

# Multi-site Family Study on Incarceration, Parenting and Partnering: PROGRAM IMPACTS TECHNICAL REPORT



***Prepared for***

U.S. Department of Health & Human Services  
Office of the Assistant Secretary for Planning and Evaluation  
Administration for Children and Families/Office of Family Assistance

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# Executive Summary

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The Office of Family Assistance (OFA) within the U.S. Department of Health and Human Services (HHS), Administration for Children and Families (ACF), funded 12 programs to support healthy relationships between incarcerated fathers, their partners, and children from 2006-2011. As “first generation” demonstration grantees serving families affected by incarceration, the grantees developed programs to promote or sustain healthy relationships and strengthen families in which a father was incarcerated or otherwise involved with the criminal justice system. This report presents findings from the Multi-site Family Study on Incarceration, Parenting, and Partnering (MFS-IP), the national evaluation of this initiative.

## **What Is Unique About Programs to Strengthen Families Affected by the Incarceration of a Parent?**

*Incarceration presents serious challenges in the family lives of justice-involved persons.* A growing body of evidence documents the collateral consequences of incarceration for the families of the incarcerated. The incarceration of a family member often compounds other forms of disadvantage, such as challenges associated with living in poverty. Independent of other challenges families experience, parental incarceration also increases children’s risk of living in poverty or experiencing household instability. These risks are borne disproportionately by families of color, particularly African American families.

*Research also suggests that supporting healthy family relationships could facilitate successful reentry.* Intimate partnerships and parent-child relationships have been shown to influence community reentry outcomes, including substance abuse and recidivism. These findings suggest the importance of supporting family relationships among families in which one partner or parent is incarcerated. Various forms of support had previously shown promise in preliminary intervention studies, including family-friendly visitation, group parenting and relationship education classes, and assistance in maintaining contact with family members.

*OFA’s “first generation” initiative for justice-involved couples built on this prior research, but was a pioneer in developing family strengthening programs for families affected by incarceration.* The 2006-2011 funding initiative for incarcerated fathers and their families was based on the known struggles of families affected by incarceration. While prior research had shown an association between family relationships and successful post-prison outcomes, there were no proven models for the delivery of family-focused services for families affected by incarceration. Applicants were required to design and implement their own approaches to serving this population during incarceration and when released back to the community. Whereas the “first generation” grantees evaluated by the MFS-IP study focused primarily on healthy relationship education, the next generations of OFA fatherhood reentry programs have placed a more significant emphasis on economic stability. Program models and promising practices are still emerging for this vulnerable population

## **What Was the Study Design for Evaluating the First Generation of Responsible Fatherhood, Marriage, and Family Strengthening Grants for Incarcerated Fathers and Their Partners?**

*Impact sites in Indiana, Ohio, New York, and New Jersey were selected—all of which offered couples-based relationship education and other family strengthening services.* Four impact sites were selected from among the 12 OFA funded grantees: the Indiana Department of Correction, the RIDGE Project (Ohio), the New Jersey Department of Corrections, and the Osborne Association (New York). These sites were selected based on stability of program design, projected enrollment, program intensity, emphasis on couples-based services, and feasibility of rigorous evaluation.

*Impact sites varied widely in program model, target population, enrollment numbers, and service intensity.* The impact sites varied in terms of the population targeted for services, the service delivery approach, and the program component(s) that were evaluated. All four impact sites served men—most of whom were fathers—incarcerated in a state prison. Two of the sites, Indiana and New Jersey, focused on special populations. Couples-based relationship education, the focus of the impact evaluation, was provided in all sites, but in New Jersey a more comprehensive program was the focus because the relationship education component could not be evaluated separately. Delivery of the couples-based relationship education component varied across sites in course format and dosage, the curriculum used, and partner participation. The sites also varied in the number of couples served in the couples-based healthy relationship component.

*Because the target population and the intervention evaluated in each site were unique, the impact study constitutes four distinct evaluations of couple-focused programming.* The impact evaluation was designed to accommodate and maximize what could be learned from the variability across sites using a single set of outcomes that could potentially be affected by the sites' couples-based programming—activities that constituted only a portion of the OFA-funded components that were implemented. The activities evaluated were:

- **Indiana:** one-time, weekend couples' healthy relationship retreat
- **Ohio:** 12-week relationship education course
- **New Jersey:** holistic, reentry-focused program, including relationship, parenting, and domestic violence education; substance use treatment; and reentry case management
- **New York:** one-time, one day weekend couples' healthy relationship seminar

*The impact evaluation focused on the effect of couples-based programming on relationship quality and stability, parenting and coparenting, and a small number of reentry outcomes.* The impact evaluation was designed to address research questions regarding the potential impact of couples-based interventions. All outcomes were considered

to be important and related to the programming being evaluated. However, not all outcomes were directly targeted by the couples-based program components being evaluated. In addition, when drawing conclusions about the effectiveness of a site's program, all outcomes are not necessarily of equal importance as some may be more directly tied to the intervention than others. The outcome findings were augmented by a qualitative substudy which consisted of in-depth interviews with a small number of families to capture information about experiences during the male partner's reentry.

*The study used matched comparison and wait-list designs to compare the experiences of couples who participated in couples-based program components with the experiences of similar couples in the four impact sites.* The evaluation used a matched comparison group design in Indiana, New Jersey, and New York, and a wait-list design in Ohio. Treatment group couples and comparison group couples were first interviewed during the male partner's incarceration, with baseline interviews taking place for treatment group couples at the time of enrollment in OFA programming and for comparison group couples at the point of identification for the study. The male partner was interviewed first. During the interview, he identified his primary intimate or coparenting partner who was then recruited for her baseline interview. Both members of the couple ("survey partners") were approached for interviews nine and 18 months later. In the two largest sites, Indiana and Ohio, an additional 34-month follow-up interview was conducted to assess longer-term program impacts. Due to variation in program enrollment, sample sizes for the impact evaluation varied by site. For the male sample, Indiana and Ohio had close to 700 enrollees each, New Jersey about 300, and New York about 200.

*The MFS-IP study design and analytic approach were intended to address major sources of bias, including selection into treatment and differential attrition over the study follow-up period.* Comparison group selection procedures were designed to achieve the greatest comparability possible between the treatment and comparison groups in a non-random assignment study. This included screening prospective comparison group men for their interest in participating in a family strengthening program and whether they thought their partners would be willing to participate. Propensity modeling was used to weight the data to minimize the possibility that existing differences between treatment and comparison couples influenced outcomes separately from the treatment received (selection bias), and the likelihood that missing follow-up data for some respondents was not random (attrition bias). However, despite these efforts, some degree of selection bias possibly remained, as it is likely that the comparison couples were not as highly committed to strengthening their relationships as the treatment couples.

*The impact analysis used two distinct statistical techniques: comparison of weighted means and latent growth curve modeling.* Comparisons of weighted means tested for statistically significant differences between treatment and comparison groups on the outcomes of interest. Means were weighted for selection and attrition using propensity modeling, and comparisons were made for men and women, in each site, and at each follow-up wave. The second approach, latent growth curve modeling, compared how outcomes changed

over time for treatment group couples compared to changes in outcomes for comparison couples in each site. All analyses controlled for the baseline measure of each outcome, and all available interview data were used, including men whose partners had not completed interviews. Because all analyses were based on self-reported interview data, men and women sometimes provided different responses to the same survey question. As a result, findings for men and women may differ. In addition, due to differences in the two statistical techniques that were used (particularly the way in which missing data is handled), findings for couples may be different than findings for individual men and women.

## **Who Are the MFS-IP Study Participants?**

*Men and women in the MFS-IP impact sample were racially and ethnically diverse, typically in their 30s, and most often in nonmarried intimate partnerships.* At baseline, MFS-IP study men and women tended to be in their early to mid-30s, and the majority reported being in intimate nonmarried relationships of longstanding duration. Most were parents of minor children (together and separately), with men reporting an average of about three children and women an average of about two children. The racial/ethnic composition of the samples varied by site, with Indiana having the largest proportion of White sample members, New Jersey the largest proportion of Black sample members, and New York the largest proportion of Hispanic/Latino sample members. Women's educational attainment tended to be somewhat higher than men's, though sizable proportions of women in each site had experienced suspension or expulsion. Men in the Ohio and New Jersey samples had lower average educational attainment and were more likely to have ever repeated a grade than men in the Indiana and New York samples.

*Men had long histories of involvement with the justice system, and had been incarcerated for an average of three years at baseline.* In each site, men had many prior arrests, with extensive histories of being incarcerated as adults and detained as youth. On average, men in Indiana, Ohio, and New Jersey had been in prison about three years at the time of their baseline interviews—which was about one-third of the average incarceration time of the men in the New York sample.

*Although all men were incarcerated at baseline, the timing of their release from that incarceration varied widely relative to the study follow-up waves.* One of the unique features of the MFS-IP impact study sample is that men experienced different incarceration and release trajectories. All men were incarcerated at baseline, and with the exception of the New Jersey sample, most were still incarcerated at 9-month follow-up. (The New Jersey program specifically targeted men who would soon be released.) Even 18 months after baseline, just under half of the Ohio and Indiana samples and two-thirds of the New York sample were still incarcerated. By the 34-month interviews, only conducted in Indiana and Ohio, 55 percent of the Indiana men and 41 percent of the Ohio men had been released. Couples' experiences, and, thus, the meaning of certain evaluation outcomes, may have varied based on whether the male partner had spent any time out in the community during a given follow-up period.

*A significant treatment differential for relationship education was evident in each site.* The primary cross-site difference in service receipt between treatment and comparison couples was that men and women in the treatment group were significantly more likely than comparison couples to report having received relationship education. This differential was evident at baseline, except for the male sample in Indiana and the female sample in New Jersey, and at nine months for both men and women in all sites. This finding is largely consistent with the nature of the study design and program components being evaluated in each site. The proportion of men in the treatment group who reported having received healthy relationship education at *any* interview wave ranged from 68 percent (Ohio) to 88 percent (New York). Although these proportions are higher than among comparison men, the difference was modest. Among women, over three-quarters of treatment women in Indiana reported having received relationship education at any point; although these proportions were much lower in the remaining sites, they were still substantially higher than among comparison women.

## **How Did the 2006-2011 Demonstration Programs Impact Intimate Relationships?**

*Effects of couples-based program components on intimate relationships were generally limited, but sustained, positive effects emerged in Indiana.* The couples-based healthy relationship retreats provided in the context of faith- and character-based residential units in Indiana was consistently associated with better outcomes in the intimate relationship quality domain. Stronger treatment effects were found for men than women, and the effect sizes were generally in the “moderate” range. Even after adjusting for the higher quality relationships of the treatment group at baseline, these couples were more likely to stay together over time, remain in exclusive relationships, live together (after the male partner’s release) and have more positive trajectories over time on several other dimensions of relationship quality than comparison couples. Although treatment group member did not seem to have improved their communication skills or beliefs about healthy relationships—improvements that could reasonably be expected to result from participation in the retreats—the overall pattern appears to suggest that the intervention was effective at promoting many aspects of relationship quality. The findings for Indiana suggest that delivering couples’ healthy relationship retreats in the context of a broader faith- and character-based unit may help reinforce the skills learned through a broader emphasis on self-improvement.

*Effects in Ohio, New Jersey and New York were mixed, weak, and largely insignificant, but findings should not be discounted.* For the programming that was evaluated in the other sites, which included healthy relationship courses in Ohio, a classroom- and case management-based program in New Jersey, and a one-day couples’ healthy relationship seminar in New York, findings were largely insignificant. However, the mixed, weak findings in this domain should not be discounted. In Ohio, couples who enrolled in the healthy relationship course showed significant improvement in communication skills and fidelity over time relative to couples who were waitlisted for the program—a pattern that is notable given that the treatment couples started off with significantly lower quality relationships (on several

dimensions) than comparison couples. In New Jersey—where the couples who received the intervention also had significantly lower-quality relationships than comparison couples at baseline—the couples who enrolled in the OFA-funded demonstration program showed significant improvement in conflict resolution skills and several partner violence outcomes relative to couples in the comparison group. In New York, the treatment and comparison couples started off with similar-quality relationships and did not appear to differ in their trajectories over time. However, the small number of individuals enrolled in the impact study in New York created difficulty in detecting differences between the treatment and comparison groups.

*The interventions that were evaluated tended to mitigate relationship deterioration, rather than producing improvement relative to baseline.* On the whole, relationship quality appeared to deteriorate over time for most study couples. Intervention during the male partner’s incarceration may have delayed or somewhat reduced deterioration for some aspects of relationship quality in particular sites and for particular outcomes, but did not substantially improve relationship quality relative to baseline levels. Whether such outcomes should be expected due to the general decline in intimate relationship quality documented for couples in the general population and the unique context of incarceration and reentry into the community was difficult to assess, based on mixed findings and confounding power issues in the sensitivity analysis.

## **How Did the Programs Impact Parenting and Coparenting?**

*Couples-based programming did not improve parenting and coparenting outcomes, except in Indiana.* The Indiana couples’ healthy relationship retreats were associated with positive, moderate treatment effects on several coparenting outcomes (joint decisionmaking, partner fulfillment of parenting responsibilities, frequency of family activities, and time enjoyed as a family) as well as on fathers’ involvement with their focal children (including coresidence, financial support, and frequency of activities with the child) after release. In the remaining sites, participation in the couples-based programming did not tend to influence parenting or coparenting outcomes. Because intimate relationship quality did not substantially improve for treatment couples in these sites, it was not unexpected that the parenting and co-parenting outcomes, which were not the focus of the intervention, also did not improve.

## **How Did the Programs Impact Other Reentry Outcomes?**

*Employment was not affected by couples-based program participation, except in Indiana.* Although employment was not a focus of the couples-based program components that were evaluated, this outcome was explored for couples in which the male partner was released because economic stability was an allowable activity under the OFA funding stream. The results indicated that among Indiana couples (particularly the female members), those who participated in the healthy relationship retreats were more likely to be employed at follow-up than comparison couples. No treatment effects for employment were found in the other sites.

*Drug use was not affected by couples-based programming in any site.* Illicit drug use was not affected by the couples-based programming in any site. This finding was not surprising because drug use was not a focus of the couples-based program components that were evaluated, although it was included as a component of the New Jersey program.

*Mixed results were found for recidivism outcomes.* Desistance from recidivism was not an explicit goal of the couples-based program components being evaluated. However, given the importance of recidivism as a potential outcome of corrections-based programs and a growing body of research demonstrating an association between strong family ties and desistance from criminal activity, several recidivism outcomes were explored for men who were released from incarceration, including self-reported rearrest, self-reported reincarceration, and reincarceration in a state prison (based on administrative data). The results were mixed, with some positive treatment effects found in New Jersey and some negative treatment effects found in Ohio. No treatment effects were observed in Indiana or New York.

## **What Are Implications for Future Research That Supports Family Relationships and Reentry Success?**

*Challenges related to statistical power in evaluations of family-strengthening interventions with justice-involved fathers must be addressed.* Future research will require larger sample sizes to adequately assess the effects of multi-component family strengthening and reentry program models. Recruiting and serving large numbers of participants can prove challenging for holistic programs, particularly those requiring ongoing, active participation from female partners. In addition, diversity of program models precludes a pooled analysis of program impacts. Future evaluation efforts might consider constraining program design options to enable cross-site pooling and support a more robust assessment of program approaches. Efforts to assess (and compare) the costs and benefits of both holistic and lower-dosage family strengthening approaches with this population might also be considered.

