Overall Marital Quality

- **The SHM program did not have a significant impact on couples' relationship status.**

As shown in Table 4, about 90 percent of couples in both the program group and the control group reported being married to or in a committed relationship with the partner they had when they entered the study. Of these couples, 89 percent reported being married at follow-up, and 11 percent reported being in a committed relationship.[30]

- **The SHM program had positive estimated impacts on couples' relationship appraisals, as evidenced by higher reported marital happiness and**

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[30]As discussed above, of couples who were asked at follow-up about their relationship status at baseline, a percentage reported that they were not married at study entry (Table 2, above). This group was given the option of reporting that they were in a committed relationship with the partner that they had when they entered the study. At the 12-month follow-up, 17 percent of couples in this group reported being married; 62 percent reported being in a committed relationship; and 21 percent reported being separated or divorced or having had their marriage annulled.

Box 3

The Multiple Comparisons Problem

Results in this report are characterized in terms of statistical significance. A statistically significant impact estimate is one that is unlikely to have been the result of a truly ineffective program. When an impact estimate is statistically significant at the 10 percent level, for example, it means that there is only a 10 percent chance that an ineffective program would have generated such a large impact estimate.

Although this logic applies when looking at one impact estimate, it is also relevant when multiple outcomes are examined. Increasing the number of impact estimates examined increases the likelihood that one estimate will be statistically significant by chance, even if the program had no true effect. For example, if ten independent outcomes are examined, there is a 65 percent chance that one of them will be statistically significant at the 10 percent level purely by chance, even if the program is truly ineffective. Likewise, if 50 independent impact estimates are examined, one is almost surely likely to be significant at the 10 percent level even if the program is truly ineffective.

To guard against the possibility of drawing wrong conclusions about the effectiveness of SHM and for whom the program is more effective or less effective, several strategies were used. First, the impact analysis was limited to a relatively small number of outcomes. Rather than examining all possible outcomes, the impact analysis in this report was limited to 26 prespecified core outcomes for which SHM was expected to have its largest effects in the first 12 months. Reducing the number of outcomes reduced the chance of a spurious finding of statistical significance.

Second, the set of subgroups examined in the impact analysis was also intentionally kept small and was specified ahead of time. In particular, results are examined across only three sets of subgroups of families and across the eight SHM programs.

Finally, the results were "eyeballed" to see whether their pattern suggested that the impact estimates were real rather than likely due to chance. One way of doing this is simply to count the number of statistically significant findings. For example, only 1 of 26 impact estimates differed significantly with a family's income. Because 1 of 26 estimates can be significant even when there is no true difference, the team concluded that SHM's effects were unlikely to differ substantially by family income. Likewise, the large number of significant impacts for the pooled sample suggested that this was not a chance finding and that SHM really improved relationship quality and other outcomes. Although there are formal statistical methods for making these assessments, an eyeball test was used because there is no consensus on the appropriate way to adjust for multiple comparisons and because formal methods can be conservative and too often result in the conclusion that the program is ineffective.

Box 4

Descriptions of the Primary Outcomes Based on the 12-Month Survey

Married (%)
The outcome is examined at a couple level. Couples are considered married if both spouses report that they are married or in a committed relationship. If either of the respondents indicates that the couple is separated, divorced, or had the marriage annulled, the outcome is coded with a negative (0) response. If only one spouse responds, that response is used for the couple.

Couples' average report of relationship happiness (Scale: 1 to 7; M = 5.85; SD = 1.11)
The outcome is examined at a couple level. Respondents are asked how happy they are with their marriages. If both spouses respond to this question, the average of the responses is used. If only one of the spouses responds, the single response is used.

Either spouse reports marriage in trouble (%)
The outcome is examined at a couple level. Respondents are asked whether they thought that their marriage was in trouble in the past three months. If either spouse answered by saying that they were "Divorced more than three months ago," the outcome was not created. Otherwise, if either spouse indicated that they had thought that their marriage was in trouble, an affirmative outcome was created.

Reports of warmth and support (Scale: 1 to 4; α = 0.86; M = 3.39; SD = 0.49)
The outcome is examined separately for men and women and is the average of responses to seven items aimed at capturing warmth and support in couple relationships. Sample items include: "My spouse expresses love and affection toward me"; "My spouse listens to me when I need someone to talk to"; and "I trust my spouse completely."

Reports of positive communication skills (Scale: 1 to 4; α = 0.80; M = 3.20; SD = 0.57)
The outcome is examined separately for men and women and is the average of responses to seven items aimed at capturing how the couple communicates during disagreements. Sample items include: "My spouse understands that there are times when I do not feel like talking and times when I do"; "We are good at working out our differences"; and "During arguments, my spouse and I are good at taking breaks when we need them."

Reports of negative behavior and emotions (Scale: 1 to 4; α = 0.87; M = 2.17; SD = 0.77)
The outcome is examined separately for men and women and is the average of responses to seven items aimed at capturing negative interactions that occur during disagreements. Sample items include: "My spouse was rude and mean to me when we disagreed"; "My spouse seemed to view my words or actions more negatively than I meant them to be"; and "My spouse has yelled or screamed at me."

(continued)

Box 4 (continued)

Reports of psychological abuse (Scale: 1 to 4; α = 0.76; M = 1.29; SD = 0.46)
This outcome is examined separately for men and women. Psychological aggression is the average of the responses to six items. Example items include, "Have you felt afraid that your spouse would hurt you?" "Has your spouse accused you of having an affair?" "Has your spouse tried to keep you from seeing or talking with your friends or family?"

Reports of physical assault and any severe physical assault (%)
These outcomes are examined separately for men and women. Two measures indicating (1) any physical assault and (2) any severe physical assault (defined as whether spouse used a knife, gun, or weapon or choked, slammed, kicked, burned or beat them) in the past three months. Responses were to adapted questions from the Revised Conflict Tactics Scale.

Neither spouse reports infidelity (%)
This outcome is examined at the couple level. It measures whether either respondent reported cheating on one's spouse with someone else or either respondent believes that the spouse had "definitely" cheated with someone else in the past three months.

Individual psychological distress (Scale: 1 to 4; α = 0.86; M = 1.93; SD = 0.76)
A measure of individual psychological distress is created from responses to the K6 Mental Health Screening Tool.[*]

Reports of cooperative coparenting (Scale: 1 to 4; α = 0.87; M = 3.37; SD = 0.56)
This outcome is examined separately for men and women. Cooperative coparenting is created from six items. Example items include "How well the respondent gets along with the spouse when it comes to parenting," "Whether they are able to work out good solutions when there is a problem with the children," "Whether respondent can turn to the spouse for support and advice when there's a rough day with the children."

NOTES: Additional information about the construction of the primary 12-month survey outcome measures and the analyses used to assess the reliability and validity of the measures are presented in Hsueh et al. (Forthcoming, 2012).

α = Cronbach's alpha; M = mean; SD = standard deviation.

[*]A slightly adapted version of the K6 Mental Health Screening Tool (Kessler et al., 2003) was administered to study participants, in which the response scale was modified from a 5-point scale to a 4-point scale, ranging from "often" to "never."

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Table 4

**Estimated Impacts on Relationship Status and Marital Appraisals
Based on the 12-Month Survey**

Outcome[a]	Program Group	Control Group	Difference (Impact)	Effect Size[b]	Standard Error
Relationship status					
Married[c] (%)	90.0	89.3	0.8	—	0.8
Marital appraisals					
Couple's average report of relationship happiness[d]	5.93	5.77	0.15	0.13 ***	0.03
Either spouse reports marriage in trouble (%)	47.7	52.9	-5.2	— ***	1.2
Sample size (couples)	2,650	2,745			

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.
   Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
   Rounding may cause slight discrepancies in sums and differences.
   [a]Box 4 describes how these outcomes are defined.
   [b]A dash indicates that a value is not shown for dichotomous outcomes because percentage point differences are readily interpretable. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group.
   [c]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.
   [d]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

> **lower levels of marital distress in the program group than the control group.**

The SHM program affected couples' appraisals of the quality of their marital relationships. Program group couples reported higher relationship happiness than their control group counterparts approximately 12 months after they entered the study (Table 4). On a scale where 1 is "completely unhappy" and 7 is "completely happy," the average responses in the program group and control group were 5.93 and 5.77, respectively, which translates to a difference of a 0.15 point impact with an effect size of 0.13 standard deviation. An impact of this magnitude could theoretically occur, for example, if the program changed the reported marital happiness of 425 couples (about 16 percent of couples in the program group) from 5 to 6 on the 7-point scale. However, because translating impacts in this way is often not possible, effect sizes are one way to interpret the substantive significance of impact estimates. The potential substantive significance of the impacts can be broadly characterized using general rules of thumb from prior

research, where effect sizes of 0.20 standard deviation or less are considered "small," effect sizes of 0.50 standard deviation are considered "moderate," and effect sizes of 0.80 standard deviation or above are considered "large."[31]

The SHM program also affected couples' reports of thinking, in the past three months before the survey interview, that their marriage was in trouble. This measure is commonly used to characterize marital distress, which can be predictive of later divorce or separation among married couples.[32] Fewer program group couples reported thinking that their marriage was in trouble than control group couples; about 53 percent of the control group reported thinking that their marriage was in trouble in the past three months, compared with about 48 percent of the program group — a reduction of 5 percentage points.

Impacts on Self-Reported Positive and Negative Marital Interactions

One method of assessing the quality of marital interactions is to ask each spouse about the extent to which positive and negative emotions and behaviors and effective communication skills are expressed in their relationship. Information from these questions on the 12-month follow-up interviews is presented first, followed by an analysis of similar constructs developed from the videotaped observations of couple interactions. The data show a pattern of small, positive impacts by SHM on the quality of marital interactions. There is little evidence of differences in these impacts between men and women or across local SHM programs.[33]

- **Program group members reported more positive emotions and communication, and fewer negative emotions and behaviors, in their relationships than their counterparts in the control group.**

As shown in Table 5, the SHM program improved the amount of self-reported warmth and support expressed in couple relationships. Using a 4-point scale, men in the program group reported an average score of warmth and support of 3.46, which is 0.04 point higher than the score reported by control group men. Program group women reported an average score of warmth and support of 3.37, which is 0.05 point higher than the score reported by control group women. These impacts translate to an effect size of 0.09 standard deviation for both men and women.

The SHM program group, on average, also reported higher use of positive communication skills than the control group. Using a 4-point scale, program group men reported an average

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[31]Cohen (1988).
[32]Karney and Bradbury (1995).
[33]See Hsueh et al. (Forthcoming, 2012), Appendix I and Appendix J.

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Table 5

**Estimated Impacts on Reported Quality of Marital Interactions
Based on the 12-Month Survey**

Outcome[a,b]	Program Group	Control Group	Difference (Impact)	Effect Size[c]		Standard Error
Warmth and support in relationship						
Men's report of warmth and support	3.46	3.42	0.04	0.09	***	0.01
Women's report of warmth and support	3.37	3.32	0.05	0.09	***	0.01
Positive communication skills in relationship						
Men's report of positive communication skills	3.24	3.19	0.05	0.08	***	0.01
Women's report of positive communication skills	3.22	3.15	0.07	0.11	***	0.01
Negative interactions in relationship						
Men's report of negative behavior and emotions	2.16	2.23	-0.07	-0.08	***	0.02
Women's report of negative behavior and emotions	2.10	2.19	-0.09	-0.12	***	0.02
Sample size						
Men	2,415	2,504				
Women	2,575	2,668				

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Box 4 describes how these outcomes are defined.