*Mechanisms of change in family strengthening programs need further investigation.* Results from the Indiana impact analyses indicate that the couples-based programming evaluated in that site had a clear pattern of impacts on intimate relationships, parenting, and coparenting. However, the impacts observed for family relationship outcomes were not consistently accompanied by effects on constructs that are often specified as mediators in intervention logic models, such as communication skills or healthy relationship beliefs. In addition, impacts on communication skills and healthy relationship beliefs observed in the New York, New Jersey, and Ohio sites did not translate into impacts on behavior or relationship stability outcomes. More work is needed to examine a potential disconnect between intended program pathways and observed mechanisms of change in family strengthening interventions.

*Measuring change in family experiences across prison and community contexts requires thoughtful instrumentation and analysis.* MFS-IP findings suggest the complexity of measuring family-related outcomes that have different relevance and meaning depending on whether the family member is incarcerated or in the community at a given point in time. The sensitivity analysis on the effects of community exposure time further illustrates challenges in assessing whether or how program effects might differ based on prison or community context. Future studies might continue to explore how differences in prison and community contexts shape the shifting relevance of intervention content across incarceration and reentry periods and influence evaluation efforts to measure change over time. Impact studies might be better able to tailor data collection and outcome measures if they are focused on interventions that share a common program model with regard to incarceration and release timing.

## **What are The Implications for Future Practice That Supports Family Relationships and Reentry Success?**

*The program approaches studied by MFS-IP show some promise for supporting family relationships.* This study is unique among family strengthening intervention evaluations in demonstrating that a low-dosage intervention (Indiana’s one-time healthy relationship retreat) can have sustained effects on partnership and parenting relationships in a low-income, justice-involved population. The few positive treatment group trajectories observed in Ohio and New Jersey on various dimensions of intimate relationship quality (including conflict resolution and intimate partner violence) suggest that the kind of program models implemented in those sites might merit further investigation—particularly because (1) not all components of these programs were evaluated and (2) the MFS-IP impact study had several design limitations. However, the general pattern of non-significant findings in three of the four grantee sites also indicates that more robust or comprehensive interventions may be needed to address the complex needs of some justice-involved families.

*Implementation context was important.* Although each site’s program model was distinct, the one feature of the Indiana program that distinguished it from all other approaches was implementation context. The program was delivered exclusively to residents of faith- and character-based, program-oriented housing units who may have been more ready for this type of support. Program administrators also thought there was a good fit between the message of the healthy relationship retreat and other program components available to the character- and faith-based housing residents. Additionally the MFS-IP qualitative study findings indicate that very specific contextual aspects of the Indiana healthy relationship retreat (e.g., female partners staying in a hotel, couples eating a special meal together) were highly salient for participants. Because both treatment and comparison group members were recruited from the character- and faith-based housing units, the observed impacts appeared to be due to a synergistic effect of the couples’ retreats and the programming provided in these units. A supportive implementation environment may thus play a crucial role for couples working to maintain and improve their family relationships. As part of any replication strategy, additional research should test the relative importance of context and content.

*Different programming may be needed to address family circumstances during incarceration and after release.* Though they showed some promising effects, the specific family strengthening models tested in the MFS-IP study, including Indiana, were not robust enough to have sustained impacts on family relationships during incarceration and after release. Across sites and follow-up waves, the couples-based activities studied did not produce a consistent pattern of improvement in communication skills, healthy marriage beliefs, or conflict resolution skills—three key components of most healthy relationship education programs. MFS-IP qualitative data suggest that many couples found it difficult to translate the skills they learned during the male partner’s incarceration into improved relationships in the community upon his release. Such findings suggest that policymakers and practitioners give further consideration to understanding the distinct skills and resources required to support family relationships in the context of incarceration and in the context of reentry. Different approaches to services for justice-involved couples may need to be available during the pre- and post-reentry periods.

*Higher-risk couples may also gain from relationship strengthening programs.* The impact findings shed new light on a longstanding question of interest to program funders and designers alike—whether more stable or committed couples are more amenable to family strengthening intervention. Results in Ohio and New Jersey, although weak, suggest that interventions with couples in relatively more precarious relationships should not be ruled out. In both sites, treatment couples had more barriers or identified risks than the comparison couples. But over time, treatment couples improved more on some outcomes relative to their baseline status than did the comparison couples. Family strengthening programs should not discount serving diverse groups of justice-involved couples and rigorously evaluating the results.

## **What Are the Study Limitations?**

*Study limitation should be taken into account in interpreting the findings in this report.* First, this study did not evaluate the grantees’ entire OFA funded programs but the couples-based interventions only. Therefore, it cannot be taken to mean that their overall programs were effective or ineffective. Second, statistical power was limited by low program enrollment in several sites and the inability of the evaluation to pool data across sites. Diverse program designs limited cross-pooling and small numbers of participants in individual sites (New York and New Jersey) and the imbalance between the size of the treatment and comparison groups in Ohio, made it difficult to detect treatment effects. Third, random assignment was not feasible in the prison environment and not all selection bias may have been eliminated by the post hoc statistical adjustments designed to minimize differences between the treatment and comparison groups. In addition, while all four sites implemented couples-based interventions, the treatment differential between treatment and comparison group members tended to be more pronounced for men than women, indicating that treatment women were not as likely as treatment men to have participated in the intervention. Finally, due to the large number of outcomes assessed in this evaluation, it is important to take the multiple comparisons problem into account when interpreting the findings. Although the

overall pattern of findings remained the same after adjusting statistically for multiple comparisons, some of the specific effects observed for men, women, and couples were no longer significant.

# Chapter 1. Introduction

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From 2006-2011, the Office of Family Assistance (OFA) within the U.S. Department of Health and Human Services (HHS), Administration for Children and Families (ACF), funded 12 programs to support healthy relationships between incarcerated fathers, their partners, and children, in response to increasing recognition of the negative consequences of incarceration on families. As “first generation” demonstration grantees serving families affected by incarceration, the grantees developed programs to provide services to promote or sustain healthy relationships and strengthen families in which a father was incarcerated or otherwise involved with the criminal justice system (e.g., recently released or on parole or probation). This report presents findings from the Multi-site Family Study on Incarceration, Parenting, and Partnering (MFS-IP), the national evaluation of this initiative. This chapter summarizes the body of research that gave impetus to the OFA funding and other contextual information important to understanding the context of this funding stream and how it fits within other federal Healthy Marriage and Responsible Fatherhood efforts.

## Incarceration and Families

The United States has the highest incarceration rate and the largest total number of incarcerated people in the world (International Centre for Prison Studies, 2012). Incarceration affects not only the 2.3 million individuals housed in U.S. jails and prisons at a given point in time,<sup>1</sup> but their families and social networks. Over half of these jail and prison inmates are parents, and an estimated 7,476,500 children in 2006 had at least one parent who was incarcerated or under correctional supervision (Glaze, 2010; Glaze & Maruschak, 2008). Many incarcerated parents lived with at least one of their children prior to incarceration; among parents in state prison, this figure was reported at 48 percent (Glaze & Maruschak, 2008).

Many incarcerated and reentering fathers are in committed intimate relationships. The Multi-Site Evaluation of the Serious and Violent Offender Reentry Initiative (SVORI) reported that 75 percent of incarcerated fathers were either married or in an intimate relationship (Lattimore, Visher, & Steffey, 2008). Independent of parenting status, nearly half (44%) of men incarcerated in state prisons were married or living with an intimate partner at the time of their arrest (unpublished analyses conducted on the 2004 Survey of Inmates in State and Federal Correctional Facilities).

Families affected by incarceration often also face challenges associated with living in poverty. Two-thirds of jail inmates come from households with an income under 50 percent of the federal poverty line (Wildeman, 2009). Families of color have disproportionately high rates of parental incarceration, which may deepen existing socioeconomic and health disparities (Wildeman & Muller, 2012; Wakefield & Wildman, 2013). African American children born in

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<sup>1</sup> In addition to the point in time estimates, many more individuals have spent time in jail in a given year.

1990 were seven times more likely to have their fathers imprisoned by age 14 compared to White children born in the same year (Wildeman, 2009).

Family interaction and support can promote successful reentry outcomes such as reduced recidivism and drug use; however, incarceration presents many challenges to maintaining strong family relationships (La Vigne et al., 2008; Shollenberger, 2009). Prisons often place inmates far away from their family members, making visitation difficult and costly. The inhospitable prison environment may also serve as a barrier to maintaining contact. Limited visiting hours, lack of privacy, and restrictions on movement and physical contact can further hamper the efforts families make to stay connected (Fishman, 1990; Hairston, Rollin, & Jo, 2004).

Incarceration has been shown to have significant and lasting effects on family relationships. Marital and partner bonds can be weakened by changes in roles associated with the male partner's absence, psychological changes, and economic strain. The loss of direct income during a father's incarceration can create a significant challenge for already-struggling families. More than half (54%) of fathers in state prisons reported providing the primary financial support for their children prior to incarceration (Glaze & Maruschak, 2008). Loss of this support is compounded by the additional costs associated with imprisonment of a family member—such as legal costs, the cost of receiving collect calls from a prison, and costs associated with visiting the incarcerated family member (Arditti, 2005). For single mothers, financial hardship has been associated with psychological distress, negative parenting, and poor child outcomes (McLoyd, 1998).

Parental incarceration increases the risk of children living in poverty or experiencing household instability, independent of other problems these children may experience—such as parental substance abuse, mental health challenges, or inadequate education (Phillips et al., 2006). Children of incarcerated parents are twice as likely as their peers to exhibit antisocial behavior, even when other risk factors are controlled (Murray et al., 2009). A recent meta-analysis of literature focusing on the effects of parental incarceration on children's behaviors and mental health confirmed lack of rigorous evidence around this topic and need for increased research (Murray et al., 2012). Nevertheless, parental incarceration is generally considered an “adverse childhood experience” that significantly increases the chance of negative long-term outcomes for children (Felitti et al., 1998).

## **Potential Supports for Families Affected by Incarceration**

Given the myriad negative effects imprisonment can have on partner relationships and father-child relationships, support for families with an incarcerated father is critically important. Such support has the potential to strengthen families by lessening conflict, dissolution, and violence; improving existing relationships; and preventing child behavioral problems.

Formal supports for justice-involved families include family-friendly correctional visitation policies, group parenting classes, program components involving children, and group relationship classes.

### *Correctional Visitation Policies*

Family-friendly visitation policies at correctional facilities include provision of toys and games in visiting rooms, creation of separate visiting rooms for incarcerated parents and their children, transportation vouchers for children and caregivers, policies that permit extended and/or overnight family visits with children, and virtual video visits as a supplement to in-person visitation (Boudin, Stutz, & Littman, 2014; McKay et al., 2010). Facilities with child-specific visitation rooms may make these environments welcoming to children by providing toys, child-sized furniture, and playful decorations (McKay et al., 2010). Information regarding how many prisons within each state actually offer these programs is limited, and evaluations of their implementation and effectiveness are few. However, family visitation programs have been linked with lack of administrative violations during incarceration, reduced recidivism following release, and strengthened family relationships (MacDonald & Kelly, 1980; Minnesota Department of Corrections, 2011).

### *Group Parenting Classes*

Parenting classes are among the most common prison-based family strengthening programs, although they are offered less frequently to fathers than to mothers. A survey of 315 state prisons found that parenting programs were offered or contracted out at 41 percent of male-only prisons compared to 90 percent of female-only prisons (Hughes & Harrison-Thompson, 2002). Group parenting programs for incarcerated fathers typically cover content such as child development, communication, discipline techniques, anger management, coparenting relationships, and rebuilding trust (Herman-Stahl, Kan, & McKay, 2008). In addition to standard program content such as instruction, discussions, and role playing, some programs incorporate other family members by inviting men to read a children's book on audiotape and send it to their children (Palm, 2001; LIS, Inc., 2002) or having the child's mother join for certain classes (Jeffries, Menghraj, & Hairston, 2001).

Participants in such classes have self-reported positive impacts of the programs, with many fathers reporting that the programs helped them learn new parenting skills, strengthened their relationships with their children, and taught them the importance of their roles as fathers (Dunn & Arbuckle, 2002; Hairston & Lockett, 1987; LaRosa & Rank, 2001; Palm, 2001; Skarupski et al., 2003).<sup>2</sup> However, evaluations have had mixed results in demonstrating the beneficial effects of parenting classes. An evaluation of a 10-week group fatherhood class offered by the Fairfax County Department of Community Corrections that used a cross-sectional four group

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<sup>2</sup> Self-reported impacts can provide valuable insight into phenomenological data (i.e., respondents' perceptions of themselves). However, it is limited by potential data validity concerns. Self-reported impacts are inherently personal and idiosyncratic, and perceptions of what counts as meaningful program impact may vary among participants. Additionally, self-reported data is subject to recall bias and social desirability bias (i.e., the tendency to provide socially favorable responses to sensitive questions).

design found that fathers who received the program had an increased frequency of child contact, increased fatherhood knowledge, and improved attitudes toward fatherhood compared to fathers who did not receive the class (Robbers, 2005). The Long Distance Dads (LDD) program, developed by the Pennsylvania Department of Corrections, uses incarcerated peer leaders to facilitate small group discussions and parenting skills development sessions. A time series, matched control design found that men who participated in LDD scored higher at post-test than the control group on self-reported measures of father-child contact, but not on a variety of parenting attitudes and parent-child relationship indices (Skarupski et al., 2003). The Parent Child Study in Oregon evaluated the effects of the group-based intervention, Parenting Inside Out, on incarcerated parents and their families through a randomized controlled trial that compared outcomes for incarcerated fathers and mothers assigned to the parenting training group versus a “services as usual” control condition. Findings indicated that parents in the intervention group experienced less stress and depressed mood than those in the control group, and had more positive interactions with their children post-intervention; there was no significant impact on attitudes toward parental involvement or on respondents’ relationships with their children’s caregivers (Eddy, Martinez, & Burraston, 2013). The evaluation of the Strengthening Washington DC Families Project used an experimental design in which entire families were randomly assigned to one of four treatment groups: parenting skills only, child social skills only, combined family skills, and a minimal treatment control group. The evaluation found no significant impact across any of the treatment groups on child behavior and well-being, child-reported family bonding, or parent-reported parenting skills (Gottfredson et al., 2006).

### *Programs Involving Children*

Parenting programs may also involve children directly, and preliminary evidence supports these integrated approaches. One such example is the Living Interactive Family Education (LIFE) program—an enhanced visitation program in which incarcerated fathers and their children engage together monthly in structured educational and recreational activities. In qualitative interviews and focus groups, fathers self-reported improvement in their relationships and communication with their children, increased family unity, and improved life skills and behavior among their children (Dunn & Arbuckle, 2002).<sup>3</sup> An experimental analysis of a ten-week parenting therapy program—in which incarcerated fathers engaged in non-directive play therapy with their visiting children—found that intervention-group fathers experienced better acceptance of their children, lower parenting stress, and less problem behavior by their children at post-test (Landreth & Lobaugh, 1998).

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<sup>3</sup> As noted previously, self-reported data is limited by validity concerns, including recall bias, social desirability bias, and lack of consistency among respondents in their perception of improvements.

Other programs focus on children only (and not the incarcerated parent). One such example is the Amachi Program, which pairs children whose parents or relatives are incarcerated with a community-based mentor (Matz, 2014). Child-targeted support groups, peer mentorship programs, recreational activities, and career counseling also provide support for children affected by parental incarceration (Mustin, 1998).

### *Group Relationship Classes*

Programming that focuses on strengthening intimate relationships among justice-involved couples is less common than parenting education. The majority of corrections-based relationship education programs are designed as a series of group classes involving incarcerated men and, often, their partners. Couples generally meet with a facilitator at the correctional institution, with meetings structured around visitation times (Bauer et al., 2007; Markman, Eason, & Grant, 2005). Classes cover such themes as communication, problem solving, conflict resolution, managing complex family relationships, and building trust and commitment. Activities may include videos, worksheets, and role plays, in addition to instruction by the facilitator (Accordino & Guerney, 1998).

Preliminary research on group relationship classes within correctional environments has shown positive outcomes for incarcerated men and their partners, although most evaluations have used a single-group design with no comparison or control. An evaluation of the PREP Inside and Out Program—which aimed to reduce negative relationship patterns and promote effective communication, conflict management, forgiveness, and goal setting within couples where the male partner was incarcerated—found improvements among participants from pre-test to post-test in negative couple interaction, communication skills, relationship satisfaction, and feelings of loneliness. Ratings of couple relationship outcomes were high, and a 30-day follow-up study indicated that benefits were maintained in the month following the program’s conclusion (Markman, Eason, & Grant, 2005). Data gathered from participants in the Relationship Enhancement program—a two-day group program with male prisoners and their spouses that emphasized nine relationship skills—suggest that participants were very satisfied with the content and format of the program, its leaders, and its ability to help them improve their relationships (Accordino & Guerney, 1998).

### **Federal Healthy Marriage Efforts**

The 2006-2011 OFA funding initiative focused on supporting incarcerated fathers and their families built upon previous large-scale OFA Healthy Marriage and Responsible Fatherhood initiatives aimed at promoting healthier families and communities. Three such initiatives—Building Strong Families (BSF), Supporting Healthy Marriage (SHM), and the Community Healthy Marriage Initiative (CHMI)—were evaluated to understand their impact on intimate partnerships and parent-child relationships. Overall, impact findings across the three studies have shown mixed effects for relationship quality and stability, and little evidence of a positive effect on child well-being.

### *Building Strong Families (2002–2013)*

The BSF project was a large-scale demonstration of marriage and relationship education for low-income, romantically involved, unmarried couples who were expecting or had recently had a child together. The BSF project focused on developing relationship skills for unmarried parents. The program model included curriculum-based group relationship education, individual support from family coordinators, and assessment and referral to other needed services. An evaluation across eight sites found no effect on couples' relationship quality, likelihood of marriage, or family stability after three years, although results varied significantly across sites (Wood et al., 2012). One site had a consistent pattern of positive effects on relationship outcomes (at 15 months) and family stability (at 36 months); another had multiple negative relationship effects. There was a small positive impact on child socio-emotional development among sites that included a home visiting component (Wood et al., 2012).

### *Supporting Healthy Marriage (2003–2014)*

The SHM project was a large-scale, multi-site, multi-year evaluation of marriage education programs for low-income married couples who had or were expecting children. Launched in 2003, it sought to expand on existing research on the benefits of strengthening couple relationships and explore whether these benefits could be reaped by lower-income families (as opposed to higher-income families). SHM programming included structured group relationship education; 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 random assignment design compared outcomes for families who were offered SHM's services with outcomes for a similar group of families who were not, but who could access other services in the community. Although both intervention and control groups could access group relationship studies during the study period, after one year of the program intervention couples reported participating in relationship services in a group setting at a much higher rate than control couples (89% versus 24%). Further, intervention couples reported a higher dose of such relationships services, with 42 percent attending more than 10 sessions compared with 3 percent of the control couples (Hsueh et al., 2012). The evaluation found a small positive impact on the couples' relationship quality at 12 and 30 months, and multiple positive effects at 30 months: higher levels of marital happiness; lower levels of marital distress and infidelity; greater warmth, support, and positive communication; and less antagonistic/hostile behaviors in their interactions with one another (Lundquist et al., 2014). No impacts on child well-being were observed (Lundquist et al., 2014).

### *The Community Healthy Marriage Initiative (2003–2013)*

Through the Community Health Marriage Initiative (CHMI), grants were awarded in 2006 to large-scale, community-wide projects that promoted healthy marriages. The programs sought to reach a broad audience and engage stakeholders across diverse community sectors such as government, schools, faith-based organizations, and businesses. In each demonstration community, the grantees reached out to multiple target groups (e.g., engaged or married couples, unwed parents, individuals) with marriage and relationship education classes,

workshops, community events, and/or media efforts that addressed the benefits of healthy marriage and relationships. A multi-year evaluation of the initiative compared demonstration communities with matched comparison communities, and found no cross-site effects on relationship quality, attitudes, or practices, other than a negative impact on marriage opinions index scores (Bir et al., 2012). Across sites, there was a positive impact on parent-reported child behavior (Bir et al., 2012).

*The Multi-site Family Study on Incarceration, Parenting and Partnering (2006-2016)*

From 2006-2011 OFA funded the “first generation” of programs to serve incarcerated fathers and their partners. This special priority area, “Responsible Fatherhood, Marriage, and Family Strengthening Grants for Incarcerated Fathers and their Partners,” was part of the Healthy Marriage/Responsible Fatherhood demonstration programs grants funded under the Deficit Reduction Act of 2005 (DRA) (P.L. 109-171). The priority area was based on the recognition of the struggles of families affected by the incarceration of a father. Prior research had found that higher levels of family support and contact during incarceration contribute to more positive reentry outcomes for men, and a few relationship education programs had previously been implemented in prisons. However, there were no proven models for the delivery of family-focused programs or services for families affected by incarceration. As this was a new program strategy area, applicants were required to design and implement their own approaches to serving this population within the framework of the federal guidelines (described in **Chapter 2**).

**Second and Third Generation OFA Programs for Formerly Incarcerated Fathers**

Since the completion of the grants included as a part of this study, OFA has funded additional grantees to provide responsible fatherhood services for soon-to-be released and recently released fathers to strengthen families and promote the economic and social well-being of children, individuals, and communities. Second generation grantees operated from FY 2012 through FY 2015 under the Community-Centered Responsible Fatherhood Ex-Prisoner Reentry Pilot Projects. Similar to the first generation grantees, the subsequent initiative focused on providing healthy marriage, responsible parenting, and economic stability activities for formerly incarcerated parents and their families. However, whereas the first set of grantees tended to focus on the delivery of healthy relationship services, economic stability services were a major emphasis among the second generation grantees. The Ex-Prisoner Reentry Pilot Projects provided job skills and job readiness training pre-release, with post-release activities including assistance finding transitional jobs and permanent employment; provision of and assistance with public housing; help securing public benefits; legal assistance; GED-preparation assistance and tuition assistance and reimbursement; vocational school training; cognitive behavioral therapy; and assistance obtaining small business loans and individual development accounts. An implementation study was conducted on these pilot programs (Fontaine et al., 2015). Using the comprehensive services model developed under the Ex-Prisoner Reentry Pilots, five Responsible Fatherhood Opportunities for Reentry and Mobility grants--the third generation of reentry grantees--were funded in September of FY 2015. These grantees are still in their initial implementation phase and are projected to operate through FY 2020.

Due to the pioneering nature of programs specifically targeting families affected by incarceration—which brought together the distinct fields of corrections and human services—OFA and the Office of the Assistant Secretary for Planning and Evaluation (ASPE) funded a comprehensive study to assess these programs’ implementation and effectiveness. The study contains an implementation evaluation; an impact evaluation; a qualitative sub-study; predictive analytic models to examine behaviors before, during, and after release from incarceration; and a public use data set.

Building on the evaluations of the federal healthy marriage and responsible fatherhood initiatives discussed above, the MFS-IP impact findings presented in this report further our understanding of the extent to which couples-based relationship strengthening interventions are effective for vulnerable families. The unique focus on couples affected by incarceration distinguishes the impact evaluation component of this study from previous efforts and expands the stakeholders for whom findings have direct policy and practice relevance. Of particular interest is how context, i.e., the prison environment, and men’s incarceration trajectories over time may affect outcomes, and how outcomes may have different meanings for families when the father is incarcerated versus living in the community.

## **Content of this Technical Impact Evaluation Report**

This technical evaluation report, with appendices, is designed to give the reader a detailed understanding of the evaluation process, analytic methods, and findings. **Chapter 2** provides an overview of the evaluation and the site-specific evaluation designs. **Chapter 3** describes the data collection and analytic approach. **Chapter 4** summarizes the characteristics of the study participants. In the next three chapters, the findings for intimate relationship quality outcomes (**Chapter 5**), parenting and coparenting relationship quality outcomes (**Chapter 6**) and reentry outcomes (**Chapter 7**) are presented using two analytical techniques--a point in time comparison between treatment and comparison couples over each wave of data collection and a comparison over time using latent growth curve modeling. Finally, **Chapter 8** discusses key findings and study limitations. The appendices provide more in-depth information on the impact study methodology (**Appendix A**), service receipt (**Appendix B**) and outcomes (**Appendices C-E**).

A short research brief on the impact findings, and all other MFS-IP publications (including this report), can be found at <http://aspe.hhs.gov/hsp/08/mfs-ip/>.

# Chapter 2. Impact Evaluation Overview and Site-Specific Study Designs

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This chapter provides an overview of the impact evaluation, followed by detailed description of each of the four programs included in the impact study and the site-specific impact design that was implemented in each site.

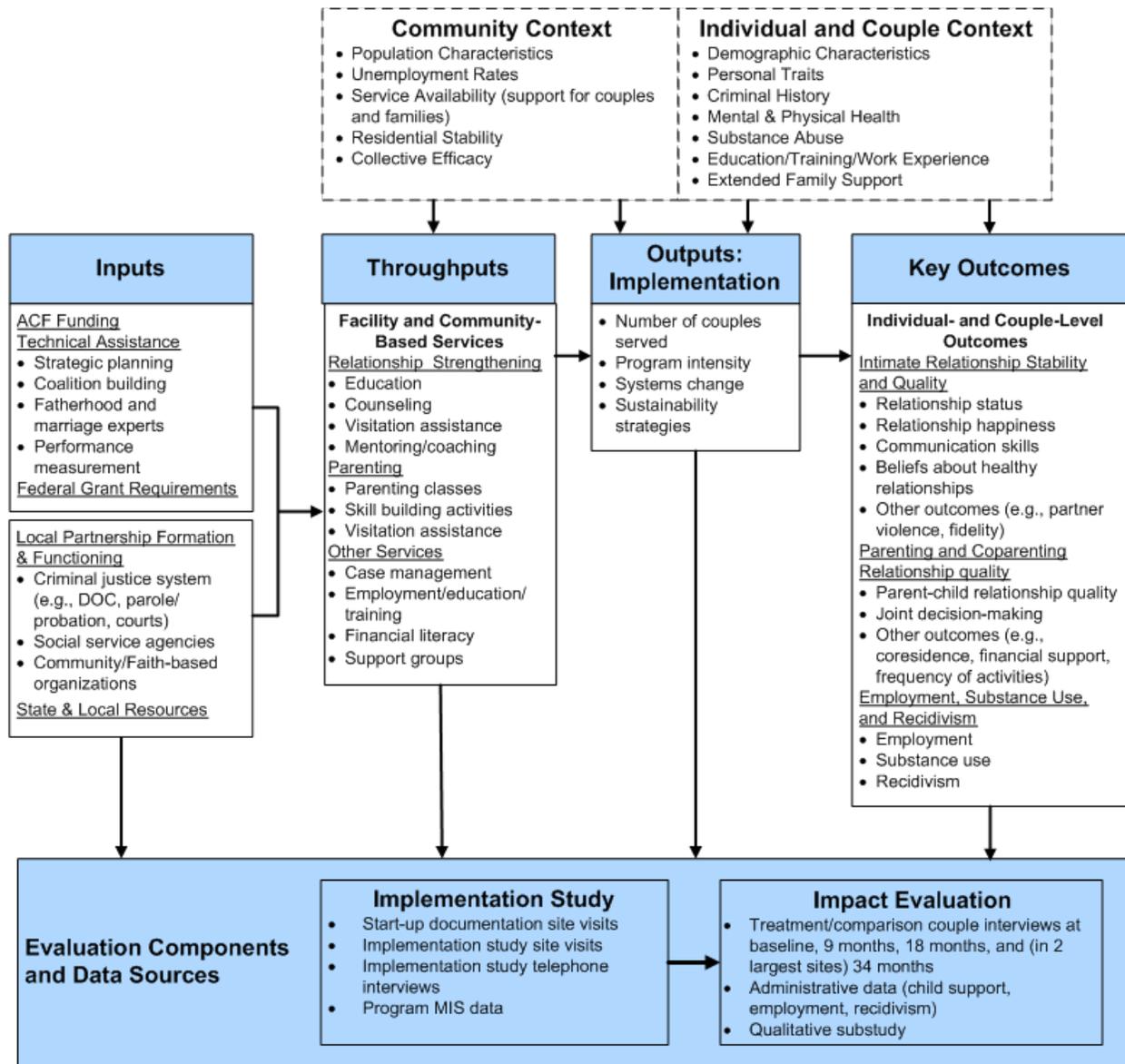
## The Goal of the Impact Evaluation

The overall goal of the MFS-IP impact evaluation component was to assess whether delivering couples-based family strengthening programming within the context of particular correctional settings was successful in fostering healthy relationships, strengthening families, and easing community reentry. While the funded programs were diverse and generally provided a wide range of family strengthening and parenting services, the impact evaluation focused on effectiveness of the couples-based interventions.

## Evaluation Framework

The joint implementation and impact evaluation framework developed for the study is shown in **Exhibit 2-1**. The framework first isolates *inputs* as the key factors necessary to implement OFA-funded programming at each site. These include ACF funding, technical assistance, and federal grant requirements. Inputs also include the partnerships grantees formed and existing resources external to the sites that, in combination with site-specific resources, yielded a comprehensive set of services and programs available to the program participants (*throughputs*). The resulting *outputs* are the number of clients (both the incarcerated individuals and their partners) served by the programs, the dosage of services received by program participants, systems-level change affected by the programs, and sustainability strategies implemented. Measurement of the changes in knowledge and behaviors (*outcomes*) for participants is an important factor in the evaluation framework, with key outcomes representing intimate relationship quality; parenting and coparenting relationship quality; and employment, substance use, and recidivism. Finally, as illustrated in the framework, community and individual participant characteristics influence the throughputs, outputs, and outcomes.

Exhibit 2-1. Evaluation Framework



## Research Questions for the Impact Evaluation

The impact evaluation was designed to address a number of research questions regarding the potential impact of couples-based interventions. These questions included:

- Did the interventions increase relationship stability and quality among participants, including commitment, fidelity, bonding, support, communication skills, healthy relationship beliefs, and partner violence?

- Did the interventions improve parenting and coparenting relationship quality and increase positive parent-child contact among participants?
- Did the male partner’s reentry into the community affect program outcomes? Were effects more likely to be found for couples in which the male partner was released from incarceration or in which he remained incarcerated?
- Did the interventions improve reentry outcomes for couples in which the male partner was released from incarceration, including reductions in recidivism, increased attachment to the labor force, and abstinence from illicit substance use?
- Were there gender differences in the impacts of the interventions?
- How can the qualitative interview data inform our understanding of the main pathways through which any identified impacts occurred (or failed to occur)?

This report addresses the research questions posed for the impact study by describing the effects of couples-based, OFA-funded programming on a number of outcomes. Findings from the **qualitative substudy**, in which in-depth interviews were conducted with about 120 impact study respondents in three sites to capture detailed information about the families’ experiences during the male partner’s reentry, are highlighted to illuminate key impact findings.