[b]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, and negative behavior and emotions.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group.

score of positive communication skills of 3.24, which is 0.05 point higher than the score of control group men, for an effect size of 0.08 standard deviation. Program group women reported an average score of positive communication skills of 3.22, which is 0.07 point higher than the score of control group women, for an effect size of 0.11 standard deviation.

Program group members reported fewer negative behaviors and emotions in their relationship than their counterparts in the control group. Also using a 4-point scale, program group men reported an average score of 2.16, compared with 2.23 for men in the control group, which is an impact with an effect size of –0.08 standard deviation. Program group women reported an average score of 2.10, compared with 2.19 for women in the control group, which is an impact with an effect size of –0.12 standard deviation.

Impacts on Observed Positive and Negative Couple Interactions

A similar pattern of positive impacts emerges when marital functioning is measured using videotaped observations of couple interactions. (Box 5 describes the primary outcomes based on observed marital interactions, and Box 6 describes how a couple's typical interactions might look in the SHM evaluation).[34] The impacts on observed positive and negative couple interactions are again small and subtle in magnitude. Nonetheless, there is a notable correspondence in the direction and magnitude of the impacts on marital functioning across the data sources — self-reports and independent direct observations.

- **In observed couple interactions, the program group engaged in more positive communication skills and less anger and hostility, on average, than the control group.[35]**

Relative to the control group overall, as shown in Table 6, men and women in the SHM program group showed greater use of positive communication techniques in their observed couple interactions. Women in the program group exhibited significantly fewer expressions of anger and hostility in couple interactions than their counterparts in the control group. These impacts suggest that the SHM program not only changed the way that participants viewed their marriages but also the extent to which they were able to implement the skills taught by the SHM curricula in their interactions. However, no significant impacts were found for husbands in the extent to which they expressed anger and hostility when speaking with their wives. Furthermore, no significant impacts were found for either spouse in the degree to which they expressed warmth and support in their couple interactions.

Impacts on Psychological and Physical Abuse and on Infidelity

The 12-month follow-up survey interviews also asked respondents about the extent to which they experienced psychological and physical abuse in their marital relationships.

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[34]Unweighted impact estimates on observed couple interaction outcomes are presented. Because equal numbers of couples in each of the local SHM programs were flagged to participate in the videotaped observations and because couples with infants and with preadolescent and adolescent focal children were oversampled, the impact estimates were also calculated with a variety of weights to understand the extent to which the impact estimates on observed couple interaction outcomes might be sensitive to this sampling strategy and the extent to which these impact estimates might be representative of estimates for the survey respondent sample or for the full SHM sample; see Hsueh et al. (Forthcoming, 2012), Appendix F. The results of these analyses suggest that the impact estimates on observed couple interaction outcomes are not highly sensitive to weighting.

[35]Differences in impacts between men and women are not statistically significant.

Box 5

**Descriptions of the Primary Outcomes Based on
Observed Marital Interactions**

Observed warmth and support (Scale: 1 to 9;[*] α = 0.70; M = 1.97; SD = 0.66)
The outcome captures the extent to which warmth, supportive, and positive emotions and behaviors are expressed by a spouse in the couple interactions. The outcome was created separately for men and women by taking the average value of the following five codes[†] from the Iowa Family Interaction Rating Scale (IFIRS):[‡] Warmth/Support, Humor/Laugh, Positive Mood, Group Enjoyment, and Physical Affection.[§]

Observed positive communication skills (Scale: 1 to 9;[*] α = 0.79; M = 5.63; SD = 0.83)
The outcome encompasses the degree to which a spouse employs effective communication techniques and skills, is actively engaged in the discussion, and facilitates problem solving in the couple interactions. The outcome was created separately for men and women by taking the average value of the following seven codes[†] from the IFIRS:[‡] Assertiveness, Listener Responsiveness, Communication, Effective Process and Disruptive Process (reverse coded), Denial (reverse coded), and Avoidant (reverse coded).[§]

Observed anger and hostility (Scale: 1 to 9;[*] α = 0.82; M = 1.33; SD = 0.56)
The outcome assesses the extent to which a spouse expresses hostility, anger, and other coercive and negative emotions and behaviors in the couple interactions. The outcome was created separately for men and women by taking the average value of the following four codes[†] from the IFIRS:[‡] Hostility, Contempt, Angry Coercion, and Verbal Attack.[§]

NOTES: Additional information about the construction of the primary outcome measures based on observed marital interactions and the measurement analyses used to assess the reliability and validity of the measures are presented in Hsueh et al. (Forthcoming, 2012).

α = Cronbach's alpha; M = mean; SD = standard deviation.

[*]The IFIRS codes are scored on a scale ranging from 1 to 9, where 1 indicates that the behavior is "not at all characteristic" of an individual (or that the behavior is never exhibited by the individual) and 9 indicates that the behavior is "mainly characteristic" of an individual in a given interaction (or that the behavior is consistently and frequently exhibited with high intensity). For varying degrees of behaviors, a score of 3 indicates that the behavior is infrequently exhibited, and when the behavior is evident, it is expressed at low intensity; a score of 5 indicates that the behavior is sometimes shown at low or moderate intensity; and a score of 7 indicates that the behavior is exhibited fairly often at an elevated intensity. Scores of 2, 4, 6, and 8 are entered when the behavior exhibited by an individual falls somewhere between the foregoing scores.

[†]Each code for a given individual was created by taking the average value for that code across the measures of husband social support, wife social support, and problem-solving interactions. Then the averaged interaction codes were used to create the composite outcome scales for each individual's observed marital interactions.

[‡]Melby et al. (1998).

[§]Appendix B describes the IFIRS codes listed here.

Box 6

**How a Typical Couple's Observed Interactions Might Look
in the SHM Evaluation**

Insights into how the conversations of a typical couple in the SHM sample might look can be gained by translating raters' scores on the codes of the Iowa Family Interaction Ratings Scale (IFIRS)[*] into the likely behaviors that spouses exhibited in interactions with each other. Box 5 describes the behaviors and scales used for outcomes based on observed marital interactions.

Observed warmth and support. In general, spouses rarely were physically affectionate with each other (Physical Affection, M = 1.20) and made few unqualified, outright warm or support-ive declarations, like "I appreciate you!" (Warmth/Support, M = 1.74). Rather, the conversations of a typical couple tended to convey a somewhat positive mood and tone (Positive Mood, M = 2.09), and spouses seemed content and to enjoy talking to each other (Group Enjoyment, M = 2.18), but even these kinds of behaviors and emotions were relatively subdued.

Observed positive communication skills. By comparison, a typical couple's conversations were characterized by positive communication, in the sense that spouses tended to openly exchange ideas, thoughts, and feelings with each other (Communication, M = 4.67; Assertive-ness, M = 3.86; Avoidant [reverse coded], M = 6.80). They also tended to listen actively to each other, saying things like "Mm-hmm" while the spouse was speaking (Listener Respon-siveness, M = 4.27; Denial [reverse coded], M = 8.45). In much the same way, spouses were actively engaged in problem solving (Effective Process, M = 3.67; Disruptive Process [reverse coded], M = 7.67).

Observed anger and hostility. A typical spouse in the SHM sample showed little outright anger and hostility (as measured by that scale): the typical spouse seldom engaged in outright angry, critical, or disapproving behaviors of a spouse (Hostility, M = 1.72) and rarely showed contempt (Contempt, M = 1.39), made verbal threats (Angry Coercion, M = 1.12), or directed unqualified, demeaning, or derogatory statements at the spouse (Verbal Attack, M = 1.09).

NOTE: [*]Melby et al. (1998).

- **Men and women in the program group reported less psychological abuse in their relationships, on average, than their control group coun-terparts.**

As shown in Table 7, men and women in the program group had average scores that are 0.04 point less on a 4-point scale than the scores of their counterparts in the control group.

- **Fewer men in the program group reported that their wives physically assaulted them during the past three months, relative to the control group, although the impact for women is not statistically significant.**

Table 6

**Estimated Impacts on Marital Quality Based on
Observed Couple Interactions at 12 Months**

Outcome[a,b]	Program Group	Control Group	Difference (Impact)	Effect Size[c]	Standard Error
Observed in couple interactions					
Men's warmth and support	1.98	1.95	0.03	0.05	0.03
Women's warmth and support	1.98	1.98	0.00	0.00	0.03
Men's positive communication skills	5.57	5.49	0.08	0.10 *	0.04
Women's positive communication skills	5.76	5.68	0.08	0.09 *	0.04
Men's anger and hostility	1.25	1.28	-0.03	-0.05	0.03
Women's anger and hostility	1.37	1.42	-0.06	-0.10 *	0.03
Sample size					
Men	695	702			
Women	695	702			

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

    Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

    Rounding may cause slight discrepancies in sums and differences.

    [a]Box 5 describes how these outcomes are defined.

    [b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, and anger and hostility.

    [c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group.

About 13 percent of control group men reported that their wives assaulted them, compared with about 11 percent of program group men; this is a 2 percentage point reduction in the proportion of men who reported experiencing physical assaults (Table 7).

When impacts were examined for the subset of physically aggressive behaviors that can be categorized as severe physical assault, such as choking or beating, SHM had no significant effects for men or women.

Lastly, the SHM program had no statistically significant effects on reported infidelity. In both the program group and the control group, about 92 percent of couples reported fidelity in their relationships.

Impacts on Spouses' Mental Health

- **Men and women in the program group reported less individual psychological distress than their counterparts in the control group.**

Table 7

**Estimated Impacts on Psychological Abuse, Physical Assault, and Infidelity
Based on the 12-Month Survey**

Outcome[a]	Program Group	Control Group	Difference (Impact)	Effect Size[b]	Standard Error
Psychological abuse and physical assault					
Men's report of psychological abuse[c]	1.30	1.34	-0.04	-0.09 ***	0.01
Women's report of psychological abuse[c]	1.25	1.28	-0.04	-0.08 ***	0.01
Men's report of any physical assault (%)	11.3	13.4	-2.2	— **	0.9
Women's report of any physical assault (%)	8.6	9.2	-0.5	—	0.8
Men's report of any severe physical assault (%)	1.5	1.9	-0.3	—	0.4
Women's report of any severe physical assault (%)	1.6	1.6	0.0	—	0.4
Fidelity					
Neither spouse reported infidelity (%)	92.4	91.3	1.1	—	0.7
Sample size					
Couples	2,650	2,745			
Men	2,415	2,504			
Women	2,575	2,668			

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Box 4 describes how these outcomes are defined.

[b]A dash indicates that a value is not shown for dichotomous outcomes because percentage point differences are readily interpretable. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group.

[c]The scale ranges from 1 to 4, where higher scores indicate higher levels of psychological abuse.

As shown in Table 8, the SHM program significantly affected the psychological well-being of spouses. Men in the program group reported an average score of psychological distress that is 0.05 point lower on a 4-point scale than the score for control group men, and program group women reported an average score that is 0.07 point lower than control group women reported. These translate to effect sizes of –0.06 and –0.09 standard deviation, respectively.

Impacts on the Coparenting Relationship

The SHM program may also affect how parents work together in their shared parenting roles. Since couples in the SHM program improved their communication skills, reduced harsh conflict, and increased their warmth and support, these benefits may carry over into their coparenting relationship.

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Table 8

**Estimated Impacts on Individual Psychological Distress and the Coparenting Relationship
Based on the 12-Month Survey**

Outcome[a,b]	Program Group	Control Group	Difference (Impact)	Effect Size[c]	Standard Error
Individual psychological distress					
Men's psychological distress	1.85	1.90	-0.05	-0.06 **	0.02
Women's psychological distress	1.95	2.02	-0.07	-0.09 ***	0.02
Coparenting relationship					
Men's report of cooperative coparenting	3.45	3.43	0.02	0.03	0.01
Women's report of cooperative coparenting	3.33	3.30	0.02	0.04	0.02
Sample size					
Men	2,415	2,504			
Women	2,575	2,668			

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Box 4 describes how these outcomes are defined.

[b]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: individual psychological distress and cooperative coparenting.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group.

- **The SHM program did not significantly affect cooperative coparenting.**

The SHM program did not have a statistically significant effect on the quality of the coparenting relationship, as measured by a scale of support and cooperation in shared child-rearing activities and responsibilities constructed from responses to survey items (Table 8).

Impacts Analyzed by Local SHM Program

All the local SHM programs implemented the full program model in adherence with program guidelines, though there were differences in the hours of couples' participation, in the local host agencies, in the characteristics of the couples who enrolled, in the characteristics of

the local program staff, in the curricula that were used, and in program operations.[36] This section explores the extent to which there are differences in impacts across local programs.[37]

- **SHM's estimated impacts are generally consistent across the eight local programs in the evaluation.**

Despite some variation in participation, in implementation features, and in characteristics of couples and programs, SHM's impacts are generally consistent across local programs. Estimated effects when analyzed by local SHM program are not statistically significantly different from one another, except for one outcome out of 20 survey outcomes that were examined: men's report of any physical assault. (See Appendix Table C.1; daggers are shown in the rightmost column to indicate whether the differences in impacts across local programs are statistically significant.)[38] Given the number of outcomes examined, one significant difference in impacts could have occurred by chance if the local programs all had the same true effects. In other words, differences in impacts across the sites are small enough that they may simply reflect the natural variation that occurs in studies of this size.

Although impacts do not vary significantly across the eight local programs, the magnitude of the estimated effects on reported marital-quality outcomes is slightly larger for programs using the Within Our Reach curriculum and smaller for programs using the Becoming Parents Program (Box 1, above, and Appendix Table C.1). However, it is not possible to reach definitive conclusions about whether some of the curricula are more effective or less effective than others, because different types of families were served by different curricula. In particular, the Becoming Parents Program served couples who just had or who were about to have a baby, and few such couples were served by the other programs or curricula. Likewise, two of the three local programs that had large Hispanic samples used Within Our Reach, and fewer Hispanic couples were served by most of the other local programs. Thus, it is not possible to determine

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[36]For details about local programs, see Miller Gaubert et al. (2010) and Miller Gaubert, Gubits, Alderson, and Knox (Forthcoming, 2012).

[37]Impacts as analyzed by local SHM program were not estimated for the outcomes based on observed marital quality. Before the impact analysis was conducted, the sample sizes of the local programs were determined to be too small to reliably estimate impacts by local SHM program using the observational data.

[38]When interpreting SHM's impacts by local program (or, later in this report, by subgroup), the emphasis is on whether there are statistically significant differences in estimated impacts across the local programs. Less emphasis is placed on whether the impacts in any one location are statistically significant. If SHM were equally effective for different local programs, some differences in impacts across the programs would still occur by chance. Finding statistically significant differences in impacts across local programs would show that the variation in impacts is greater than what would be expected by chance, indicating that SHM likely had different effects for different local programs. For detailed impacts at the level of the local program, see Hsueh et al. (Forthcoming, 2012), Appendix H.

whether the effects are driven by the sample members' characteristics, the characteristics of local programs, or curricula differences — or some combination of the three.

Do SHM Program Impacts Vary for Subgroups of Couples?

Thus far, this report has examined estimated impacts of the Supporting Healthy Marriage (SHM) program for everyone for whom follow-up data were collected. The effects of the SHM program may differ for different subgroups of people defined using characteristics of sample members when they first entered the study. This section explores these possibilities.

The subgroup analysis was limited to three sets of characteristics that were chosen in advance and for which there are good reasons to expect impacts to differ. This analysis plan was intended to reduce the likelihood that a result would be statistically significant by chance.[39] (See Box 3, above.) These characteristics — identified on the basis of theory, prior research, and policy relevance — include:[40]

- **Level of marital distress.** It was hypothesized that SHM might have different effects on couples experiencing different levels of marital distress when they entered the study. Since SHM was designed as a preventive intervention, for example, it might not be expected to affect couples who were already experiencing the highest levels of marital distress. At the same time, there may be little room for SHM to improve the relationships of couples with the lowest levels of marital distress. Therefore, the decision was made to look at SHM's differential effects by couples' level of marital distress when they entered the study.

- **Family income-to-poverty level.** While some marriage education programs have been found effective for middle-class families, very little research has examined the effects of marriage education among economically disadvantaged families. Given this lack of research in low-income samples and the fact that the marriage education curricula used in the SHM programs were modified to make them more appropriate for low-income couples, it is important to examine whether and how SHM differentially affected couples at different income levels.

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[39]For descriptions of the analytic approaches to test the SHM subgroup impacts that are discussed in this section, see Hsueh et al. (Forthcoming, 2012), Appendix D.

[40]For details about how the subgroups were defined and for tables showing how the impacts of SHM on participation and referral outcomes vary for different groups of families, see Hsueh et al. (Forthcoming, 2012), Appendix J. Child age was also considered as a possible characteristic by which to define subgroups, but given that certain programs targeted expecting parents or those with infants, this characteristic is too highly related with program location to allow the analysis to confidently identify SHM's differential effects by child age.

- **Race/ethnicity.** Within the United States, different racial and ethnic groups display different marital patterns.[41] Recognizing this, various federal initiatives, including the Hispanic Healthy Marriage Initiative and the African American Healthy Marriage Initiative, aim to develop culturally competent strategies for supporting healthy marriages and addressing the unique needs of these populations. Furthermore, the Building Strong Families evaluation identified a pattern of significant positive impacts of the program for African-American couples. Thus, while SHM aimed to deliver culturally competent services (even though the program content that was delivered through the four marriage education curricula was not adapted to focus on the needs of any one racial/ethnic group), it is important to see whether the SHM program worked equally well for different groups or whether it worked better for some groups than for others.

To explore the subgroup impacts of the SHM program, the impacts were estimated separately for each subgroup to see whether their magnitude and direction differ significantly. Appendix D presents the results of this "split-sample" subgroup analysis and provides some evidence that SHM's impacts differ significantly for subgroups of couples defined by level of marital distress and race/ethnicity. The number of impact estimates that differ significantly across the 26 survey and observed outcomes that were examined range from 1 to 3 for each of these subgroup sets.

- **There is some evidence that the positive impacts of SHM are slightly larger for Hispanic couples and for couples with high marital distress at study entry.**

A potential shortcoming of a split-sample approach is that it does not isolate which characteristics might be most influential in shaping the effects of the intervention, above and beyond other potential confounding factors. This can be a point of concern, given that the sample members' characteristics differ substantially across local SHM programs. As a result, it can be difficult to determine whether the impact estimates are driven by a particular subgroup characteristic, other associated characteristics, differences in local programs, or some combination of factors. The tables in Appendix E present a supplemental analysis that was conducted in an attempt to isolate how the effects of the SHM program vary for subgroups after accounting for a set of other observable differences across subgroups (referred to as the "full interaction model"). Even though this approach can be helpful in understanding how impacts are associated with different characteristics, its power to detect statistically significant differences in impacts

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[41]Kreider and Ellis (2011).

across subgroups can be limited, and the impact estimates can be sensitive to how the analytic model is specified.

The full interaction analysis suggests that there are few statistically significant differences in how SHM affected subgroups of couples after adjustments were made for differences in impacts arising from other observable characteristics across subgroups. When examining all the outcomes across survey responses and observed marital interactions for the three subgroup sets (level of marital distress, income relative to poverty level, and race/ethnicity), only three statistically significant differences in impacts across all subgroups were found (Appendix E). These results suggest that there is some uncertainty about the extent to which differences in program impacts can be attributed to the subgroups of interest per se or to other characteristics that differ across couples, including the characteristics of local SHM programs.

Discussion

The 12-month impact results from the Supporting Healthy Marriage (SHM) evaluation provide some of the first evidence that a couples-based, family-strengthening intervention for lower-income married couples can improve the quality of marital relationships and functioning, as well as adult psychological well-being, when delivered on a large scale. As measured by survey and observational data, there are small, positive program-driven estimated impacts across multiple dimensions of marital interactions and functioning — namely, marital happiness, marital distress, positive communication skills, warm and supportive expressions of emotions and behaviors, expressions of negative emotions and behaviors, and psychological and physical abuse; there are also small program-driven improvements in parents' individual psychological well-being and adjustment. These impact estimates do not appear to differ significantly across the eight local SHM programs in the evaluation, though some evidence suggests that the program impacts vary somewhat by couples' racial and ethnic background and by their level of marital distress at study entry.

The number and consistency of impacts across a range of outcomes and data sources provide reassurance that the estimated impacts are not statistical anomalies. The question, then, is, How important are the impacts? The SHM program, for example, had a positive impact on couples' relationship appraisals: at the 12-month follow-up point, 48 percent of program group couples reported thinking in the past three months that their marriage was in trouble, compared with 53 percent of couples in the control group. This is a reduction of 5 percentage points. However, even at the 12-month follow-up point, a high proportion of program group couples still reported experiencing marital distress. As a point of comparison, for example, only 24 percent of men in the National Survey of Families and Households (NSFH) reported thinking in the past year that their marriage was in trouble.

Ultimately, answers to whether the short-term impacts of SHM are important lie in the longer-term impacts of the program. Prior longitudinal studies have often found that marital quality and adults' psychological functioning are predictive of future marital and relationship stability, as well as of outcomes for children.[42] Thus, even though the impacts of the SHM program are small, it is possible that the short-term impacts may lead to longer-term positive effects on adult and child well-being.

SHM's effects on reducing psychological abuse for men and women are noteworthy, given that the presence of any abuse in the home can have important ramifications for adult and

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[42]Cowan and Cowan (2006); Cummings and Davies (2002); Downey and Coyne (1990); Grych and Fincham (2001); Karney and Bradbury (1995); Kessler, Walters, and Forthofer (1998).

child well-being.[43] The SHM program also reduced the extent to which men reported that their wives physically assaulted them. These reductions could potentially prevent other types of aggression from emerging in the longer run, given that prior research has found that physical aggression in relationships is typically mutual and can often escalate into reciprocal forms of physical aggression between spouses.[44]

Taken together, the SHM impact results add to the growing body of evidence regarding the effectiveness of couples-focused, family-strengthening interventions. As discussed below, the impacts of the SHM program join a mixed set of findings regarding the effectiveness of couple-strengthening programs focused on low-income couples to date: the Building Strong Families (BSF) evaluation suggests that it is challenging to affect the relationship outcomes of low-income unmarried parents of newborns,[45] but the Supporting Father Involvement (SFI) intervention and the Strong Bonds studies — and now SHM — indicate that it is possible to strengthen the marital relationships of racially and ethnically diverse families who have low or modest incomes, at least in the short run.[46]

The short-term impact results of SHM are consistently positive and larger than the effects of the BSF evaluation, a large-scale, multisite random assignment evaluation of a relationship skills education program for unmarried parents with a newborn or who were expecting a child. The BSF program had no overall significant impacts on the quality of couple relationships when pooled across eight local programs at a 15-month follow-up point.[47] It is difficult to know with certainty why the two studies produced different results. Although the SHM and BSF programs tested similar curricula and employed similar programmatic approaches to serving couples, the programs served couples at very different stages of their relationships. Couples in the SHM evaluation had been married, on average, for more than six years when they entered the study, whereas the couples in the BSF evaluation were unmarried. There are also considerable differences in the racial and ethnic composition of the study samples: African-American couples make up 52 percent of the BSF sample, compared with only 11 percent of the SHM sample. Across the two studies, program group members also took up services at very different rates: on the follow-up surveys, 61 percent of the BSF program couples and 89 percent of the SHM program couples reported ever participating in a group session about relationship skills. While it is not possible to disentangle the unique contributing roles of each of these factors, it is likely that differences in the two studies' impacts can be attributed to some combination of differences in their target populations, implementation, or take-up of services.