## **Federal Funding Requirements for the Responsible Fatherhood, Marriage, and Family Strengthening Grants for Incarcerated Fathers and their Partners**

On September 30, 2006, OFA announced grant awards to 226 organizations to support healthy marriage and responsible fatherhood activities. Healthy marriage and responsible fatherhood grants were funded under separate competitive funding opportunities, and within the responsible fatherhood funding stream, 12 awards were funded under the priority area, “Responsible Fatherhood, Marriage and Family Strengthening Grants for Incarcerated Fathers and their Partners,” with funding of up to \$500,000 per grant per year for five years.<sup>4</sup> These grants, the focus of MFS-IP, were intended to promote or sustain healthy relationships and strengthen families in which one of the parents was incarcerated or otherwise involved with the criminal justice system.

Across all healthy marriage and responsible fatherhood priority areas, the authorizing legislation for the grants (The Deficit Reduction Act of 2005 [P.L. 109-170]) allowed for the development and implementation of projects that supported any of the following three authorized activity areas: healthy marriage, responsible parenting, and economic stability. For the responsible fatherhood grantees, although the primary goal of the initiative was to promote

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<sup>4</sup> Originally, 14 grants were awarded. One site relinquished its funding after the first year and one did not receive continuation funding.

responsible fatherhood in all its forms, an essential point was to encourage responsible fatherhood within the context of marriage. Healthy marriage and relationship strengthening activities were the required component for the grants for incarcerated parents and their partners, whereas responsible parenting and economic stability activities were optional.

All grantees were required to provide services to all eligible persons, regardless of a potential participant's race, gender, age, disability, or religion. Target populations for responsible fatherhood grants could include one or more of the following groups: married fathers, single or unmarried fathers, cohabitating fathers, young or teenage fathers, and new fathers or fathers-to-be. The grants for incarcerated parents and their partners could only serve fathers who were currently or very recently under criminal justice supervision.

All healthy marriage and responsible fatherhood grantees were restricted from using grant funds to support inherently religious activities—grantees were required to take steps to separate their inherently religious activities from the grant-funded services. Additionally, the authorizing legislation for the healthy marriage and responsible fatherhood grantees specified that successful applicants must describe what they would do to ensure program participation was voluntary and how their programs would address domestic violence. OFA required that grantees collaborate with domestic violence experts or coalitions in developing their programs. Grantees serving incarcerated parents and their partners were also required to involve stakeholders from the criminal justice system, as well as diverse community sectors.

Beyond these basic requirements, grantees could design their programs to reflect local needs and operational contexts. The grantees were not required to adhere to an established program model or set of best practices (as these had not yet been established) and the sites varied widely in the program components delivered and service delivery approaches implemented.

From 2006 to 2011, the 12 OFA-funded sites implemented their demonstration programs, with specific components varying according to agency capabilities, goals, and target populations. Some provided intensive, holistic services to a smaller number of participants, whereas others provided a briefer, skills-building intervention to larger numbers of participants. Most grantees delivered their programs in one or more state prison(s) or local county jail(s). Some grantees offered services at any time during the father's incarceration, whereas others focused specifically on the post-admission period and/or on the period immediately before and after release. Target populations were justice-involved fathers in a committed and/or coparenting relationship, with variability across programs in how committed relationships were defined and whether the relationship had to be confirmed by the partner. Men were typically the primary enrollment target in that they were screened and enrolled first, with their partners then approached for participation. In some sites, the partner had to participate in services for the man to be eligible; other sites did not impose this requirement. Further information about implementation of the demonstration programs across the 12 grantees can be found in the summary implementation report (McKay, Lindquist, & Bir, 2013) and the technical implementation report (Lindquist et al., 2015a), both available at <http://aspe.hhs.gov/hsp/08/mfs-ip/>.

## Impact Site Selection and Overview

From the 12 demonstration grantees, four<sup>5</sup> sites were chosen for the impact study: the Indiana Department of Correction, RIDGE Project (Ohio), New Jersey Department of Corrections, and Osborne Association (New York).

The impact sites were chosen using the following criteria:

- **Couples-based relationship services** were of sufficient intensity to produce measurable impacts.
- **Projected enrollment** was estimated to be sufficient to support a treatment and comparison group.
- **Stage of implementation** indicated a stable program design at the time of site selection.
- **Evaluation design** possibilities, such as opportunity for random assignment or identification of an appropriate comparison group, were strong.

**Exhibit 2-2** summarizes core information about each impact site, including agency type, target population, and OFA-funded program components. In addition, the exhibit identifies the program components that were the focus of the impact evaluation. Due to design constraints (as described in more detail below) and the focus of the evaluation on the impact of programming on couples, the couples-based program component rather than the entire set of OFA-funded services offered was the focus in Indiana, Ohio, and New York.

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<sup>5</sup> Originally, the Minnesota Council on Crime and Justice was also included in the impact study, with an experimental design put into place in this site and approximately 80 treatment and control couples enrolled in the study. However, due to extremely low enrollment, data collection was discontinued and the data that were collected were not used in the impact study.

**Exhibit 2-2. Impact Site Overview**

<b>Grantee</b>	<b>Type of Grantee</b>	<b>Target Population</b>	<b>Full Scope of OFA-Funded Services Offered</b>	<b>Program Components Evaluated</b>
Indiana Department of Correction (IN DOC)	State correctional agency	<ul style="list-style-type: none"> <li>Residing in a character/faith-based living unit</li> <li>In a committed relationship (couples retreats)</li> </ul>	Relationship education classes (men), healthy relationship retreats (couples), parenting classes (men)	Couples' healthy relationship retreats only
RIDGE Project (OH RIDGE)	Faith-based organization	<ul style="list-style-type: none"> <li>Fathers</li> <li>In a verified committed romantic relationship</li> </ul>	Series of relationship education classes (couples, men), parenting classes (men), visitation and in-prison contact assistance, referrals	First relationship education course
New Jersey Department of Corrections (NJ DOC)	State correctional agency	<ul style="list-style-type: none"> <li>Fathers of minor children</li> <li>In a committed intimate or coparenting relationship</li> <li>Partner agreed to participate</li> <li>Had six to nine months left to serve</li> <li>Had chemical dependency issues</li> <li>Set to be released without community supervision after serving maximum sentence</li> </ul>	Relationship education classes (couples, men), domestic violence workshops, parenting classes (couples), visitation and in-prison contact assistance, case management (couples), financial skills education (couples), substance abuse treatment (men)	Entire set of services
Osborne Association	Community-based nonprofit	<ul style="list-style-type: none"> <li>Fathers or men serving in a parental role</li> <li>Completed parenting classes and cognitive behavioral training classes (relationship education classes)</li> <li>In a committed relationship (healthy relationship seminar)</li> </ul>	Relationship education classes (men), healthy relationship seminars (couples), parenting classes (men), visitation and in-prison contact assistance, family counseling, referrals	Couples' healthy relationship seminars only

## Detailed Site Descriptions and Study Designs

This section provides a detailed description of each impact site’s OFA-funded program. In addition, it summarizes the study design that was implemented in each site to evaluate the impact of the couples-based intervention. (As noted above, the couples-based healthy relationship component was evaluated in Indiana, Ohio, and New York, whereas in New Jersey, the overall OFA-funded program was evaluated because the relationship strengthening component could not be separated from other services.) Because each site’s programming and target population were unique, RTI developed site-specific strategies for comparison group recruitment. Fairly substantial variation in the designs across sites was necessary due to several factors, including the eligibility criteria and recruitment strategies implemented by the grantees, the number of facilities served, and the grantees’ enrollment schedule. In three sites (Indiana, New Jersey, and New York), a matched comparison group design was implemented. In the remaining site (Ohio), a wait-list comparison design was implemented. The designs implemented in each site are summarized below, with detailed information about the rationale for the final design in each site and the specific procedures used to carry out the design included in **Appendix A**.

It is important to note that random assignment of men and their partners to OFA-funded programming was not feasible in any of the four sites. Program staff invested a substantial amount of time to successfully recruit partners—who had many competing responsibilities during the man’s incarceration—and were strongly committed to serving as many couples as possible (and meeting OFA enrollment expectations). Staff were also reluctant to jeopardize the already tenuous relationships of prospective participants by ultimately not offering the program to those selected for a control group. In addition, correctional partners expressed concerns about random assignment, which is rarely done within prisons due to concerns about equal access to the limited program offerings available in prisons.

Therefore, matched comparison or wait list designs were implemented in all four sites, as summarized below. The comparison group selection procedures put in place during study enrollment were designed to achieve the greatest comparability possible between the

### Random Assignment Considerations

Random assignment evaluations are designed to ensure that any differences in composition between the treatment and control groups at baseline are minimal and randomly distributed. By assigning treatment status based on chance, one reduces the possibility that couples who receive family strengthening programming are already in more committed relationships and more motivated to stay together. When treatment status is not randomly assigned but voluntary, and the treatment group includes more motivated people, the comparison between treatment and comparison groups is biased. The calculated treatment effect includes the effect of the treatment, but in addition, the effect of the motivation.

However, random assignment studies also have drawbacks. Some random assignment studies do not thoroughly examine the equivalence of treatment and control couples at baseline, instead focusing on *exploring post-intervention differences between groups on the assumption that the groups are equivalent at baseline*. Without empirically assessing baseline equivalence between groups, random assignment studies may, in fact, have similar selection bias issues as those in quasi-experimental designs.

treatment and comparison groups. However, some degree of selection bias was undoubtedly introduced by our study design, as it is doubtful that the comparison couples were as highly committed to strengthening their relationships as the treatment couples. Post-hoc statistical techniques (i.e., propensity score modeling) were used to weight the data to minimize any remaining selection bias (described in **Chapter 3**). In addition, both of the analytic techniques implemented to assess the impact of OFA-funded demonstration programming take into consideration baseline levels of each outcome explored, which allows us to understand the “starting point” for the treatment and comparison couples in our sample and to compare trajectories going forward from that point.

### *Indiana Department of Correction (IDOC)*

In Indiana, the focus of the impact evaluation was a couples-based healthy relationship retreat delivered to men and their intimate partners. The couples’ retreats, as well as other program components that were not the focus of the impact evaluation, were delivered in the context of character- and faith-based housing units.

The Indiana Department of Correction (IDOC) delivered OFA-funded services to men who resided in character- and faith-based housing units in one of 10 IDOC facilities. These units, known as Purposeful Living Units Serve (PLUS), are limited to men meet behavioral criteria (e.g., no behavioral infractions) and who are interested in participating in extensive life skills and character development programming. An application to PLUS is required. In making the decision to deliver programming to PLUS residents, program administrators felt that family strengthening programming would be a good complement to the existing programming.

The OFA grant was used to expand the programming already available in the PLUS units to include:

- A facility-based **parenting class** delivered to all men in the PLUS unit. The parenting class used the *24/7 Dads* curriculum, which aims to help men develop the attitudes, knowledge, and skills they need to get and stay involved with their children. Key topics include handling and expressing emotion, masculinity, and discipline, with the curriculum also guiding men through the process of evaluating their own parenting skills and fathering role models.
- A facility-based **relationship education class** delivered to all men in the PLUS unit. In the first three years of the grant, the men’s relationship education class was delivered in 12 weekly classes using the *Within My Reach* curriculum (PREP for Individuals, Inc., 2008). In year four, IDOC switched to the new version of PREP developed for incarcerated men, which is intended to address issues that incarcerated persons encounter in relationships during incarceration and after release, and effective relationship strategies during both time periods (*Walking the Line*; PREP for Individuals, Inc., 2010).

- A facility-based **couples’ healthy relationship retreat** available to couples only (men in the PLUS unit who were in committed relationships and their partners). The couples’ healthy relationship retreats used the Within Our Reach curriculum (PREP Educational Products, Inc., 2008). The intervention was held as weekend retreats, with lodging provided to the partners, who were also provided transportation to a hotel near the facility. Each retreat began with a Friday night dinner banquet for the partners at the hotel, hosted by the IDOC. On Saturday and Sunday mornings, partners were transported to the facility in a charter bus. Each retreat was facilitated by several IDOC staff (primarily from the Division of Religious Services and also including chaplains and other PLUS administrators from the facility) and community volunteers, including former prisoners. During the classroom-based retreat, each couple sat together at a table decorated by other PLUS residents. Activities consisted of lectures, workbooks, video clips, and interactive activities. Couples shared meals (with food of a higher quality than typical prison fare) and were allowed to briefly hug or kiss during the retreats.

### Prevention and Relationship Enhancement Program (PREP)

PREP’s Within My Reach and Within Our Reach curricula are specifically targeted to low-income families.

- **Within Our Reach** is a program designed to help couples achieve their goals in relationships, family, and marriage. The curriculum is designed to build on the existing strengths of the couple and add critical life and relationship skills to help participants create safer, more stable couple relationships—and, by extension, better environments for their children. Unit titles include “We’ve Got Issues”; “By My Side: Supporting Each Other”; “You, Me, and Us”; and “Connecting with Community.”
- **Within My Reach** is a program designed for individuals that covers three major themes—Building Relationships, Maintaining Relationships, and Making Relationship Decisions. Unit titles include “Healthy Relationships: What They Are and What They Aren’t,” “Knowing Yourself First,” “Dangerous Patterns in Relationships,” “Commitment: Why It Matters to Adults and Children,” and “Reaching into Your Future.”

The IDOC program did not include a post-release service component or any individualized services. In addition to purchasing the curricula and workbooks and paying for the partners’ transportation, food, and lodging, grant funds were used to train IDOC staff and volunteers on the PREP curriculum.

To evaluate the full set of OFA-funded services in Indiana would have required identifying comparison men from outside the PLUS units because all men in the PLUS units had access to the parenting and relationship education classes (and, if they were in committed relationships, the couples’ healthy relationship retreat). Due to concerns about the selection bias that would have resulted from this approach, as well as the intention of the impact evaluation to focus on the impact of programming on *couples*, **the impact evaluation focused specifically on evaluating the impact of the couples’ healthy relationship retreat component**. Therefore, in Indiana, the impact of the couples’ healthy relationship retreat—not the entire OFA-funded program—was determined using a matched comparison design.

Men and their partners who participated in the retreats during the MFS-IP impact study baseline enrollment period were included in the treatment group. The retreats were typically offered twice a year at each facility and the facility's PLUS coordinator was responsible for enrolling couples in the retreats; this process typically entailed announcing the upcoming retreat within the PLUS unit, determining which men were interested,<sup>6</sup> and following up with the partners to confirm availability. Contact information was provided to the evaluation team in advance of each retreat and all baseline interviews for treatment couples were conducted prior to the retreat.

To select the comparison group, screening forms were administered by the evaluation team to men residing in the PLUS units approximately twice a year. Those who reported being in committed intimate relationships and indicated that they and their partner would like to participate in the couples' healthy relationship retreat, but who had not already done it, were selected for the comparison group (along with their partners). Some administrative corrections data (e.g., release date, demographic characteristics) were used to improve the selection of comparison men, and priority was given to men projected to get released before the next scheduled retreat. If a comparison couple ended up participating in the retreats over the course of the study, they were reclassified as treatment group couples. See **Appendix A** for additional details about the Indiana study design.

Based on the study design implemented in Indiana, both the treatment and comparison group men in this site resided in special, character-/faith-based units and received men's relationship education classes and parenting classes at some point during their incarceration, with the only difference between the two groups being that the treatment group also received the couples' healthy relationship retreats with their partners.<sup>7</sup>

### *The RIDGE Project (Ohio)*

In Ohio, the focus of the impact evaluation was the first relationship education course in a series of four courses. Partners were invited but not required to participate, so the course was attended by men and couples.

The RIDGE Project's program targeted fathers in verified committed relationships who were incarcerated in one of the numerous Ohio Department of Rehabilitation and Corrections (ODRC) facilities served by the program. Program staff verified relationship status with the partner; however, female partners were not required to participate for male partners to be eligible. Men who were sex offenders or the subject of protective orders were excluded.

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<sup>6</sup> Selection generally took place on a first-come, first-serve basis. However, if a substantial amount of time had passed since the last retreat was held in a given facility and the PLUS coordinator perceived that demand for the retreat exceed the number of available slots, men who either had upcoming release dates (and therefore would not get another opportunity to participate) or who had completed the classroom PREP component were prioritized.

<sup>7</sup> The order in which men could have received the program components could have varied, as neither of the classes was a prerequisite to the other (or to the couples' retreats).

The primary program components constituted a series of four courses:

- Two sequential, facility-based **relationship education courses** delivered to men who enrolled in the program and made available to their partners during the man’s incarceration. Each course consisted of 12 weekly sessions delivered in a classroom in the facility. The curricula used were Couple Communication I and II (Interpersonal Communication Programs [ICP], Inc., 2011 and 2010, respectively). These commercially available modules focused on helping couples learn relationship skills, such as effective communication and conflict resolution. Because partners were not required to participate, the classes consisted of men without partners present as well as couples.
- Two sequential, facility-based **fatherhood courses** delivered to men (typically after they had completed the Couple Communication I and II classes). Each course included 24 weekly sessions. For the courses, the RIDGE Project founders developed an original, in-house parenting curriculum called Keeping FAITH. This curriculum focuses on teaching men how to father from inside prison. Special topics include giving advice to children without being controlling and coping with children who have difficulty communicating.

The courses were taught by the RIDGE Project’s founders and trained staff and volunteers, many of whom had previously been incarcerated. In addition to the courses, the program offered visitation support to its participants as a way of rewarding attendance at the classes and encouraging family communication and contact. The program reimbursed partners who participated in Couples Communication classes for transportation and food expenses associated with prison visitation, up to a maximum of \$50 per partner.

Although RIDGE’s OFA-funded program did not include a formal case management component or post-release services, program participants could take the initiative to access a number of services offered by the organization after the male partner’s release.

The **impact evaluation design in Ohio focused on evaluating the impact of the first relationship education course (Couples Communication I)**. This was the most feasible approach given the sequential (and optional) nature of the courses. The study design employed was a wait-list design, which was a rigorous approach that was possible in Ohio due to the large number of men who were interested in the program across a range of ODRC facilities that could not all be accommodated during the baseline enrollment period.

The treatment group consisted of men who enrolled in Couples Communication I (CC1) during the baseline enrollment period for the MFS-IP impact evaluation, and their partners—who were also offered the course but did not have to attend.<sup>8</sup> The program enrollment process consisted of RIDGE staff periodically holding recruitment presentations at ODRC facilities in which CC1 was scheduled to be rolled out soon. Men who attended the presentations and were

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<sup>8</sup> Therefore, some of the “treatment” women in Ohio did not actually receive any intervention. On the other hand, some couples (or individual men) may have not only received Couples Communication I but also gone on to receive Couples Communication II. In addition, some men may have later received the fatherhood course(s). Therefore, the Ohio treatment group had variable levels of program intensity.

interested in the program completed an application, which was reviewed by program staff. Program staff contacted the partner to confirm the relationship and invite partners to participate in the upcoming CC1 course. After this step, the couple was considered to be enrolled in the program and contact information was provided to the evaluation team. Because the CC1 class rosters were often not finalized until after the first few days of class, for some couples the impact evaluation baseline interviews took place after the first few classes. Therefore, the baseline interview was not always a pre-intervention interview in Ohio.

The comparison group consisted of men (and their partners) who (1) were incarcerated in prisons served by the program, attended a RIDGE recruitment presentation at their facility, completed an application for the program, and were screened as eligible by program staff (which entailed contacting the partner to confirm the relationship) but (2) never started the CC1 course because they were transferred, released, or remained on the wait list before a new class was rolled out at their facility during their study participation period. This design was considered a wait list design because the men were recruited, screened as eligible, and put on a list to be enrolled in the program, yet did not receive it because it was not actually rolled out at their facility during their study participation period.

Based on the study design implemented in Ohio, the comparison couples only had access to whatever services were available through “treatment as usual” at the male partner’s facility. The treatment couples were enrolled in CC1 (although the partners may not have attended any classes and either member of the couple may have dropped out of the course at any point after enrollment). Upon completion of CC1, the treatment couples also had had access to CC2. In addition, the female partners had access to visitation support and the male partners had access to the two fatherhood courses (typically offered upon completion of CC1 and CC2). Both members of the couple had access to referrals offered by RIDGE, after the male partner’s release.

### *New Jersey Department of Corrections (NJ DOC)*

In New Jersey, the impact evaluation examined the effectiveness of the overall program that was delivered, which was a holistic set of services including individualized supports and structured programming.

The New Jersey Department of Corrections’ OFA-funded program targeted “max-out offenders” (those who serve their entire sentence with no post-release supervision) with chemical dependency who were fathers, in committed or coparenting relationships, and within six to nine months of release at one of the four prisons in which the program was delivered. This target population, particularly the emphasis on the “max-out” population, was selected due to the dearth of services normally available to them. Partner participation, either in-person or long distance, was required for the men to be eligible.

The NJ DOC program included a combination of individualized supports and structured programming spanning six to nine months pre-release and six months post-release, including:

- **Case management** provided to both members of the couple pre- and post-release. Prior to release, the grant-funded case managers supported partners in navigating the hurdles that might otherwise prevent them from bringing children for visits with their fathers. Case managers worked individually with each family, contacting them to help make arrangements for visitation and to assist them in obtaining and submitting the documentation required by facilities in order to bring a child for visitation. During the incarceration, case managers met individually and jointly with both couple members to develop a joint reentry plan and a substance abuse recovery plan for the male partner. As part of these plans, case managers connected couples with counseling, employment assistance, support groups, and/or public assistance programs in their home communities. After release, case managers followed up with both members of the couple for a minimum of six months to support them in implementing the reentry plan—including providing a warm handoff to facilitate access to other needed services and discussing strategies to address new needs or issues that arose during the reentry period.
- A facility-based **relationship education course** delivered to both members of the couple in the facility prior to the man’s release. The curriculum used for the relationship education course was Married and Loving It! (MALI Inc., 2011). The course was delivered over five weeks and covered such topics as communication styles and skills, managing anger and conflict, managing finances, understanding outside influences on couple relationships, and the benefits of marriage. It was typically facilitated by case management staff with training in group facilitation or clinical group work, and combined presentations by facilitators, workbook exercises for participants to fill in during presentations, and frequent participatory discussion of course topics.
- A facility-based **domestic violence education workshop** delivered to both members of the couple in between completion of the marriage education course and initiation of the parenting course. The two-hour, single-session workshop used the Understanding Domestic Violence curriculum, developed by the National Fatherhood Initiative to discuss the definition of domestic violence, men’s roles in domestic violence as both fathers and partners, and nonviolent conflict resolution.
- A facility-based **parenting class** delivered to both members of the couple prior to the man’s release. The parenting curriculum was adapted from Active Parenting Now, which is an evidence-based<sup>9</sup> curriculum based on the psychological theories of Alfred Adler. The course was delivered over four weeks and emphasized the importance of encouragement and authoritative (as opposed to autocratic or permissive) parenting. Aimed at helping parents

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<sup>9</sup> A nonexperimental study compared students and parents who voluntarily participated in the program with a comparison group of non-participating students and parents. The results found that participants in the program reported higher family cohesion, less family conflict, and higher self-esteem relative to the comparison group, based on paper surveys completed in-school by students and at home by parents (Abbey, Pilgrim, Hendrickson, & Buresh, 2000). The curriculum was accorded “evidence-based” status by the Substance Abuse and Mental Health Services Administration (SAMHSA).

to cultivate children's self-esteem, cooperation, and responsibility, the curriculum covered such topics as recognizing the goals of behavior, natural and logical consequences, family meetings, power struggles and problem-solving skills, encouragement, and stimulating independence. Coparents were allowed to bring their children with them to the facility-based parenting classes, with children's books and coloring supplies provided. The parenting class was facilitated by the same program staff who led the marriage education course sessions.

- A facility-based **substance abuse treatment program** delivered to men prior to their release. The course, delivered over 12 weeks, used the Living in Balance curriculum and focused on addressing substance abuse issues and preventing relapse. It was facilitated by the same program staff who facilitated the other courses.
- A facility-based **financial planning** class delivered to both members of the couple after the parenting class and prior to the male partner's release. Facilitators drew on the Federal Deposit Insurance Corporation's Money Smart curriculum, which includes ten two-hour workshops. Case managers facilitated three of the ten sessions, based on guidance from each cohort of participants regarding which financial topics were most relevant and interesting to them.

NJ DOC implemented a distance learning format in year four of the grant to accommodate women who were interested in participating in the relationship and parenting classes but unable to attend sessions with their partners at the prisons. With this format, partners were mailed a copy of the course materials and were expected to complete the homework exercises and mail them back.<sup>10</sup>

In New Jersey, the impact of participation in the demonstration program was evaluated using a matched comparison group design. Men (and their partners) who enrolled in the program during the baseline enrollment period for the impact study were included in the treatment group. The program enrollment process included the following steps. NJ DOC staff used the agency's administrative data system to identify men who met initial eligibility criteria. These men were invited to an orientation meeting where they learned more about the program and were invited to participate if they were interested and met additional eligibility criteria not captured in the administrative data system (being in a committed partnership and being a father). Partners of interested men were contacted to confirm eligibility and the partner's willingness to participate. Once enrolled, contact information for the couple was provided to the evaluation team. As with the Ohio program, because program enrollment did not take place very far in advance of the first course in the series, the impact evaluation baseline interviews for treatment couples often took place after the couples had already participated in one or more classes. Therefore, as with Ohio, the baseline interview was not always a pre-intervention interview in New Jersey.

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<sup>10</sup> The evaluation did not obtain data on service intensity or format (e.g., the number of partners who participated through distance learning or the number of in-person hours completed).

The comparison group was selected in two stages. In the first stage, men who (1) were incarcerated in one of two comparison prisons of comparable size and security level as the facilities in which demonstration programming was delivered, (2) met the release date and “max out” eligibility criteria using NJ DOC data, and (3) were identified as having a substance abuse problem were administered a screening form. In the second stage, those who reported that they were fathers and in committed relationships, and that they and their partners would be interested in participating in a relationship strengthening program if it were available at their facility, were selected for the comparison group (along with their partners).

Based on the study design implemented in New Jersey, the comparison couples only had access to whatever services were available through “treatment as usual” at the male partner’s facility whereas the treatment group (including both men and women) was enrolled in a program that included group instruction and individualized supports both prior to and after the male partner’s release.

### *The Osborne Association (New York)*

In New York, the focus of the impact evaluation was a couples-based healthy relationship seminar delivered to men and their intimate partners after the male partner had participated in a men’s relationship education course (and, often, other programming).

The Osborne Association’s OFA-funded program targeted fathers (and future fathers) in committed relationships who were incarcerated in one of the five New York State Department of Corrections and Community Supervision (NYS DOCCS) facilities served by Osborne. For the couples’ healthy relationship seminar (described below), the female partner had to attend in order for the male partner to be eligible.

Program components included:

- **Child-friendly visitation.** The Osborne Association worked with correctional facility administrators to establish Children’s Centers at several New York State prisons. At these specially equipped centers, parents and children could participate together in skills-building sessions. The 15- to 30-minute semi-structured sessions offered by Osborne allowed fathers to practice the parenting skills they learned in the parenting course (described below), interact directly with their children, and receive feedback and parenting support from experienced fathers. Activities included providing family meals, marking holidays and birthdays with special activities, conducting joint skills-building activities with fathers and children, and devoting parts of visitation time to group conversations or games. Graduates of the parenting classes were hired to staff the child-friendly visitation areas. These men served as informal mentors, available to answer questions from other fathers or visiting children and to encourage positive parent-child interaction.
- A facility-based **parenting class** provided to men. The 16-week Basic Parenting curriculum was developed by Osborne in collaboration with incarcerated fathers and academic experts in incarceration and parenting. The curriculum is designed to support men in parenting

effectively from prison, regardless of the length of their incarceration. Peer educators assisted in delivering the parenting curriculum. These educators, typically incarcerated fathers who had graduated from a prior course and been trained as peer leaders, served as role models and helped participants apply the course content to their own lives.

- A facility-based **relationship education course** provided to men, typically after they had completed the parenting class and/or a cognitive behavioral training class using the Breaking Barriers curriculum. This five-week, 10-hour course used principles from the book, *Fighting for Your Marriage* (Markman, Stanley & Blumberg, 2001), and incorporated skills-focused elements of the PREP course with insight-oriented aspects of the PAIRS curriculum. The course was adapted with input from incarcerated men.
- A facility-based **healthy relationship seminar** provided to couples. Seminar participants were recruited by program staff from among men who had completed the men-only relationship education course and parenting class, via an informational session about the seminar typically conducted during the men-only relationship education class. Men who indicated that they had a committed partner and were interested in participating were asked to provide contact information for their partners (who were contacted by program staff with an invitation to participate in the couples-based weekend seminar) and to contact their partners themselves to encourage them to participate. The healthy relationship seminar, taught during a one-day period, represented a condensed version of the same content delivered to men during the relationship education course.
- Facility-based **relationship counseling** offered to both members of participating couples by program case managers with clinical qualifications. Counseling sessions were available on an as-needed basis at the prison facilities where male participants were incarcerated, with transportation support provided to female partners who wished to participate in counseling.

Although Osborne's demonstration program did not include a formal case management component or post-release services, program case managers often helped participants access a number of services offered by other programs within the Osborne Association after the male partner's release.

As with the demonstration program in Indiana, **the impact evaluation focused specifically on evaluating the impact of the couples' healthy relationship seminar**, which was typically delivered after the male partner had participated in a men's relationship education course (and, often, other programming). This approach was taken because of the desire to focus on couples-based programming and because it was not possible to predict in advance which men would end up receiving the seminar with their partners. A matched comparison group design was employed to evaluate the couples' healthy relationship seminar.

The treatment group consisted of men (and their partners) who participated in the seminar during the baseline enrollment period for the impact study. Recruitment for the seminars was typically done toward the end of the men's relationship education course; men who were in

intimate relationships were asked if they were interested in participating in the seminars with their partners, and partners were contacted by program staff to confirm availability. Contact information was provided to the evaluation team in advance of each seminar and all baseline interviews for treatment couples were conducted prior to the seminar.

The comparison group was selected in two stages. In the first stage, men who were (1) incarcerated in one of six comparison prisons of comparable size and security level as the facilities in which OFA-funded programming was delivered and (2) were participating in a parenting class (one that was not delivered by the Osborne Association) were administered a screening form. In the second stage, those who reported that they were fathers and in committed relationships, and that they and their partners would be interested in participating in a relationship strengthening program if it were available at their facility, were selected for the comparison group (along with their partners).

Based on the study design implemented in New York, the comparison men participated in a parenting class and had access to whatever other services were available through “treatment as usual” at the male partner’s facility. In contrast, the treatment men had access to child-friendly visitation and typically received parenting, cognitive behavioral, and relationship classes, in addition to the one-day couples’ healthy relationship seminar in which they participated with their partners. Treatment couples also had the opportunity to participate in relationship counseling offered by Osborne.