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[43]Coker et al. (2002); Kitzmann, Gaylord, Holt, and Kenny (2003).
[44]Archer (2000).
[45]Wood et al. (2010).
[46]Cowan et al. (2009); Stanley et al. (2010).
[47]Wood et al. (2010).

The short-term estimated impacts of SHM are positive, like those of another recent study — a random assignment evaluation of the Supporting Father Involvement (SFI) intervention, which is a preventive couples-focused program aimed at strengthening family functioning and fathers' involvement and that targets predominantly low-income Mexican parents in family support centers. SFI, for example, had positive impacts on couples' relationship satisfaction on the order of 0.11 standard deviation for men and 0.25 standard deviation for women, or 0.18 standard deviation when averaged across men and women.[48] SHM had a positive impact on a similar measure of couple-level relationship happiness with an effect size of 0.13 standard deviation.

On the other hand, earlier research on marital interventions has found larger effect sizes for middle-class families. SHM's short-term effects are small by comparison, even considering that the program was designed to provide more intensive "dosages" of services than most relationship and marriage education program models tested in the past. The short-term estimated impacts of SHM might be small for a variety of reasons. For instance, it is possible that lower-income couples who face multiple challenging life circumstances may find it more difficult to implement the skills from the SHM curricula in their everyday lives and interactions, thereby diminishing the program's impacts.

At the same time, differences in research designs across studies make it difficult to draw definitive conclusions from comparisons of the magnitudes of impacts across studies. The vast majority of studies (other than the Building Strong Families evaluation) were conducted with relatively small samples, a single curriculum, and under relatively controlled circumstances. Meta-analyses in other fields have found that these conditions tend to produce larger impacts, on average, than circumstances like the SHM evaluation, in which programs were delivered and tested on a large scale and program operators had discretion over the curricula used, the staff that were hired, and the program's management structures, among other factors.[49] Indeed, when statistically significant impacts are evident, large-scale program evaluations often tend to find only modest impacts on indicators of family functioning and parents' individual psychological well-being. For example, a national evaluation of Early Head Start (EHS), which provides services aimed at enhancing child development directly and to support child development through parenting and/or family development services, showed improvements on a range of parenting practices, such as whether parents spanked or read to their child or whether they showed supportiveness and emotional responsivity in observed parent-child interactions. The

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[48]The effect sizes for SFI's impacts were calculated by the authors of this report using information presented in Cowan et al. (2009) by subtracting the posttreatment mean of the control group from the posttreatment mean of the couples-focused program group and dividing this by the posttreatment standard deviation of the control group.

[49]Lipsey and Wilson (2001); Wilson and Lipsey (2001).

magnitude of these effects ranged from 0.08 to 0.16 standard deviation. Likewise, EHS led to improvements on parenting stress that were 0.10 standard deviation in size when children were 2 years old.[50] Elsewhere, the Moving to Opportunity for Fair Housing (MTO), a ten-year research demonstration that combines tenant-based rental assistance with housing counseling, was found to reduce adult psychological distress with an impact of 0.08 standard deviation.[51]

The SHM program also had positive effects on psychological adjustment for parents — for both fathers and mothers. While the effects are small, any improvements in parental psychological distress are potentially important, both for parents' own well-being and because parental depression and distress are often linked with less positive parenting practices and increased problem behaviors for children.[52] That SHM positively affected the psychological well-being of both fathers and mothers is particularly noteworthy, given how few social programs are aimed at improving the well-being of low-income men and given recent policy interests in improving the capacities of fathers from lower-income backgrounds to engage in high-quality, stable relationships with their children.

The SHM program did not have a significant effect on the likelihood that parents would still be together at the 12-month follow-up. Most random assignment studies of relationship skills programs have not examined effects on marital stability in the short term, though there are two recent exceptions. The SFI study did not find statistically significant impacts on the likelihood that married couples at random assignment would stay married at an 18-month follow-up point. In that study, about 92 percent of couples remained married at the follow-up point across the study's research conditions.[53] Elsewhere, Strong Bonds — a study of the PREP curriculum delivered by Army chaplains (PREP Army), which also targeted couples with low or modest incomes — identified statistically significant impacts on couples' marital status after a 12-month follow-up period: 6 percent of the control group filed for a divorce or divorced, compared with 2 percent of the program group.[54] This study's sample is quite different than SHM's, however, making it difficult to draw direct comparisons across the two studies.

It was also hypothesized that the SHM program might affect other aspects of the couple relationship, such as infidelity and the quality of the coparenting relationship, but these hypotheses are not supported by the 12-month data.

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[50]U.S. Department of Health and Human Services (2001).
[51]Kling, Liebman, and Katz (2007).
[52]Hoffman, Crnic, and Baker (2006); McLoyd (1990); Conger and Elder (1994).
[53]Personal communication with Philip Cowan and Carolyn Pape Cowan about SFI's estimated impacts on couples' relationship status.
[54]Stanley et al. (2010).

As noted, the average cost of delivering SHM services ranged from $7,400 to $11,500 per couple across the local programs. The estimated program operating costs reflect the intensity of a yearlong, multicomponent program that substantially emphasized staff efforts to engage and retain enrolled couples in services. Future research could focus on testing lower-cost strategies of delivering marriage and relationship education services on a similar scale and identifying areas for cost reduction. The challenge, however, is to determine which elements of the program (such as staff-to-client ratios, duration of engagement, supports provided, and so on) could be trimmed without compromising the program's capacity to produce positive impacts.

SHM's impacts were generally consistent across the eight local programs in this evaluation. This finding likely reflects that there were large differentials in relationship-focused services received by both the program group and the control group members in all locations and that all the programs were able to implement the full SHM program model in adherence with program guidelines. Thus, even though there was some variation in implementation features, hours of couples' participation, characteristics of the host agencies, and average program costs per couple, this finding suggests that these differences were not large enough to generate significant differences in impacts across local programs.

Some evidence suggests that SHM's effects differ for couples with different racial and ethnic backgrounds and for couples experiencing different levels of marital distress, though it is difficult to know what constellation of factors might have led to this pattern of results. Even so, these findings are of interest because little is known about who might benefit the most or the least from preventive, family-strengthening interventions like SHM. Given that the SHM evaluation is one of the first tests of a relationship and marriage education skills program delivered on a broad scale to lower-income married couples, the findings presented here can generate hypotheses for additional research. For example, additional analyses might explore how program effects differ for mixed racial and ethnic couples, because they may be more vulnerable to marital challenges that arise when spouses have different cultural backgrounds. Furthermore, because low-income couples and families often experience myriad challenging circumstances (such as complex family structures, multiple partner fertility, depression, severe stress, limited social and human capital resources, and joblessness — particularly among young, low-income men), future investigations could be aimed at understanding the extent to which these and other stressors moderate the impacts presented here. Understanding the role that these and other factors play in moderating impacts may help to inform program content and structure.

In sum, the SHM program had positive impacts on multiple dimensions of marital interactions and parents' individual psychological well-being and adjustment at the 12-month follow-up point. At the interim follow-up, however, the program did not significantly affect the likelihood that parents were still together or spouses' reports of infidelity or the quality of their

coparenting relationship — as was hypothesized. SHM's short-term effects are small, but they are consistent across a range of outcomes and data sources. Moreover, these short-term positive impacts occurred for couple interactions and adult psychological well-being — outcomes that have been associated with social and emotional outcomes for children, pointing to the possibility of longer-term positive effects on child well-being.

Looking forward, the data collected in the SHM evaluation provide an unprecedented opportunity to explore a range of questions related to marital and family processes among low-income families with diverse racial and ethnic backgrounds. Key questions for the evaluation are whether the 12-month effects of the SHM program are sufficient in magnitude and enduring enough over time to yield longer-term impacts on marital stability and benefits for parents and their children. Over time, the short-term effects may fade, or — as in some studies — the effects may grow as couples assimilate and integrate the curriculum lessons into their lives and interactions with each other.[55] It is important to follow couples and their families over a longer period of time to see whether the accumulation of positive effects across multiple domains of couple functioning, even if small in magnitude, will yield positive impacts on marital stability, on parenting and father engagement, and on parents' well-being and their children's adjustment and well-being over time. Subsequent reports using data collected approximately 30 months after couples entered the study will examine the effects of SHM on these and other outcomes over a longer period.

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[55]Schultz, Cowan and Cowan (2006); Hawkins, Blanchard, Baldwin, and Fawcett (2008).

Appendix A

More Information on the Baseline Characteristics of Couples in the SHM Evaluation

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Appendix Table A.1

**Definitions of the Demographic and Socioeconomic Characteristics of Couples
in the SHM Evaluation Sample at Study Entry**

Characteristic	How Defined
Race/ethnicity	Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. The "other/multiracial" category includes couples who are of different race/ethnicity (70 percent), couples in which at least one spouse has more than one race/ethnicity (15 percent), couples in which both of these conditions are true (8 percent), and couples who both self-identified as only Asian, Pacific Islander, Native American, or other (8 percent).
Education level[a]	Each spouse was asked to identify the highest credential completed. Response options were: General Educational Development (GED) or high school equivalency certificate, high school diploma, two-year/associate's degree, technical/vocational degree, college degree, or none of the above.
Age	Average age is calculated using the date of birth provided by each spouse.
Income 100% to less than 200% of FPL or less than 100% of FPL	FPL = federal poverty level. The poverty level was calculated using federal poverty guidelines for the year that the couple entered the study.
Expecting a child	A couple was defined as expecting a child if the woman said that she was pregnant.
Average number of children in the household	The number of children is the woman's response to the question of how many children under age 18 live in her household at least half of the time.
Married at the time of random assignment	Information about whether couples were married at random assignment comes from a retrospective question, which was a late addition to the 12-month follow-up survey. 59 percent of couples in the SHM research sample were asked whether they were married at enrollment. The percentages in the table reflect the responses only of couples who were asked the question at the 12-month follow-up. The overall percentage is weighted by local program sample sizes.
Average number of years married[b]	This number represents the mean of the woman's and the man's response. Years married is calculated using responses at enrollment for all couples, including those couples who gave a response on the 12-month survey that they were not married at the time of enrollment.
Stepfamily	A family is considered a stepfamily if either spouse responded that any child in the household was his or her stepchild.

<div align="right">(continued)</div>

Appendix Table A.1 (continued)

Characteristic	How Defined
Happiness in marriage	Individuals are categorized as happy in their marriage if they rated their happiness as 5, 6, or 7 on a scale of 1 to 7.
Marriage in trouble	Individuals are categorized as reporting marriage in trouble if they reported that during the past year they ever thought that their marriage was in trouble.
Psychological distress	Psychological distress is measured using the Kessler 6, which is a quantifier of nonspecific psychological distress. It includes six questions, such as "During the past 30 days, how often did you feel: So sad that nothing could cheer you up? Nervous? Restless or fidgety?" Each item is rated on a scale from 0 to 4, where a higher score indicates more frequent distress. The items are summed, and the individual is considered to be distressed if this sum is greater than 12. See Kessler et al. (2003).
Substance abuse	Substance abuse is measured using three questions from the CAGE Questionnaire and three similar questions adapted for drug use. These include the following: "Have you ever felt you should cut down on your drinking/drug use?"; "Have people annoyed you by complaining about your drinking/drug use?"; "Have you ever felt bad or guilty about your drinking/drug use?" See Ewing (1984).

NOTES: [a]Participants in the Oklahoma City location were asked whether they had a high school diploma or GED certificate. Response options were: none, high school diploma, GED or high school equivalency certificate, other (specify).

[b]In Oklahoma City, this question was not included on the SHM Baseline Information Form but was asked on the SHM 12-Month Follow-Up Survey.

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Appendix Table A.2

**Characteristics of SHM Couples Compared with Low-Income Married Couples
from National Surveys**

Characteristic[a]	SHM	2000 SMFL	1987 NSFH
Socioeconomic characteristics			
Race/ethnicity[b] (%)		***	***
White	27.6	53.7	66.8
Hispanic	49.5	33.3	18.3
African-American	15.1	7.3	11.1
Other	7.9	5.8	3.9
Average age (years)	31.4	36.5 ***	34.2 ***
Education level (%)			***
Less than high school	23.1	27.8	33.0
High school diploma or GED certificate[c]	51.8	44.5	40.4
More than high school	25.2	27.7	26.7
Family characteristics			
Average number of children in the household			
Preschool age (0-4)	1.0	0.8 ***	0.8 ***
School age (5-17)	1.2	1.7 ***	1.7 ***
Average number of years married	6.2	13.3 ***	11.2 ***
Marital appraisals (%)			
Men's report of happiness in marriage[d]		***	***
Less than happy	19.6	8.0	11.0
Happy	51.6	44.0	42.0
Very happy	28.9	48.0	47.0
Women's report of happiness in marriage[d]		***	***
Less than happy	25.0	5.0	14.0
Happy	49.3	43.0	39.0
Very happy	25.7	52.0	47.0
Men report marriage in trouble[e]	55.2	32.0 ***	23.7 ***
Women report marriage in trouble[e]	57.1	32.0 ***	29.4 ***
Sample size (individuals)	12,596	178	1,580

(continued)

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Appendix Table A.2 (continued)

SOURCES: MDRC calculations based on the SHM Baseline Information Forms; Amato's calculations based on the Survey of Marriage and Family Life (2000 SMFL); and Abt Associates' calculations based on the National Survey of Families and Households (1987 NSFH).

NOTES: Samples from the SMFL and NSFH are restricted to all married couples who had a child under age 18 and who had family incomes of less than 200 percent of the federal poverty level.

    Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent. Asterisks indicate that the results are significantly different for the SMFL sample compared with the SHM sample or for the NSFH sample compared with the SHM sample.

    Rounding may cause slight discrepancies in sums and differences.

    [a]In this table, SHM baseline measures are defined at the individual level to make them comparable with the measures from the other studies.

    [b]SHM and NSFH asked one question about race/ethnicity and one question about whether the respondent identified as Hispanic, while SMFL asked one question with the following response categories: "White Hispanic," "White non-Hispanic," "Black," or "Other."

    [c]For comparability with the national samples, high school graduation in this table includes those with GED certificates.

    [d]SHM asked, "All things considered, how happy are you with your marriage?" while NSFH and SMFL asked, "Taking all things together, how would you describe your marriage?" SHM and NSFH had a 7-point response scale, where 1 to 4 are considered "Less than happy"; 5 and 6 are considered "Happy"; and 7 is considered "Very happy." SMFL had a 3-point response scale with the options "Not too happy," "Pretty happy," and "Very happy."

    [e]SHM and NSFH asked respondents whether they had ever thought that their marriage was in trouble during the past year, while SMFL asked about the past three years.

Appendix B

Descriptions of the Codes Used to Construct the Primary Outcomes Based on Observed Marital Interactions

To describe dimensions of the quality of marital interactions examined in this report using videotaped observational data of couple interactions, it is helpful to review more detailed information about the codes from the Iowa Family Interaction Ratings Scale (IFIRS)[1] that were used to construct the primary outcomes based on observed marital interactions. This appendix presents the related IFIRS codes and descriptions of the behaviors, along with means (M) and standard deviations (SD).[2] The codes are grouped by measures of observed warmth and support, positive communication skills, and anger and hostility in couple interactions.

Codes Used to Construct the Scale for Observed Warmth and Support

- **Warmth/Support** (M = 1.74; SD = 0.83) includes expressions of liking, appreciation, praise, care, concern, or support for spouse (for example, "I love you"; and "You did that well.").

- **Humor/Laugh** (M = 2.63; SD = 1.22) includes displays of humor and statements that are lighthearted and good-natured in tone and manner and that decrease tension.

- **Positive Mood** (M = 2.09; SD = 1.01) encompasses content, happy, and optimistic displays as well as positive behavior toward self, others, or things in general (for example, "I'm content with my life"; and "This is fun!").

- **Group Enjoyment** (M = 2.18; SD = 1.20) captures the degree to which enjoyment is evident and displays of pleasure, fun, and satisfaction are present (for example, "I like doing this with you.").

- **Physical Affection** (M = 1.20; SD = 0.54) captures any positive, affectionate physical contact, including hugs, caresses, touches, kisses, tickles, or patting or stroking spouse's arm or back.

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[1]Melby et al. (1998).

[2]The IFIRS codes are scored on a scale ranging from 1 to 9, where 1 indicates that the behavior is "not at all characteristic" of an individual (or that the behavior is never exhibited by the individual) and 9 indicates that the behavior is "mainly characteristic" of an individual in a given interaction (or that the behavior is consistently and frequently exhibited with high intensity). For varying degrees of behaviors, a score of 3 indicates that the behavior is infrequently exhibited, and when the behavior is evident, it is expressed at low intensity; a score of 5 indicates that the behavior is sometimes shown at low or moderate intensity; and a score of 7 indicates that the behavior is exhibited fairly often at an elevated intensity. Scores of 2, 4, 6, and 8 are entered when the behavior exhibited by an individual falls somewhere between the foregoing scores.

Codes Used to Construct the Scale for Observed Positive Communication Skills:

- **Assertiveness** (M = 3.86; SD = 1.61) captures confidence, forthrightness, and clear and appropriate ways of expressing oneself that are neutral or positive in affect, including verbalizations (for example, "I can do it!"), direct eye contact, or body orientation toward spouse.

- **Listener Responsiveness** (M = 4.27; SD = 1.25) captures active listening: attending to, acknowledging, or validating another person through verbal or nonverbal displays (such as nodding head or saying, "Yeah" or "Mm-hmm" while the other person is speaking).

- **Communication** (M = 4.67; SD = 1.09) encompasses clear expression, in a neutral or positive manner, of one's needs and wants, ideas, explanations, or solicitations of spouse's point of view and clarifications (for example, "I'm interested in why you think that is true.").

- **Effective Process** (M = 3.67; SD = 1.02) captures behavior that actively facilitates the problem-solving process in a timely and appropriate way, including describing and clarifying the problem or encouraging and soliciting input from spouse (for example, "I have a problem, which is that I feel like I'm the only one who cleans the house.").

- **Disruptive Process** (reverse coded; M = 7.67; SD = 1.39) captures behavior that actively discourages or obstructs problem solving, including being inattentive, uncooperative, drawing the conversation off topic, belittling or discouraging spouse's comments (for example, "If you were home more and would help me, we wouldn't have this problem.").

- **Denial** (reverse coded; M = 8.45; SD = 0.80) assesses one's rejection or denial of personal responsibility for a situation, or for the situation itself, or casting blame onto someone else (for example, "I got mad because I didn't feel good" ; and "It's all your fault.").

- **Avoidant** (reverse coded; M = 6.80; SD = 1.39) captures behavior that conveys avoidance or rejection of or withdrawal from the conversation, which includes averting one's gaze or orienting one's body away from spouse.

Codes Used to Construct the Scale for Observed Anger and Hostility

- **Hostility** (M = 1.72; SD = 1.07) captures hostile, angry, critical, disapproving, and/or rejecting behavior toward spouse (for example, "Go soak your head!" and "Drop dead!").

- **Contempt** (M = 1.39; SD = 0.81) encompasses displays of disgust, disdain, or scorn toward spouse (for example, a nonverbal sneer), including condescending, sarcastic, and superior statements (such as "You make me sick"; and "Whatever…," said with a shrug and turning away from spouse).

- **Angry Coercion** (M = 1.12; SD = 0.40) assesses attempts to control spouse or change behavior or opinion of spouse in a hostile manner, such as power plays, demands, and contingent physical or verbal threats (for example, "Shape up, or I'll shape you up!" and "Shut your mouth, or I'll shut it for you!").

- **Verbal Attack** (M = 1.09; SD = 0.32) gauges personalized, unqualified disapproval of spouse and unkind statements that appear to demean, hurt, or embarrass spouse, such as put-downs and personally derogatory criticisms of spouse (such as "You really are sort of stupid"; and "You're lousy with handling money.").

Appendix C

Estimated Impacts Analyzed by Local SHM Program

The Supporting Healthy Marriage Evaluation

Appendix Table C.1

**Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Local SHM Program**

Outcome[a]	Bronx		Oklahoma City		Local
	Control	Impact/	Control	Impact/	Program
	Group	Effect Size[b]	Group	Effect Size[b]	Difference[c]
Relationship status					
Married[d] (%)	86.1	-2.2	93.9	1.4	
Marital appraisals					
Couple's average report of relationship happiness[e]	5.59	0.15	6.07	0.07	
Either spouse reports marriage in trouble (%)	61.3	-3.6	37.4	1.4	
Warmth and support in relationship[f]					
Men's report of warmth and support	3.36	0.09	3.54	0.05	
Women's report of warmth and support	3.20	0.12	3.50	0.03	
Positive communication skills in relationship[f]					
Men's report of positive communication skills	3.14	0.07	3.27	0.09	
Women's report of positive communication skills	3.05	0.14	3.28	0.11	
Negative interactions in relationship					
Men's report of negative behavior and emotions[f]	2.43	-0.06	2.09	-0.09	
Women's report of negative behavior and emotions[f]	2.39	-0.09	1.97	-0.06	
Men's report of psychological abuse[f]	1.46	-0.05	1.23	0.00	
Women's report of psychological abuse[f]	1.38	-0.16	1.21	-0.02	
Men's report of any physical assault (%)	18.0	-2.8	10.5	0.4	†
Women's report of any physical assault (%)	11.4	-1.1	7.1	-0.5	
Men's report of any severe physical assault (%)	4.1	-2.1	1.6	-0.6	
Women's report of any severe physical assault (%)	2.5	-0.9	1.3	-0.1	
Fidelity					
Neither spouse reported infidelity (%)	84.7	-0.1	94.4	2.0	
Individual psychological distress[f]					
Men's psychological distress	1.95	0.00	1.78	-0.06	
Women's psychological distress	2.05	-0.01	1.82	-0.05	
Coparenting relationship[f]					
Men's report of cooperative coparenting	3.45	-0.04	3.56	0.02	
Women's report of cooperative coparenting	3.27	-0.01	3.49	0.02	
Sample size (program and control group totals)					
Couples		683		842	
Men		617		778	
Women		663		827	