## Summary and Limitations of the Impact Study Designs

The impact sites varied in terms of the population targeted for services, the service delivery approach, and the program component(s) that was evaluated. All four impact sites served men—most of whom were fathers<sup>11</sup>—incarcerated in a state prison. Two of the sites, Indiana and New Jersey, focused on special populations. Couples-based relationship education, the focus of the impact evaluation, was provided in all sites but in New Jersey a more comprehensive program was the focus because the relationship education component could not be evaluated separately. Delivery of the couples-based relationship education component varied across sites in course format and dosage, the curriculum used, and partner participation. The sites also varied in the number of couples served in the couples-based healthy relationship component.

The impact evaluation was designed to accommodate and maximize what could be learned from the variability across sites using a single set of outcomes that could potentially be affected by the sites’ couples-based programming. Key features of the site-specific impact study designs employed in each site (described in this chapter and **Appendix A**), are summarized in

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<sup>11</sup> The New York program was available to future fathers. In addition, the Indiana program addressed the fatherhood requirement by delivering its parenting class to all men residing in the PLUS units rather than limiting the classes to fathers.

**Exhibit 2-3.** Substantial variation in the designs across sites was necessary to accommodate site diversity.

The comparison group selection procedures were designed to achieve comparability between the treatment and comparison groups. We also reduced bias by classifying all couples who enrolled in the program component(s) being evaluated in Ohio and New Jersey as treatment group members, regardless of whether they completed the component(s). Generally, this strategy provides a better measure of potential program effectiveness than classifying only those who complete the program as treatment group members. This source of bias was less of an issue in Indiana and New York, because the intervention was delivered over a 1-2 day period, such that all individuals enrolled in the treatment received the entire treatment. Overall, some degree of selection bias was undoubtedly introduced by our study design, as it is unlikely that the comparison couples were as highly committed to strengthening their relationships as the treatment couples, who voluntarily participated in a couples-based relationship education program. To minimize any remaining selection bias, propensity score modeling was used to achieve better comparability between the treatment and comparison groups (described in **Chapter 3**). In addition, the analytic techniques implemented to assess the impact of the couples-based intervention take into consideration baseline measurement, which allows us to understand the “starting point” for the treatment and comparison couples in our sample and compare trajectories going forward.

Counterbalancing the possible influence of selection bias on the impact findings are several other design features that may have the opposite effect. The following additional factors should be considered when interpreting the impact results reported in **Chapters 5-7**:

- **Treatment Intensity.** The treatment women in Ohio did not necessarily receive any programming and the treatment women in Indiana and New York only received a one- to two-day seminar/retreat. In all three of these sites, the men likely received a much larger dose of programming than the women. In New Jersey, both members of the couple should have received fairly intensive programming that included case management as well as the classroom-based instruction predominant in the other sites; however, all couples who enrolled in the New Jersey program were assigned to the treatment group and, therefore, may not have received the full range of services. **Chapter 4** and **Appendix B** present the actual service receipt reported by treatment (and comparison) group members.
- **Baseline as a Pre-Intervention Measure.** Because the evaluation was designed to determine the impact of the couples’ healthy relationship seminars/retreats in Indiana and New York, it was critical in these two sites that the baseline interview be conducted before this component.<sup>12</sup> In Ohio and New Jersey, however, the baseline interview often took place after the treatment couples had received some programming and, as noted, is therefore not a pure pre-intervention baseline.

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<sup>12</sup> Although men in these two sites could have received other family strengthening programming before the baseline interview, this would not be a confounding influence because it was equally likely for treatment and comparison men.

- Statistical Power.** The sample sizes in New Jersey and New York are much smaller than in the other two sites (shown in **Chapter 3**), largely due to lower-than-expected program enrollment. Also, the designs generally did not yield an even distribution of treatment and comparison cases, particularly in Ohio (where far fewer comparison couples than treatment couples were enrolled) and Indiana (where more treatment couples than comparison couples were enrolled). Small sample sizes and uneven distribution of treatment and comparison couples increase the difficulty of detecting treatment effects and limit subgroup analyses.

**Exhibit 2-3. Summary of Site-Specific Designs**

Grantee	Design Summary	Treatment Group Eligibility and Services	Comparison Group Eligibility and Services
Indiana Department of Correction (IN DOC)	Matched comparison group design to evaluate impact of couples' healthy relationship retreats	<u>Eligibility (Men)</u> <ul style="list-style-type: none"> <li>Resided in a character /faith-based living unit in one of 10 IDOC facilities</li> <li>In committed relationships (as verified by partner attendance at retreat)</li> </ul> <u>Services Received</u> <ul style="list-style-type: none"> <li>Men and partners received a two day couples' healthy relationship retreat</li> <li>Men also received parenting and relationship education classes delivered through PLUS</li> </ul>	<u>Eligibility (Men)</u> <ul style="list-style-type: none"> <li>Resided in the same character/faith-based living units in the same IDOC facilities as the treatment men</li> <li>Self-reported (in a screening form) being in a committed relationship and interested in doing couples' retreat with partner</li> </ul> <u>Services Received</u> <ul style="list-style-type: none"> <li>Men received parenting and relationship education classes delivered through PLUS</li> </ul>

Grantee	Design Summary	Treatment Group Eligibility and Services	Comparison Group Eligibility and Services
RIDGE Project (OH RIDGE)	Wait-list design to evaluate impact of first relationship education class (Couples Communication 1)	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of several ODRC facilities in which CC1 was rolled out during evaluation enrollment period</li> <li>• Submitted application to participate in program</li> <li>• Confirmed by program staff to be eligible (fathers in verified committed relationships)</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• Men were enrolled in CC1. Partners were invited to participate but did not have to attend.</li> <li>• Men also had access to two fatherhood courses offered subsequently. Men and partners also had access to a CC2 upon completion of CC1, as well as visitation/in-prison contact assistance and referrals</li> </ul>	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of the ODRC facilities in which CC1 was not rolled out during evaluation enrollment period</li> <li>• Submitted application to participate in program</li> <li>• Confirmed by program staff to be eligible (fathers in verified committed relationships)</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• No OFA-funded programming (only standard ODRC services)</li> </ul>
New Jersey Department of Corrections (NJ DOC)	Matched comparison group design to evaluate impact of overall OFA-funded program	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of the 4 NJ DOC facilities served by the program</li> <li>• Met sentencing eligibility criteria (max out offenders with six to nine months left to serve)</li> <li>• Were verified by program staff to be fathers, have chemical dependency issues, and be in committed intimate or coparenting relationships</li> <li>• Partners agreed to participate</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• Men and partners were enrolled in the program, which included relationship education classes (couples, men), domestic violence workshops (couples), parenting classes (couples), visitation and in-prison contact assistance, case management (couples), financial skills education (couples), and substance abuse treatment (men)</li> </ul>	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of 2 comparable NJ DOC facilities not served by the program</li> <li>• Met sentencing eligibility criteria (max out offenders with six to nine months left to serve) and were flagged as having chemical dependency issues</li> <li>• Self-reported (in a screening form) being fathers, in committed relationships, and interested in participating in a relationship strengthening program with partners</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• No OFA-funded programming (only standard NJ DOC services)</li> </ul>

Grantee	Design Summary	Treatment Group Eligibility and Services	Comparison Group Eligibility and Services
Osborne Association	Matched comparison group design to evaluate impact of couples' healthy relationship seminars	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of the 5 NYS DOCCS facilities served by the program</li> <li>• Fathers or men serving in parental roles</li> <li>• In committed relationships (as verified by partner attendance at seminar)</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• Men and partners received a one day couples' healthy relationship seminar</li> <li>• Most men had already taken parenting classes, relationship education classes, and/or cognitive behavioral training. Men also had access to child-friendly visitation. Men and partners also had access to family counseling and referrals.</li> </ul>	<p><u>Eligibility (Men)</u></p> <ul style="list-style-type: none"> <li>• Incarcerated in one of 6 comparable NYS DOCCS facilities not served by the program</li> <li>• Self-reported (in a screening form) being fathers, in committed relationships, and interested in participating in a relationship strengthening program with partners</li> </ul> <p><u>Services Received</u></p> <ul style="list-style-type: none"> <li>• Men received a parenting class offered by their facility</li> </ul>

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# Chapter 3. Data Collection and Analytic Approach

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This chapter summarizes the impact data collection methodology and analytic approach. **Appendix A** contains additional methodological details.

## Data Collection Approach

The study designs described in **Chapter 2** were implemented in each site from December 2008 through August 2011—the baseline enrollment period for the impact study. All data collection procedures were reviewed and approved by RTI’s Institutional Review Board. In addition, research approval was obtained from the departments of corrections in the four states. The study was also certified by the Office for Human Research Protections.<sup>13</sup>

### *Interview Procedures*

Couples were first interviewed during the male partner’s incarceration (baseline interviews took place at the time of enrollment in OFA-funded demonstration programming for treatment group couples and at the point of identification for the study for comparison group couples) and then interviewed again nine and 18 months later. In the two largest sites (Indiana and Ohio), an additional 34-month follow-up interview was conducted to assess longer-term impacts. The entire field effort took place from December 2008 through April 2014.

Incarcerated men who self-identified as being married, in a committed intimate relationship, or in a coparenting relationship were consented and interviewed first.<sup>14</sup> (Additional site-specific selection criteria, as discussed in **Chapter 2**, were applied prior to recruiting men for the interviews.) During the baseline interview, each man was asked to identify and provide contact information for his intimate or coparenting partner.<sup>15</sup> As part of the baseline male interview,

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<sup>13</sup> The Office for Human Research Protections is located in the U.S. Department of Health and Human Services. It has responsibility for assuring that HHS-funded research is conducted in an ethical manner and will not harm the participants. Prisoners are considered a vulnerable class of research participants and have protections that require specific approval by OHRP of any research protocol.

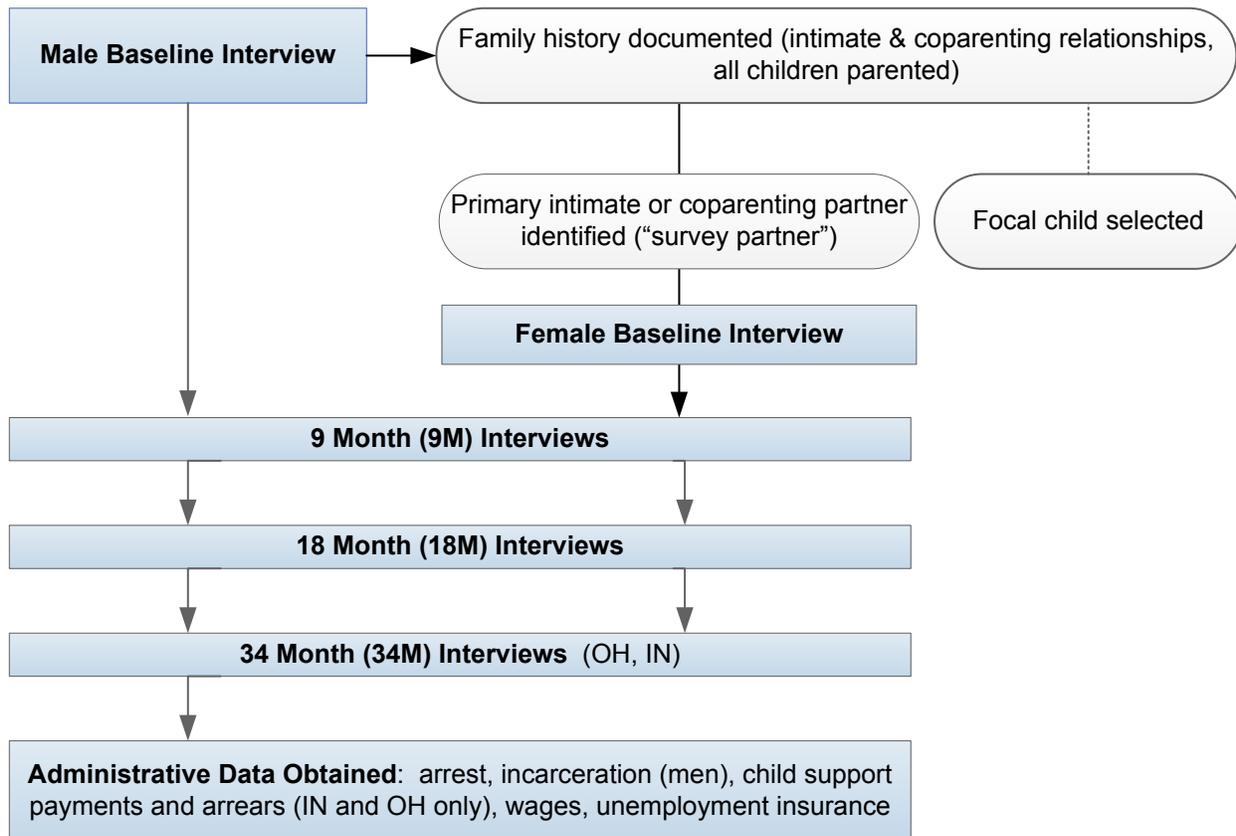
<sup>14</sup> In addition to being incarcerated and in a self-reported intimate or coparenting relationship, in order to be eligible, men also had to be 18 or older, speak English, be physically and mentally capable of participating in an interview, and agree to provide contact information for their partners. Couples in which a restraining order was in place were considered ineligible, as were couples for which the woman denied that an intimate or coparenting relationship existed when contacted for her baseline interview.

<sup>15</sup> For men in the treatment group, this partner may not necessarily have been the same partner who actually participated in the intervention; timing and record-keeping limitations prevented the evaluation team from getting accurate contact information from program staff for the official partner of record. However, treatment men were asked in the baseline interview if the survey partner was the same woman with whom he was participating in relationship education classes. Nearly all men in the treatment group (98%) indicated that their survey partner was the same person with whom they would be receiving relationship education.

interviewers also identified a “focal child” about whom additional questions would be asked. From all of a man’s children one child was selected, with priority given to children who were parented by both members of the study couple and who were closest in age to eight years old, to allow for meaningful measurement of changes in child well-being over time (via parent reports). The children were not interviewed for this study.

After a man’s baseline interview was completed, we then contacted his partner and interviewed those who consented to participate in the study.<sup>16</sup> Follow up interviews were attempted with both members of the study couple, regardless of whether the female partner was successfully interviewed at baseline and/or whether the couple remained in a relationship over time. In all sites, follow-up interviews were fielded nine and 18 months post-baseline. In Indiana and Ohio, a 34-month follow-up interview was also fielded. The data collection approach is illustrated in **Exhibit 3-1**.

**Exhibit 3-1. Overview of Data Collection Approach**



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<sup>16</sup> Women who were under the age of 18, did not speak English, or were not physically or mentally capable of participating in the interview were ineligible for the study. In addition, if a woman reported that a restraining order was in place or denied that she was in an intimate or coparenting relationship with the man, both she and the male partner were considered ineligible.

The interviews were conducted in person by RTI field interviewers who were extensively trained on confidentiality procedures and human subjects' protection issues for vulnerable populations. The interviewers obtained clearance from the local correctional facilities in which interviews were conducted. To maintain confidentiality, protocols were put in place to ensure the same interviewer did not interview both members of a given couple. Informed consent for the interview was obtained from respondents prior to each interview. In addition, an informed consent form for the release of administrative data was administered to each respondent.