(continued)

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Appendix Table C.1 (continued)

| Outcome[a] | Orlando | | Pennsylvania | | Local |
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Program Difference[c]
Relationship status					
Married[d] (%)	92.9	-1.3	91.9	-0.8	
Marital appraisals					
Couple's average report of relationship happiness[e]	5.76	0.10	5.84	0.20	
Either spouse reports marriage in trouble (%)	51.0	-4.4	51.0	-9.1	
Warmth and support in relationship[f]					
Men's report of warmth and support	3.45	0.06	3.34	0.00	
Women's report of warmth and support	3.37	0.03	3.19	0.24	
Positive communication skills in relationship[f]					
Men's report of positive communication skills	3.22	0.00	3.19	0.17	
Women's report of positive communication skills	3.20	0.11	3.21	0.04	
Negative interactions in relationship					
Men's report of negative behavior and emotions[f]	2.18	0.01	2.02	-0.12	
Women's report of negative behavior and emotions[f]	2.14	-0.13	2.10	-0.13	
Men's report of psychological abuse[f]	1.31	0.01	1.27	-0.05	
Women's report of psychological abuse[f]	1.22	-0.07	1.27	-0.09	
Men's report of any physical assault (%)	10.5	1.7	14.6	-7.7	†
Women's report of any physical assault (%)	7.6	-1.0	8.0	1.1	
Men's report of any severe physical assault (%)	0.8	1.2	1.7	-0.8	
Women's report of any severe physical assault (%)	0.5	-0.2	4.0	-2.1	
Fidelity					
Neither spouse reported infidelity (%)	93.8	-0.7	91.4	2.3	
Individual psychological distress[f]					
Men's psychological distress	1.87	0.02	1.86	-0.04	
Women's psychological distress	1.96	-0.13	2.08	-0.01	
Coparenting relationship[f]					
Men's report of cooperative coparenting	3.50	-0.02	3.29	0.05	
Women's report of cooperative coparenting	3.36	0.01	3.16	0.20	
Sample size (program and control group totals)					
Couples		709		567	
Men		673		508	
Women		699		551	

Outcome[a]	Seattle		Shoreline		Local
	Control	Impact/	Control	Impact/	Program
	Group	Effect Size[b]	Group	Effect Size[b]	Difference[c]
Relationship status					
Married[d] (%)	88.0	-0.9	89.1	1.5	
Marital appraisals					
Couple's average report of relationship happiness[e]	5.84	0.01	5.72	0.09	
Either spouse reports marriage in trouble (%)	52.4	-4.0	55.0	-6.5	
Warmth and support in relationship[f]					
Men's report of warmth and support	3.48	0.15	3.38	0.09	
Women's report of warmth and support	3.42	0.02	3.29	0.12	
Positive communication skills in relationship[f]					
Men's report of positive communication skills	3.21	0.00	3.24	-0.02	
Women's report of positive communication skills	3.18	-0.07	3.13	0.16	
Negative interactions in relationship					
Men's report of negative behavior and emotions[f]	2.24	0.04	2.23	-0.10	
Women's report of negative behavior and emotions[f]	2.19	-0.04	2.18	-0.07	
Men's report of psychological abuse[f]	1.37	-0.07	1.34	-0.11	
Women's report of psychological abuse[f]	1.28	-0.04	1.25	0.02	
Men's report of any physical assault (%)	14.9	1.4	12.0	-2.6	†
Women's report of any physical assault (%)	9.0	-0.1	6.9	3.1	
Men's report of any severe physical assault (%)	1.6	0.5	1.2	-0.8	
Women's report of any severe physical assault (%)	0.9	2.2	0.3	1.3	
Fidelity					
Neither spouse reported infidelity (%)	92.3	0.8	91.9	1.7	
Individual psychological distress[f]					
Men's psychological distress	1.85	-0.04	1.98	-0.12	
Women's psychological distress	1.93	-0.03	2.07	-0.06	
Coparenting relationship[f]					
Men's report of cooperative coparenting	3.54	0.01	3.35	0.02	
Women's report of cooperative coparenting	3.41	-0.02	3.23	0.07	
Sample size (program and control group totals)					
Couples		554		679	
Men		484		625	
Women		532		655	

Outcome[a]	Texas		Wichita		Local
	Control	Impact/	Control	Impact/	Program
	Group	Effect Size[b]	Group	Effect Size[b]	Difference[c]
Relationship status					
Married[d] (%)	87.6	1.8	84.5	4.0	
Marital appraisals					
Couple's average report of relationship happiness[e]	5.74	0.21	5.58	0.18	
Either spouse reports marriage in trouble (%)	59.4	-8.1	59.3	-8.8	
Warmth and support in relationship[f]					
Men's report of warmth and support	3.33	0.16	3.44	0.08	
Women's report of warmth and support	3.22	0.18	3.33	0.02	
Positive communication skills in relationship[f]					
Men's report of positive communication skills	3.13	0.21	3.14	0.09	
Women's report of positive communication skills	3.09	0.22	3.08	0.11	
Negative interactions in relationship					
Men's report of negative behavior and emotions[f]	2.30	-0.18	2.33	-0.07	
Women's report of negative behavior and emotions[f]	2.30	-0.22	2.32	-0.21	
Men's report of psychological abuse[f]	1.41	-0.24	1.39	-0.19	
Women's report of psychological abuse[f]	1.33	-0.14	1.37	-0.13	
Men's report of any physical assault (%)	14.4	-7.6	14.9	-2.2	†
Women's report of any physical assault (%)	11.9	-2.7	12.0	-2.3	
Men's report of any severe physical assault (%)	2.9	-0.6	1.4	0.4	
Women's report of any severe physical assault (%)	1.6	0.0	2.1	-0.8	
Fidelity					
Neither spouse reported infidelity (%)	91.7	1.6	90.3	0.0	
Individual psychological distress[f]					
Men's psychological distress	1.89	-0.05	2.03	-0.19	
Women's psychological distress	2.12	-0.29	2.13	-0.07	
Coparenting relationship[f]					
Men's report of cooperative coparenting	3.32	0.10	3.38	0.06	
Women's report of cooperative coparenting	3.19	0.10	3.26	-0.05	
Sample size (program and control group totals)					
Couples		691		670	
Men		627		607	
Women		671		645	

(continued)

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Program impacts were calculated separately for each local SHM program, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates for each local SHM program were then compared to see whether their magnitude and direction differ significantly by local SHM program.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across local SHM programs were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

Appendix D

Estimated Impacts Analyzed by Subgroup, Using the Split-Sample Approach

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Appendix Table D.1

**Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Level of Marital Distress at Random Assignment: Subgroup Analysis Using Split Samples**

	Low Marital Distress		Moderate Marital Distress		High Marital Distress		Subgroup
	Control	Impact/	Control	Impact/	Control	Impact/	
Outcome[a]	Group	Effect Size[b]	Group	Effect Size[b]	Group	Effect Size[b]	Difference[c]
Relationship status							
Married[d] (%)	95.6	-0.4	89.9	1.9	81.3	1.5	
Marital appraisals							
Couple's average report of relationship happiness[e]	6.30	0.09	5.86	0.10	5.00	0.28	††
Either spouse reports marriage in trouble (%)	29.9	-5.4	53.3	-5.1	78.1	-6.6	
Warmth and support in relationship[f]							
Men's report of warmth and support	3.60	0.09	3.43	0.08	3.16	0.17	
Women's report of warmth and support	3.58	0.05	3.33	0.12	3.00	0.15	
Positive communication skills in relationship[f]							
Men's report of positive communication skills	3.42	0.06	3.21	0.11	2.90	0.14	
Women's report of positive communication skills	3.45	0.09	3.17	0.12	2.79	0.21	
Negative interactions in relationship							
Men's report of negative behavior and emotions[f]	1.86	-0.04	2.20	-0.08	2.71	-0.18	
Women's report of negative behavior and emotions[f]	1.77	-0.06	2.16	-0.14	2.71	-0.21	††
Men's report of psychological abuse[f]	1.16	-0.03	1.33	-0.07	1.62	-0.24	††
Women's report of psychological abuse[f]	1.12	-0.06	1.26	-0.11	1.52	-0.11	
Men's report of any physical assault (%)	7.0	-0.8	13.8	-3.3	21.3	-3.6	
Women's report of any physical assault (%)	4.6	-1.0	8.5	-1.0	16.3	-1.0	
Men's report of any severe physical assault (%)	0.5	-0.2	2.2	-0.8	3.5	-0.3	
Women's report of any severe physical assault (%)	0.9	-0.4	1.5	0.2	2.5	0.1	

(continued)

Appendix Table D.1 (continued)

Outcome[a]	Low Marital Distress		Moderate Marital Distress		High Marital Distress		
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Subgroup Difference[c]
Fidelity							
Neither spouse reported infidelity (%)	95.8	0.5	92.5	1.2	84.4	2.4	
Individual psychological distress[f]							
Men's psychological distress	1.65	-0.02	1.91	-0.07	2.18	-0.11	
Women's psychological distress	1.73	-0.08	2.02	-0.09	2.34	-0.14	
Coparenting relationship[f]							
Men's report of cooperative coparenting	3.62	0.04	3.44	0.01	3.17	0.10	
Women's report of cooperative coparenting	3.57	0.02	3.32	0.06	2.98	0.10	
Sample size (program and control group totals)							
Couples	1,711		1,981		1,619		
Men	1,610		1,803		1,429		
Women	1,679		1,931		1,552		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table D.2

**Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months,
by Level of Marital Distress at Random Assignment: Subgroup Analysis Using Split Samples**

Outcome[a,b]	Low Marital Distress		Moderate Marital Distress		High Marital Distress		Subgroup Difference[d]
	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	
Observed in couple interactions							
Men's warmth and support	2.09	0.08	1.97	-0.02	1.72	0.17	
Women's warmth and support	2.11	0.02	2.00	-0.03	1.77	0.07	
Men's positive communication skills	5.64	0.20	5.49	0.00	5.31	0.12	
Women's positive communication skills	5.86	0.07	5.65	0.03	5.55	0.13	
Men's anger and hostility	1.22	-0.12	1.25	-0.03	1.39	-0.01	
Women's anger and hostility	1.31	-0.04	1.44	-0.13	1.54	-0.13	
Sample size (program and control group totals)							
Men	465		514		395		
Women	465		514		395		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group, pooled across subgroups.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

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Appendix Table D.3

Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Income Relative to Poverty Level at Random Assignment: Subgroup Analysis Using Split Samples