The interviews were conducted using computer assisted personal interviewing.<sup>17</sup> For particularly sensitive topics (such as partner violence, relationship quality, criminal behavior, and substance abuse), audio–computer assisted self-interviewing was used. This technique reduces social desirability bias (i.e., the tendency to give an answer that will be approved of) by providing greater confidentiality to respondents. All interviews were conducted in private locations. For the female partner, the respondent's home was a frequent location. Incarcerated individuals were interviewed in private rooms in the correctional facility, with correctional staff out of earshot. As noted previously, all men did their baseline interview in a state prison. The male follow-up interview was conducted wherever the male sample member was at the time, which could have been in a correctional facility (as was the case for men who either did not get released from the baseline incarceration during the follow-up period or got released but were reincarcerated at the time of their follow-up interview) or in the community. (Men's incarceration trajectories are discussed in **Chapter 4**.)

#### The MFS-IP Qualitative Substudy

The interview procedures for the qualitative substudy were similar to those used in the impact study. Qualitative interviews were conducted with 170 impact study participants from Indiana, Ohio, and New York. The qualitative study included both longitudinal and cross-sectional cohorts, with the couples in the longitudinal cohort interviewed once shortly before the male partner's release and once shortly after his release and the couples in the cross-sectional cohort interviewed only once (after release). The interviews took place in private settings by trained qualitative interviewers. Each member of the couple was interviewed individually. The interviews lasted approximately 1.5 hours and covered the following topics: family structure, household structure and living arrangements, family contact, reflections on incarceration and family, reflections on reentry and family, family roles and relationships, parenting specifics, employment and money, and sources of support.

The interviews lasted about two hours. Incentives were provided for all community-based interviews, which included nearly all female interviews at each wave and follow-up interviews for men who had gotten released. The incentive structure increased over time,<sup>18</sup> ending up at \$75 per interview.

<sup>17</sup> The only exception was that a paper version of the instrument was used in all interviews conducted in New York State Department of Corrections facilities, which prohibited the use of laptops.

<sup>18</sup> Originally, we paid \$35 to non-incarcerated female respondents and \$40 to non-incarcerated male respondents, who had not received an incentive at baseline. We then increased the incentive to \$40 for both groups. However, after struggling to increase 18-month response rates in a few sites, we ultimately increased the incentive to \$75. Respondents also received a \$25 bonus if they completed three interviews and a \$5 bonus if they called in after receiving their lead letter.

### *Interview Content and Instrumentation*

At each wave, the interview instruments included questions on background characteristics (e.g., demographics, attitudes, motivation, criminal history, relationship history), service provision (types of services received, delivery format, number and duration of sessions), relationship quality and stability, parenting and child well-being, employment and economic stability, and criminal behavior and substance use. The content of the instruments used at each wave, and for men and women, was virtually identical, with skip and fill patterns based on the male partner's incarceration status built into the instrument. The few additional sources of variation in the instrument occurred over time:

- Couples in which the male partner had not been released from his baseline incarceration continued to be asked about the extent of in-prison contact and were skipped out of questions that were dependent on community exposure (e.g., coresidence, partner violence).
- Couples in which the male partner got released from his baseline incarceration were asked detailed questions about the first 24 hours after release and additional questions dependent on having community exposure (e.g., coresidence, partner violence). The first post-release interview for these couples asked about experiences since the male partner's release; subsequent interview(s) asked about experiences since the previous interview.

A detailed list of interview topics by wave and gender is included in **Appendix A**. Specific outcome variables are described in detail later in this chapter.

Individual interview questions and scales were adapted from related previous healthy marriage/responsible fatherhood studies (including the SHM, BSF, and CHMI evaluations) as well as prisoner reentry research (including the Multi-Site Evaluation of the Serious and Violent Offender Reentry Initiative and the Returning Home study). External experts provided feedback during the instrumentation process. The draft baseline instruments were pilot tested with jail inmates and their partners in the Raleigh/Durham area. Following the pilot test, the instruments were revised and programmed for computer assisted personal interviewing.

### *Response Rates and Sample Sizes*

The total numbers of interviews completed for the impact study,<sup>19</sup> as well as response rates, are shown by wave in **Exhibit 3-2**. Site-specific details are included in **Appendix A**. Response rates reflect the number of completed interviews divided by the number of eligible cases fielded. Eligibility criteria for the baseline interview were discussed previously. Follow-up interviews were fielded for all eligible men who completed baseline, and their partners—

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<sup>19</sup> The numbers in **Exhibit 3-2** include the Minnesota sample, which includes 83 men and 72 women.

**Exhibit 3-2. Response Rates for Impact Sample, by Wave**

	<b>Baseline</b>	<b>9M</b>	<b>18M</b>	<b>34M</b>
<b>Men</b>				
Treatment Group				
Interviews completed	1,156	877	829	589
Ineligible cases	261	20	46	23
Non-interviews	264	259	281	175
Response rate	81.4%	77.2%	74.7%	77.1%
Comparison Group				
Interviews completed	835	627	608	445
Ineligible cases	296	4	25	13
Non-interviews	182	204	202	129
Response rate	82.1%	75.5%	75.1%	77.5%
Total				
Interviews completed	1,991	1,504	1,437	1,034
Ineligible cases	557	24	71	36
Non-interviews	446	463	483	304
Response rate	81.7%	76.5%	74.8%	77.3%
<b>Women</b>				
Treatment Group				
Interviews completed	894	805	810	603
Ineligible cases	13	95	124	69
Non-interviews	249	256	222	115
Response rate	78.2%	75.9%	78.5%	84.0%
Comparison Group				
Interviews completed	588	543	572	415
Ineligible cases	20	85	101	81
Non-interviews	227	207	162	91
Response rate	72.1%	72.4%	77.9%	82.0%
Total				
Interviews completed	1,482	1,348	1,382	1,018
Ineligible cases	33	180	225	150
Non-interviews	476	463	384	206
Response rate	75.7%	74.4%	78.3%	83.2%

regardless of whether the partner completed baseline.<sup>20</sup> A small number of cases classified as eligible for baseline were reclassified as ineligible for one or more follow-up interviews because they died, became physically or mentally incapable of participating in the follow-up interview, put a restraining order in place with their study partner, or moved outside the study area. Also, a small number of women who were located for the first time at one of the follow-up waves and retrospectively reported that they were not in an intimate or coparenting relationship with the male partner at the time of his baseline interview were classified as ineligible.<sup>21</sup> The specific number of male and female cases that were eligible at baseline but reclassified as ineligible at one or more follow-up interviews for any of these reasons is listed in the exhibit (see “Ineligible cases”).

The non-interviews shown are eligible cases that were not successfully interviewed—typically because the respondent could not be located, but also including refusals and interviewer difficulty accessing respondents in a treatment or (new) correctional facility.

The analytic sample sizes for the four impact sites are shown in **Exhibit 3-3**. These analytic samples exclude a small number of men (n=24) and women (n=16) from the New York sample who were removed from the impact analyses during the propensity modeling process (described later in this chapter) to achieve better balance between treatment and comparison groups. The numbers are broken down by interview wave, gender, and treatment/comparison group status. Demographic information and other characteristics of the impact analysis sample in each site are presented in **Chapter 4**.

**Exhibit 3-3. Sample Sizes for Impact Analyses (by Wave, Gender, and Group) by Site**

	IN	OH	NJ	NY	Total
<b>Baseline</b>					
# Men who did baseline	686	688	309	201	1,884
Treatment group	281	506	183	138	1108
Comparison group	405	182	126	63	776
# Women who did baseline	577	527	180	115	1,399
Treatment group	264	394	113	78	849
Comparison group	313	133	67	37	550
# Couples <sup>a</sup> (both did baseline)	577	527	180	115	1,399
Treatment group	264	394	113	78	849
Comparison group	313	133	67	37	550

<sup>20</sup> The only exception to this rule is that some female cases (approximately 110) were not fielded for follow-up (and were classified as ineligible) because we had insufficient evidence to conclude that the women actually existed (i.e., the man was never able to provide updated contact information for the woman and she was never located at a previous wave).

<sup>21</sup> However, the male partner was retained in the study because of the substantial resources that had already been expended to conduct his previous interviews.

	IN	OH	NJ	NY	Total
<b>9M</b>					
# Men who did 9M	592	516	175	145	1,428
Treatment group	249	387	108	102	846
Comparison group	343	129	67	43	582
# Women who did 9M	537	470	163	105	1,275
Treatment group	247	348	102	73	770
Comparison group	290	122	61	32	505
# Couples (both did 9M)	486	375	123	83	1,067
Treatment group	225	287	81	57	650
Comparison group	261	88	42	26	417
<b>18M</b>					
# Men who did 18M	564	502	173	135	1,374
Treatment group	242	361	108	98	809
Comparison group	322	141	65	37	565
# Women who did 18M	545	487	180	109	1,321
Treatment group	243	362	108	75	788
Comparison group	302	125	72	34	533
# Couples (both did 18M)	476	385	127	85	1,073
Treatment group	219	281	80	62	642
Comparison group	257	104	47	23	431
<b>34M</b>					
# Men who did 34M	539	495	n/a	n/a	1,034
Treatment group	229	360	n/a	n/a	589
Comparison group	310	135	n/a	n/a	445
# Women who did 34M	530	488	n/a	n/a	1,018
Treatment group	239	364	n/a	n/a	603
Comparison group	291	124	n/a	n/a	415
# Couples (both did 34M)	448	379	n/a	n/a	827
Treatment group	203	280	n/a	n/a	483
Comparison group	245	99	n/a	n/a	344

n/a Not applicable.

<sup>a</sup> No analyses presented in this report were limited to couples in which both partners completed a particular interview wave, because the latent growth curve approach used to analyze change over time among couples accommodates missing data. The couples' numbers are presented in this table for descriptive purposes only.

## Analytic Approach

### *Outcomes*

The outcomes explored in the impact analyses are classified into three domain areas:

- Intimate relationship status and quality;
- Parenting and coparenting; and
- Employment, drug use, and recidivism.

Multiple outcomes in each domain were explored. All outcomes were considered to be important and were directly or indirectly related to the programming being evaluated. However, when drawing conclusions about the effectiveness of a site's couples-based program component, the outcomes are not necessarily of equal importance as some may be more meaningful than others. Outcomes in the intimate relationship status and quality outcomes are most directly related to the program components being evaluated, with outcomes in the other domains less likely to be directly affected by the programming but amenable to change through improvements in other, more directly-affected outcomes (e.g., relationship skills) or based on the "ancillary services" provided by the site (e.g., employment assistance). Therefore, a number of outcomes were explored due to various plausible pathways by which they could have been impacted. Outcomes that are most directly related to the couples-based program components being evaluated in each site or that are of particular interest to policymakers are described in this chapter and highlighted in the results chapters (**Chapters 5-7**), with detailed findings for the full set of outcomes shown in **Appendices C-E**. Adjustments for multiple comparisons are discussed in **Appendices A, C, D, and E**.

Several of the outcomes explored in this study are dependent on the male partner's incarceration status. Some (e.g., partner violence) are only relevant to couples in which the male partner had any community exposure time (i.e., had been released at some point prior to the interview); others (e.g., in-prison contact between the study couple) are only relevant to couples in which the male partner was incarcerated the entire time since the previous interview.

The outcomes presented in this report are based exclusively on self-reported interview data, with one exception: administrative data obtained from the state departments of correction in the four impact states is used to examine reincarceration in a state prison as an outcome. Additional topical reports using other types of administrative data (e.g., child support payments) are available at <http://aspe.hhs.gov/hsp/08/mfs-ip/>.

Each outcome variable was coded such that higher values indicate positive outcomes; for some variables, this meant reverse coding some items in a scale. The same set of outcomes was analyzed for each follow-up wave. Most attitudinal outcomes (e.g., relationship happiness) reflect "current" feelings or attitudes at the time of the 9-, 18-, or 34-month interview.

Behaviorally-specific outcomes generally reflect experiences within the reference period (e.g., partner violence). As mentioned, the reference period varied depending on whether the interview was the first one that took place after the male partner’s release from his baseline incarceration. If so, the reference period for most questions was the time period since his release. If not, the reference period was the time period since the last interview.

### Intimate Relationship Status and Quality Outcomes

The impact of OFA demonstration programming on numerous outcomes within the intimate relationship status and quality domain was examined. Selected outcomes pertaining to the couples’ relationship status and relationship quality are shown in **Exhibit 3-4**. As noted in the table, some outcomes were only measured for couples who had ever been intimately involved (as opposed to coparenting only) during the study period, whereas others were measured for all study couples.

**Exhibit 3-4. Selected Outcomes within Intimate Relationship Status and Quality Domain**

Outcome	Description
Relationship status	Dichotomous indicator reflecting the respondent’s report that the study couple was in an intimate relationship (either married or not married but in an intimate relationship) at the time of the interview (0=no, 1=yes)
Communication skills	Score ranging from 0-12 based on 4 scale items assessing respondent’s report of the frequency (often, sometimes, rarely, or never) with which the couple uses positive communication strategies (e.g., repeating back what the partner says to make sure you understand, stopping and resuming talks when they get out of hand, allowing your partner to finish talking before you respond)
Beliefs about healthy relationships	Score ranging from 0-21 based on 7 scale items assessing respondent’s agreement (strongly agree, agree, disagree, strongly disagree) with statements about healthy relationships. Statements reflected beliefs that relationships can be improved (e.g., “once a couple starts to have problems, it usually is not possible to fix them,” “people can learn to avoid situations where they might be tempted to cheat on their spouse or partner,” “most people can learn to communicate better with their spouse”), work is required to keep a relationship healthy (e.g., “couples should not have to work on their relationships”), different viewpoints should be discussed within a couple (e.g., “when wives and husbands have very different views about important things in the family, it is best to not talk about those things”), and the acceptability of verbal or physical abuse (e.g., “when one spouse says something mean or hurtful, it is OK for the other spouse to say something mean or hurtful back,” “it is sometimes OK for couples to get a little rough physically, like pushing or hitting”).
Conflict resolution skills <sup>a</sup>	Score ranging from 0-12 based on 4 scale items assessing respondent’s reports of the frequency (often, sometimes, rarely, or never) with which the couple manages potentially harmful issues or arguments (e.g., working out differences, keeping a sense of humor when arguing, not letting small issues escalate)
Happiness with relationship <sup>a</sup>	Respondent’s rating of how happy he/she is with his/her relationship with study partner on a scale from 1-10

<sup>a</sup> These outcomes were only measured for respondents whose relationship with the survey partner had ever been classified as intimate (as opposed to coparenting only) by either member of the study couple at a current or previous interview wave.

Other outcomes in this domain include relationship exclusivity, fidelity, dyadic adjustment (a composite measure of relationship quality), bonding, support, and attitudes toward marriage. For couples in which the male partner had any community exposure during the particular follow-up period, several additional outcomes were assessed—including coresidence, emotional support provided to partner, emotional support received from partner, and partner violence victimization and perpetration (including physical abuse, emotional abuse, severe physical or sexual abuse, frequent physical abuse, and frequent emotional abuse). Finally, for couples in which the male partner remained incarcerated during the follow-up period, additional outcomes included contact between the study couple (including any phone calls, frequency of phone calls, any personal visits, and frequency of personal visits). Detail about the measurement of all intimate relationship status and quality outcomes is included in **Appendix C**.

### **Parenting and Coparenting Outcomes**

Within the parenting and coparenting domain, analysis of parenting outcomes was limited to study couples for whom a focal child was selected. Further, analyses of female outcomes and male and female coparenting outcomes were limited to study couples for whom the female partner coparented the focal child in some way. All outcomes reflect the respondents' self-reported quality of relationship with the focal child or the coparenting experiences of the study couple with regard to the focal child.