Outcome[a]	Less than 100% of FPL Control Group	Less than 100% of FPL Impact/ Effect Size[b]	100% to less than 200% of FPL Control Group	100% to less than 200% of FPL Impact/ Effect Size[b]	200% or more of FPL Control Group	200% or more of FPL Impact/ Effect Size[b]	Subgroup Difference[c]
Relationship status							
Married[d] (%)	87.1	3.1	91.0	-0.7	90.2	-1.3	†
Marital appraisals							
Couple's average report of relationship happiness[e]	5.81	0.14	5.74	0.11	5.70	0.16	
Either spouse reports marriage in trouble (%)	56.5	-5.4	52.3	-6.1	47.1	-3.0	
Warmth and support in relationship[f]							
Men's report of warmth and support	3.41	0.09	3.40	0.09	3.48	0.05	
Women's report of warmth and support	3.30	0.11	3.33	0.05	3.35	0.12	
Positive communication skills in relationship[f]							
Men's report of positive communication skills	3.19	0.11	3.18	0.07	3.21	0.08	
Women's report of positive communication skills	3.12	0.14	3.17	0.09	3.17	0.13	
Negative interactions in relationship							
Men's report of negative behavior and emotions[f]	2.23	-0.07	2.24	-0.10	2.24	-0.11	
Women's report of negative behavior and emotions[f]	2.21	-0.13	2.20	-0.11	2.17	-0.11	
Men's report of psychological abuse[f]	1.38	-0.10	1.34	-0.10	1.27	-0.04	
Women's report of psychological abuse[f]	1.33	-0.12	1.26	-0.04	1.22	-0.06	
Men's report of any physical assault (%)	16.4	-4.0	11.0	-0.7	11.6	-0.9	
Women's report of any physical assault (%)	10.3	-0.2	9.0	-1.4	6.1	1.7	
Men's report of any severe physical assault (%)	2.5	-0.9	1.8	-0.3	0.6	0.7	
Women's report of any severe physical assault (%)	2.3	-0.2	0.9	0.2	1.9	-0.4	

(continued)

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Appendix Table D.3 (continued)

Outcome[a]	Less than 100% of FPL		100% to less than 200% of FPL		200% or more of FPL		Subgroup Difference[c]
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	
Fidelity							
Neither spouse reported infidelity (%)	90.0	2.2	91.7	0.2	94.4	-0.8	
Individual psychological distress[f]							
Men's psychological distress	1.98	-0.06	1.87	-0.08	1.78	-0.02	
Women's psychological distress	2.12	-0.13	1.97	-0.05	1.90	-0.08	
Coparenting relationship[f]							
Men's report of cooperative coparenting	3.41	0.05	3.41	0.03	3.52	-0.02	
Women's report of cooperative coparenting	3.26	0.05	3.30	0.04	3.38	0.05	
Sample size (program and control group totals)							
Couples	2,139		2,074		943		
Men	1,937		1,919		855		
Women	2,080		2,016		915		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: "FPL" = federal poverty level. The poverty level was calculated using federal poverty guidelines for the year that the couple entered the study.

Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: †††= 1 percent; ††= 5 percent; † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table D.4

Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months,
by Income Relative to Poverty Level at Random Assignment: Subgroup Analysis Using Split Samples

Outcome[a,b]	Less than 100% of FPL		100% to less than 200% of FPL		200% or more of FPL		Subgroup Difference[d]
	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	
Observed in couple interactions							
Men's warmth and support	1.92	0.00	1.90	0.04	2.04	0.17	
Women's warmth and support	1.94	-0.05	1.97	-0.06	2.04	0.25	
Men's positive communication skills	5.40	0.14	5.41	0.15	5.75	0.01	
Women's positive communication skills	5.56	0.10	5.68	0.14	5.96	0.05	
Men's anger and hostility	1.31	-0.09	1.27	-0.06	1.23	0.06	
Women's anger and hostility	1.50	-0.19	1.39	-0.11	1.34	0.13	
Sample size (program and control group totals)							
Men	582		525		238		
Women	582		525		238		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: "FPL" = federal poverty level. The poverty level was calculated using federal poverty guidelines for the year that the couple entered the study.

Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group, pooled across the subgroups.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

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Appendix Table D.5

Estimated Impacts on Primary Outcomes Based on the 12-Month Survey, by Race/Ethnicity: Subgroup Analysis Using Split Samples

Outcome[a]	Both Hispanic		Both African-American		Both White		Other/Multiracial		Subgroup
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Difference[c]
Relationship status									
Married[d] (%)	90.5	0.8	86.6	1.1	89.3	1.2	88.4	-0.1	
Marital appraisals									
Couple's average report of relationship happiness[e]	5.89	0.16	5.65	0.01	5.73	0.14	5.65	0.15	
Either spouse reports marriage in trouble (%)	52.6	-5.9	60.4	-5.8	48.8	-7.2	53.9	-2.3	
Warmth and support in relationship[f]									
Men's report of warmth and support	3.39	0.07	3.41	0.00	3.49	0.11	3.42	0.13	
Women's report of warmth and support	3.26	0.16	3.26	0.07	3.46	0.04	3.34	0.04	
Positive communication skills in relationship[f]									
Men's report of positive communication skills	3.22	0.13	3.16	0.04	3.22	0.06	3.14	0.05	
Women's report of positive communication skills	3.19	0.16	3.05	0.03	3.19	0.15	3.12	0.03	
Negative interactions in relationship									
Men's report of negative behavior and emotions[f]	2.14	-0.11	2.39	-0.03	2.19	-0.09	2.35	-0.05	
Women's report of negative behavior and emotions[f]	2.14	-0.15	2.30	-0.03	2.15	-0.13	2.27	-0.09	
Men's report of psychological abuse[f]	1.32	-0.12	1.42	-0.08	1.26	-0.07	1.42	-0.07	
Women's report of psychological abuse[f]	1.27	-0.10	1.32	-0.06	1.26	-0.12	1.31	-0.01	
Men's report of any physical assault (%)	12.9	-4.7	15.6	-1.9	9.6	1.6	17.0	-1.0	†
Women's report of any physical assault (%)	9.5	-1.4	10.2	-0.3	6.8	0.4	10.1	0.4	
Men's report of any severe physical assault (%)	1.8	-0.2	3.5	-2.4	1.1	0.2	2.2	-0.7	
Women's report of any severe physical assault (%)	1.9	0.1	2.8	-1.1	0.5	-0.2	1.1	0.9	

(continued)

Appendix Table D.5 (continued)

Outcome[a]	Both Hispanic Control Group	Impact/ Effect Size[b]	Both African-American Control Group	Impact/ Effect Size[b]	Both White Control Group	Impact/ Effect Size[b]	Other/Multiracial Control Group	Impact/ Effect Size[b]	Subgroup Difference[c]
Fidelity									
Neither spouse reported infidelity (%)	93.1	0.5	85.8	2.9	93.0	1.0	89.1	1.7	
Individual psychological distress[f]									
Men's psychological distress	1.89	-0.06	1.91	-0.09	1.87	0.00	1.95	-0.12	
Women's psychological distress	2.01	-0.11	2.03	-0.12	2.01	-0.12	2.03	-0.02	
Coparenting relationship[f]									
Men's report of cooperative coparenting	3.38	0.03	3.48	-0.02	3.47	0.06	3.45	0.01	
Women's report of cooperative coparenting	3.25	0.10	3.32	-0.05	3.39	0.01	3.32	0.01	
Sample size (program and control group totals)									
Couples	2,322		598		1,129		1,324		
Men	2,111		552		1,044		1,193		
Women	2,280		581		1,090		1,270		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. Nearly 80 percent of couples in the category "other/multiracial" are mixed-race couples.

Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table D.6

Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months, by Race/Ethnicity: Subgroup Analysis Using Split Samples

Outcome[a,b]	Both Hispanic Control Group	Effect Size[c]	Both African-American Control Group	Effect Size[c]	Both White Control Group	Effect Size[c]	Other/Multiracial Control Group	Effect Size[c]	Subgroup Difference[d]
Observed in couple interaction									
Men's warmth and support	1.78	0.14	2.07	-0.03	2.15	-0.01	2.02	-0.01	
Women's warmth and support	1.82	0.03	2.04	-0.05	2.18	0.00	2.07	-0.03	
Men's positive communication skills	5.25	0.24	5.63	-0.14	5.79	-0.02	5.63	0.04	†
Women's positive communication skills	5.47	0.25	5.72	-0.14	6.00	-0.02	5.84	-0.04	††
Men's anger and hostility	1.27	-0.05	1.31	0.02	1.25	-0.07	1.30	-0.05	
Women's anger and hostility	1.42	-0.11	1.47	0.09	1.38	-0.13	1.41	-0.02	
Sample size (program and control group totals)									
Men	644		147		281		320		
Women	644		147		281		320		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. Nearly 80 percent of couples in the category "other/multiracial" are mixed-race couples.

Program impacts were calculated separately for each subgroup level, using an ordinary least squares model adjusting for pre-random assignment characteristics of sample members. Impact estimates from each level were then compared to see whether their magnitude and direction differ significantly by subgroup level.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group, pooled across subgroups.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Appendix E

Estimated Impacts Analyzed by Subgroup, Using Full Interaction Models

The Supporting Healthy Marriage Evaluation

Appendix Table E.1

Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Level of Marital Distress at Random Assignment: Subgroup Analysis with Full Interactions

Outcome[a]	Low Marital Distress		Moderate Marital Distress		High Marital Distress		Subgroup
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Difference[c]
Relationship status							
Married[d] (%)	94.8	-1.3	89.8	1.9	82.1	2.0	
Marital appraisals							
Couple's average report of relationship happiness[e]	6.29	0.09	5.84	0.10	5.02	0.28	††
Either spouse reports marriage in trouble (%)	33.0	-6.9	53.8	-5.3	75.4	-5.0	
Warmth and support in relationship[f]							
Men's report of warmth and support	3.59	0.09	3.43	0.08	3.17	0.16	
Women's report of warmth and support	3.55	0.07	3.33	0.12	3.02	0.14	
Positive communication skills in relationship[f]							
Men's report of positive communication skills	3.41	0.06	3.20	0.11	2.90	0.13	
Women's report of positive communication skills	3.43	0.09	3.17	0.13	2.81	0.18	
Negative interactions in relationship							
Men's report of negative behavior and emotions[f]	1.87	-0.04	2.22	-0.08	2.70	-0.18	
Women's report of negative behavior and emotions[f]	1.81	-0.08	2.17	-0.14	2.68	-0.19	
Men's report of psychological abuse[f]	1.19	-0.06	1.33	-0.08	1.60	-0.21	
Women's report of psychological abuse[f]	1.15	-0.10	1.27	-0.12	1.50	-0.07	
Men's report of any physical assault (%)	8.3	-1.9	14.0	-3.3	21.2	-2.5	
Women's report of any physical assault (%)	5.5	-1.6	8.9	-1.2	15.4	0.3	
Men's report of any severe physical assault (%)	0.5	-0.2	2.1	-0.8	3.7	-0.1	
Women's report of any severe physical assault (%)	1.4	-0.8	1.6	-0.1	1.9	1.0	

(continued)

Appendix Table E.1 (continued)

Outcome[a]	Low Marital Distress		Moderate Marital Distress		High Marital Distress		Subgroup Difference[c]
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	
Fidelity							
Neither spouse reported infidelity (%)	94.1	0.4	92.3	1.3	85.9	2.2	
Individual psychological distress[f]							
Men's psychological distress	1.73	-0.05	1.93	-0.09	2.10	-0.08	
Women's psychological distress	1.81	-0.09	2.04	-0.09	2.25	-0.13	
Coparenting relationship[f]							
Men's report of cooperative coparenting	3.61	0.02	3.45	0.02	3.19	0.10	
Women's report of cooperative coparenting	3.54	0.03	3.32	0.07	3.00	0.09	
Sample size (program and control group totals)							
Couples	1,711		1,981		1,619		
Men	1,610		1,803		1,429		
Women	1,679		1,931		1,552		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: †††= 1 percent; ††= 5 percent; and † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table E.2

Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months,
by Level of Marital Distress at Random Assignment: Subgroup Analysis with Full Interactions

Outcome[a,b]	Low Marital Distress		Moderate Marital Distress		High Marital Distress		Subgroup Difference[d]
	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	
Observed in couple interactions							
Men's warmth and support	2.03	0.09	1.97	-0.02	1.79	0.14	
Women's warmth and support	2.02	0.04	2.01	-0.02	1.86	0.05	
Men's positive communication skills	5.56	0.19	5.52	0.00	5.34	0.15	
Women's positive communication skills	5.73	0.13	5.67	0.05	5.60	0.11	
Men's anger and hostility	1.23	-0.12	1.25	-0.03	1.38	-0.02	
Women's anger and hostility	1.34	-0.03	1.43	-0.10	1.54	-0.19	
Sample size (program and control group totals)							
Men	465		514		395		
Women	465		514		395		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group, pooled across subgroup levels.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; and † = 10 percent.

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Appendix Table E.3

Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Income Relative to Poverty Level at Random Assignment: Subgroup Analysis with Full Interactions

Outcome[a]	Less than 100% of FPL		100% to less than 200% of FPL		200% or more of FPL		Subgroup Difference[c]
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	
Relationship status							
Married[d] (%)	88.3	3.1	90.1	-0.5	88.6	-1.3	
Marital appraisals							
Couple's average report of relationship happiness[e]	5.81	0.13	5.69	0.13	5.62	0.22	
Either spouse reports marriage in trouble (%)	54.2	-4.7	54.0	-6.6	52.4	-5.4	
Warmth and support in relationship[f]							
Men's report of warmth and support	3.42	0.11	3.38	0.10	3.43	0.07	
Women's report of warmth and support	3.32	0.10	3.31	0.07	3.27	0.15	
Positive communication skills in relationship[f]							
Men's report of positive communication skills	3.19	0.14	3.16	0.08	3.18	0.07	
Women's report of positive communication skills	3.15	0.15	3.14	0.12	3.12	0.12	
Negative interactions in relationship							
Men's report of negative behavior and emotions[f]	2.23	-0.09	2.27	-0.11	2.29	-0.11	
Women's report of negative behavior and emotions[f]	2.19	-0.13	2.24	-0.14	2.24	-0.15	
Men's report of psychological abuse[f]	1.38	-0.11	1.37	-0.11	1.33	-0.09	
Women's report of psychological abuse[f]	1.32	-0.10	1.30	-0.07	1.28	-0.10	
Men's report of any physical assault (%)	16.3	-3.9	12.2	-1.0	13.4	-1.5	
Women's report of any physical assault (%)	9.9	-0.3	10.0	-1.6	7.8	1.6	
Men's report of any severe physical assault (%)	2.6	-1.0	2.0	-0.4	0.7	1.0	
Women's report of any severe physical assault (%)	2.2	-0.6	1.0	0.3	2.2	0.4	

(continued)

Appendix Table E.3 (continued)

Outcome[a]	Less than 100% of FPL		100% to less than 200% of FPL		200% or more of FPL		Subgroup Difference[c]
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	
Fidelity							
Neither spouse reported infidelity (%)	91.1	1.8	90.6	0.5	93.1	-0.1	
Individual psychological distress[f]							
Men's psychological distress	1.96	-0.06	1.88	-0.07	1.84	-0.07	
Women's psychological distress	2.09	-0.13	1.99	-0.07	1.95	-0.11	
Coparenting relationship[f]							
Men's report of cooperative coparenting	3.42	0.05	3.39	0.03	3.47	0.03	
Women's report of cooperative coparenting	3.29	0.05	3.28	0.06	3.30	0.08	
Sample size (program and control group totals)							
Couples		2,139		2,074		943	
Men		1,937		1,919		855	
Women		2,080		2,016		915	

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: "FPL" = federal poverty level. The poverty level was calculated using federal poverty guidelines for the year that the couple entered the study.

Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; and † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table E.4

Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months, by Income Relative to Poverty Level at Random Assignment: Subgroup Analysis with Full Interactions

Outcome[a,b]	Less than 100% of FPL		100% to less than 200% of FPL		200% or more of FPL		Subgroup Difference[d]
	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	
Observed in couple interactions							
Men's warmth and support	1.95	0.00	1.92	0.06	1.98	0.22	
Women's warmth and support	1.98	-0.06	1.97	-0.04	1.95	0.29	†
Men's positive communication skills	5.46	0.15	5.41	0.14	5.62	0.01	
Women's positive communication skills	5.63	0.07	5.67	0.13	5.79	0.16	
Men's anger and hostility	1.29	-0.09	1.28	-0.07	1.24	0.08	
Women's anger and hostility	1.46	-0.17	1.42	-0.13	1.37	0.12	
Sample size (program and control group totals)							
Men	582		525		238		
Women	582		525		238		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: "FPL" = federal poverty level. The poverty level was calculated using federal poverty guidelines for the year that the couple entered the study.

Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group pooled across subgroup levels.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; and † = 10 percent.

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Appendix Table E.5

**Estimated Impacts on Primary Outcomes Based on the 12-Month Survey,
by Race/Ethnicity: Subgroup Analysis with Full Interactions**

Outcome[a]	Both Hispanic		Both African-American		Both White		Other/Multiracial		Subgroup
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Difference[c]
Relationship status									
Married[d] (%)	89.2	0.5	87.5	2.2	88.2	2.1	89.5	0.3	
Marital appraisals									
Couple's average report of relationship happiness[e]	5.87	0.19	5.67	-0.05	5.57	0.16	5.64	0.16	†
Either spouse reports marriage in trouble (%)	53.5	-5.8	59.3	-6.6	54.6	-9.4	52.3	-2.7	
Warmth and support in relationship[f]									
Men's report of warmth and support	3.42	0.08	3.39	-0.03	3.39	0.15	3.39	0.16	
Women's report of warmth and support	3.31	0.15	3.24	0.05	3.32	0.11	3.30	0.06	
Positive communication skills in relationship[f]									
Men's report of positive communication skills	3.20	0.15	3.18	0.02	3.16	0.08	3.14	0.07	
Women's report of positive communication skills	3.19	0.17	3.05	0.03	3.10	0.20	3.12	0.04	
Negative interactions in relationship									
Men's report of negative behavior and emotions[f]	2.21	-0.11	2.33	-0.06	2.24	-0.12	2.32	-0.08	
Women's report of negative behavior and emotions[f]	2.16	-0.19	2.26	-0.02	2.24	-0.12	2.26	-0.09	
Men's report of psychological abuse[f]	1.36	-0.15	1.40	-0.10	1.31	-0.07	1.42	-0.08	
Women's report of psychological abuse[f]	1.28	-0.11	1.32	-0.05	1.33	-0.16	1.32	-0.02	
Men's report of any physical assault (%)	14.7	-5.2	15.8	-3.3	11.0	1.8	16.6	-1.4	
Women's report of any physical assault (%)	10.7	-3.2	9.8	1.5	7.8	1.8	9.7	1.1	
Men's report of any severe physical assault (%)	1.4	0.2	3.3	-1.9	2.3	-0.2	2.6	-1.1	
Women's report of any severe physical assault (%)	2.1	0.2	2.7	-0.8	0.6	-0.4	1.4	0.5	

(continued)

Appendix Table E.5 (continued)

Outcome[a]	Both Hispanic		Both African-American		Both White		Other/Multiracial		Subgroup Difference[c]
	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	Control Group	Impact/ Effect Size[b]	
Fidelity									
Neither spouse reported infidelity (%)	93.4	0.4	86.5	3.3	90.4	1.6	89.0	1.8	
Individual psychological distress[f]									
Men's psychological distress	1.90	-0.10	1.88	-0.07	1.93	0.05	1.95	-0.11	
Women's psychological distress	1.96	-0.10	2.06	-0.17	2.12	-0.16	2.06	-0.03	
Coparenting relationship[f]									
Men's report of cooperative coparenting	3.42	0.07	3.45	-0.03	3.39	0.06	3.41	0.02	
Women's report of cooperative coparenting	3.31	0.07	3.30	-0.02	3.25	0.11	3.28	0.05	
Sample size (program and control group totals)									
Couples	2,322		598		1,129		1,324		
Men	2,111		552		1,044		1,193		
Women	2,280		581		1,090		1,270		

SOURCE: MDRC calculations based on the SHM 12-Month Follow-Up Survey.

NOTES: Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. Nearly 80 percent of couples in the category "other/multiracial" are mixed-race couples.

Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 4 describes how these outcomes are defined.

[b]Effect sizes are shown for all outcomes, except as noted below. Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group. For the outcomes of relationship status, fidelity, any physical assault, severe physical assault, and marriage in trouble, this column reports the percentage point difference between the means for the program group and the control group.

[c]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: ††† = 1 percent; †† = 5 percent; and † = 10 percent.

[d]This includes couples who, at follow-up, were still married or still in a committed relationship with the same partner they had when they entered the study.

[e]The scale ranges from 1 to 7, where 1 = "completely unhappy" and 7 = "completely happy."

[f]The scale ranges from 1 to 4, where higher scores indicate higher levels of the respective outcomes: warmth and support, positive communication skills, negative behavior and emotions, psychological abuse, individual psychological distress, and cooperative coparenting.

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Appendix Table E.6

Estimated Impacts on Marital Quality Based on Observed Couple Interactions at 12 Months, by Race/Ethnicity: Subgroup Analysis with Full Interactions

Outcome[a,b]	Both Hispanic		Both African-American		Both White		Other/Multiracial		Subgroup Difference[d]
	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	Control Group	Effect Size[c]	
Observed in couple interaction									
Men's warmth and support	1.86	0.15	2.04	-0.03	2.04	-0.05	1.98	0.00	
Women's warmth and support	1.89	0.01	2.03	-0.03	2.06	0.02	2.02	0.00	
Men's positive communication skills	5.32	0.21	5.53	0.01	5.70	-0.05	5.61	0.07	
Women's positive communication skills	5.53	0.24	5.68	-0.03	5.88	-0.05	5.80	0.00	
Men's anger and hostility	1.28	-0.02	1.33	-0.08	1.25	-0.08	1.29	-0.10	
Women's anger and hostility	1.42	-0.05	1.47	-0.12	1.46	-0.28	1.40	-0.06	
Sample size (program and control group totals)									
Men	644		147		281		320		
Women	644		147		281		320		

SOURCE: MDRC calculations based on the SHM 12-Month Observational Study.

NOTES: Couples are categorized as Hispanic, white, or African-American if both spouses self-selected that race/ethnicity. Nearly 80 percent of couples in the category "other/multiracial" are mixed-race couples.

Impact estimates from these subgroup analyses were calculated using an ordinary least squares model that includes a program dummy, covariates created from pre-random assignment characteristics of sample members (including dummy variables for the other subgroups being tested), and a series of two-way interaction terms of the program group dummy with the covariates and program group dummy with subgroup indicators.

[a]Box 5 describes how these outcomes are defined.

[b]The scale ranges from 1 to 9, where higher scores indicate higher levels of the respective outcomes: observed warmth and support, positive communication skills, and anger and hostility.

[c]Effect size is calculated by dividing the impact of the program (the difference between the means for the program group and the control group) by the standard deviation for the control group pooled across subgroup levels.

[d]Tests of differences across subgroup levels were conducted, and statistical significance levels are indicated as follows: †††= 1 percent; ††= 5 percent; and † = 10 percent.

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