Selected outcomes in the parenting and coparenting domain are listed in **Exhibit 3-5**. Other outcomes (described in **Appendix D**) include parental warmth and perceptions of the extent to which the coparenting partner fulfills parenting responsibilities. Additional outcomes for couples in which the male partner had any community exposure during the follow-up period include father–focal child coresidence, father's coresidence with any of his children (men only), the father's financial support for the focal child, the frequency of nonresidential father–focal child interaction (men only), the frequency of father's activities with focal child (men only), the frequency of family oriented activities with focal child, and the frequency of enjoying time together as a family. Finally, additional outcomes for couples in which the male partner remained incarcerated during the entire follow-up period pertain to the father's in-prison contact with the focal child—including whether he received any personal visits, phone calls, or mail from the child, and whether he sent mail to the child. No independent measures of child well-being were obtained in the study.

**Exhibit 3-5. Selected Outcomes within Parenting and Coparenting Domain**

Outcome	Description
Parent-child relationship quality	Respondent's rating of his/her current relationship with the focal child (poor, fair, good, excellent)
Self-rating as parent	Respondent's rating of how good a parent he/she is to the focal child (not very good, good, very good, excellent)
Decisions about focal child made jointly <sup>a</sup>	Dichotomous indicator reflecting that the respondent reports that most major decisions about the focal child (such as child care and health care) have been made by the study couple together (as opposed to by either member individually or someone else involved in raising the child) during the reference period

<sup>a</sup> This outcome was only measured for study couples for whom the female partner coparented the focal child in some way.

**Employment, Drug Use, and Recidivism Outcomes**

The final set of outcomes—which pertain to employment, illicit drug use, and criminal recidivism—are shown in **Exhibit 3-6**. None of these outcomes were directly targeted by the couples-based components being evaluated and treatment effects were not anticipated. However, these indicators are of substantial interest to policymakers in the corrections and human services fields. Economic stability was an allowable activity under grant funding, and recidivism and illicit drug use are outcomes relevant to any corrections-based program. In addition, past research has shown that having strong pro-social networks can influence important post-release outcomes such as recidivism and substance use (Visher et al., 2004; Bales & Mears, 2008; Barrick, Lattimore, & Visher, 2014; Cochran, 2014). Therefore, these outcomes were explored due to the plausible pathways by which they could have been impacted (e.g., through changes in intimate relationship quality).

**Exhibit 3-6. Employment, Drug Use, and Recidivism Outcomes**

Outcome	Description
Currently employed	Dichotomous indicator reflecting that the respondent reports that he/she is currently employed
No illicit drug use (excluding marijuana)	Dichotomous indicator reflecting that the respondent reported not using any of the following drugs during the reference period: powder cocaine, crack cocaine, heroin, methamphetamine, other amphetamines, hallucinogens or designer drugs, prescription medications, or methadone
No rearrest ( <i>men only</i> )	Dichotomous indicator reflecting that the respondent reports not being arrested during the reference period
No self-reported reincarceration in jail or prison ( <i>men only</i> )	Dichotomous indicator reflecting that the respondent reports not being incarcerated in a jail or prison during the reference period
No reincarceration in state prison based on administrative state corrections data ( <i>men only</i> )	Dichotomous indicator reflecting whether the respondent was reincarcerated in a state prison within 12 and 24 months of release

Analyses of employment and illicit drug use impacts were limited to couples in which the male partner had any community exposure time during the reference period. Analyses of recidivism outcomes were limited to men only.

### *Addressing Selection Bias*

Given the nonexperimental designs in the four sites, it was necessary to adjust for **selection bias**—the likelihood that a priori differences between treatment and comparison group members may influence outcomes independently from any programming received. We used propensity score modeling to adjust for selection bias, which balances the treatment and comparison groups on all observed, pre-treatment attributes. The approach entails modeling the likelihood that an individual with those characteristics was selected to the intervention.

Specifically, we ran a series of logistic regression models for the male and female subsamples in each site.<sup>22</sup> The outcomes were dichotomous indicators of intervention participation (i.e., treatment group status) as the dependent variable and a series of pre-intervention characteristics (measured in the baseline interview) as the independent variables.<sup>23</sup> Standard propensity modeling approaches include selecting independent variables that might possibly be associated with differential sample membership and the outcomes of interest (in the absence of the program). Because we conducted the propensity models at the site level, small sample sizes prevented us from including a large number of covariates; therefore, we identified a few “core” independent variables to include in each site’s model (e.g., marital status, parental status, duration of incarceration), and included a small number of other, site-specific variables that appeared to be associated with treatment assignment in that particular site. The female propensity models included several variables from the male dataset that reflected each woman’s *partner’s* characteristics. This decision was made because the main factors that influenced a woman’s likelihood of receiving the intervention were actually driven by characteristics of her partner, not herself. As discussed in **Chapter 2**, the man was the primary intervention target in all sites, in that he was recruited first and provided contact information for his partner, who was then invited to participate. In addition, including the partner’s baseline characteristics allowed us to create propensity weights for women who did not complete the baseline interview but who did complete a 9- or 18-month (or even 34-month) interview.

The propensity scores that were generated from these models represent the summary effect that the baseline characteristics had on treatment group membership (e.g., the extent to which they explain why some sample members were statistically more likely than others to receive the intervention as opposed to being in the comparison group). Coefficients from the logistic regression model were then applied to the data to produce estimates of the probability of assignment. Each individual was assigned a propensity score ranging from 0 to 1 that reflects

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<sup>22</sup> Because the target populations and programming approaches were so different across the four sites (see **Chapter 2**), all analyses had to be conducted at the site level, which required that the propensity models also be conducted at the site level.

<sup>23</sup> Even though the baseline interviews in Ohio and New Jersey were not always done prior to the receipt of the couples-based program component that were evaluated in the impact study, only variables that could not have been affected by programming (e.g., demographics, pre-incarceration characteristics) were selected for inclusion in the propensity models.

the predicted probability that the individual falls into the treatment group or the comparison group. These probabilities ( $p$ -hats or  $p^{\wedge}$ ) were then used to create weights which, when applied to the data, provide a means of estimating the unbiased population average treatment effects (PATE). The success of the propensity score model estimation is judged by the effectiveness of the strata or weights to reduce differences between the treatment and comparison groups on observed characteristics (in other words, to achieve acceptable balance between the two groups).

A detailed description of this approach, as well as diagnostics to assess the effectiveness of our models, is presented in **Appendix A**. As discussed in that appendix, the propensity models achieved good balance between treatment and comparison groups on pre-intervention characteristics in all four sites. Even so, two caveats must be noted:

- A few comparison cases had to be dropped in New York in order to achieve acceptable balance. Because of the small sample size in this site, the models had to be very parsimonious, yet the treatment and comparison groups differed significantly on many baseline characteristics. Although acceptable balance was achieved after dropping some comparison cases, this reduced the already low statistical power in this site. Therefore, the findings for New York should be interpreted with extra caution.
- Even though the end result was acceptable balance between the treatment and comparison group members in all four sites, some differences between the two groups could not be accounted for. The models were necessarily limited to *the pre-intervention characteristics included as independent variables in the propensity models*. We could not include baseline measures of relationship quality because these measures did not reflect the couple's pre-intervention status.<sup>24</sup> Therefore, it is likely that the treatment couples were more motivated than the comparison couples to participate in programming, particularly in sites in which the female member of the couple had to participate in treatment, which required a great deal of commitment from women, given that most were working and single-parenting. Therefore, treatment couples may have already had better relationships at the time of the baseline interviews. This limitation to the propensity scores should be kept in mind when interpreting the results. However, both analytic approaches that were used to test for treatment effects (described later in this chapter) did control for the baseline values of each outcome, which reduces this bias somewhat.

### *Addressing Attrition Bias*

In addition to the propensity models developed to adjust for selection bias, we needed to adjust for **attrition bias**—the likelihood that having follow-up data for a respondent may be associated with factors that influence outcomes independently from any OFA-funded programming received. Anecdotally, we learned that some respondents declined to participate

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<sup>24</sup> As described earlier, baseline interviews were conducted after the start of the couples-based program components being evaluated in Ohio and New Jersey. They were not pre-intervention interviews. Therefore, the only variables that could be included in the propensity models were demographics or characteristics of the couple's relationship prior to incarceration, since these were the only factors that could not have been influenced by the program being evaluated.

in a follow-up interview because their relationship with the survey partner had ended. It is also plausible that respondents who could not be located for follow-up were in less stable relationships than those who were. Not correcting for nonresponse bias, therefore, would have run the risk of producing findings that overrepresented the experiences and outcomes of couples in more stable relationships.

Therefore, we developed propensity models that estimated the likelihood of completing the 9-, 18-, and 34-month interviews for men and women in each site. As with the propensity models used to develop weights for selection bias, logistic regression was used, with dichotomous indicators of whether the person completed their 9-, 18-, and 34-month interviews as the dependent variables and individual (baseline) characteristics as the independent variables. The results of the attrition bias propensity models are presented in **Appendix A**.

Superweights that reflected both the selection bias and the attrition bias weights were applied to each case for all outcome analyses. To create the superweights, the selection bias weight was multiplied with each attrition bias weight to create three superweights for each individual: a nine-month superweight to be used in analysis of 9-month outcomes, an 18-month superweight to be used in analysis of 18-month outcomes, and a 34-month superweight to be used in analysis of 34-month outcomes. These superweights were normalized (by dividing each individual's superweight by the mean of the superweights) and capped at 5.<sup>25</sup> Our approach to adjusting for selection and attrition bias is similar to that used in several previous nonexperimental evaluations of criminal justice programming, including SVORI (see Lattimore & Steffey, 2010) and the Multi-Site Adult Drug Court Evaluation (see Rossman, Roman, Zweig, et al., 2011).

### *Analyzing Treatment-Comparison Differences by Wave—First Analysis Approach*

The first approach to analyzing the impact of OFA-funded demonstration programming simply entailed comparing the PATE-weighted mean values of the outcome variables at each follow-up wave between treatment and comparison group members in each site. To determine whether the outcome differed significantly for treatment and comparison group members, we estimated weighted logistic regression models for the binary outcomes and weighted linear regression models for the non-binary outcomes. For each outcome model, the baseline value of the outcome was included as a control. For the comparisons of weighted means, we used the superweights (described above) that were developed to adjust for both selection and attrition bias. The estimated impact was calculated by subtracting the weighted mean for the comparison group from the weighted mean for the treatment group. We also calculated effect sizes for each outcome. For binary outcomes, the reported effect size is the logged odds ratio from the weighted logistic regression. For other outcomes, the reported effect size is a standardized mean difference calculated by dividing the estimated impact by the standard deviation for the comparison group. These comparisons were made among the total male and total female samples in each site for each follow-up time point. All available data were used.

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<sup>25</sup> Very few superweights weights had to be capped at 5. For both the male and female samples, roughly ten weights were capped for each interview wave across all sites.

Not every couple had complete data from both members of the couple for each time period; as described earlier, not all women completed a baseline interview and there was some attrition for both men and women at each follow-up wave. Therefore, not every man in the male analytic sample for a given follow-up wave had a corresponding female partner in the female sample for that same follow-up wave (and vice versa).

To see whether differences in the male partner’s incarceration trajectory affected the impact findings that were evident with the comparison of weighted means approach, we conducted a sensitivity analysis. The analysis measured the interaction between community exposure (i.e., whether the male partner had any “street time” during the reference period or was incarcerated the entire time) and group membership (i.e., treatment vs comparison group assignment). This analysis determined whether there were differences in the effect of the intervention between couples whose male partner had any community exposure time during the reference period and couples whose male partner had been incarcerated for the entire reference period. This analysis was guided by the possibility that outcomes may vary based on the male partner’s incarceration trajectory. The outcome measures explored in the impact study likely mean something different for couples whose male partner was released from incarceration at some point during the follow-up period and was able to interact with his family in the community than they do for couples whose male partner remained incarcerated over the whole follow-up period. Treatment effects may be more or less pronounced, depending on whether the man remains incarcerated or gets released over the follow-up period. And the effects could be in either direction. For example, couples who learn communication skills during the man’s incarceration may not have an opportunity to fully develop these skills until the man has been released from incarceration—in which case, treatment effects may only be evident when we examine the difference in reported outcomes among the groups with community exposure. The opposite pattern could also occur, with treatment effects only being evident for couples in which the man is incarcerated, given the limited opportunity for disagreement and conflict. Therefore, we conducted a sensitivity analysis to identify any differences in treatment effects that vary based on the man’s incarceration/release status. This analysis was conducted for variables that were measured for all couples (regardless of the male partner’s community exposure).

### *Analyzing Differences in Treatment-Comparison Trajectories—Second Analytic Approach*

The second approach to examining the impact of demonstration programming was latent growth curve modeling. This approach models change over time among sample members in a multi-level framework. It is a mixed effects model (one that has both fixed effects and random effects, described below) that is estimated under a structural equation modeling framework (one that takes into account that individual sample members are nested within couples and that repeated measures are nested within individuals). While the first analytic approach (comparison of weighted means between treatment and comparison group members) examines whether the treatment group has better outcomes than the comparison group at each follow-up wave, latent growth curve models explore the *trajectories* experienced by

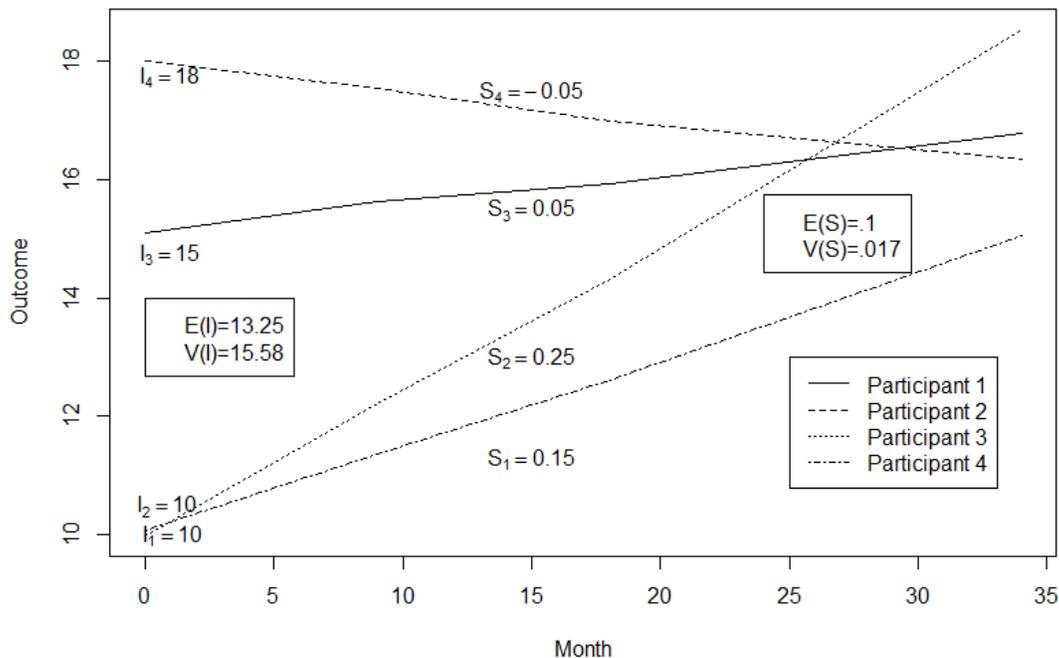
sample members over the entire follow-up period (e.g., gradual improvement over time, deterioration over time, intermittent patterns of improvement and deterioration, no change). The latent growth curve approach examines all outcome variables at the couple-level, rather than the individual-level. While this approach is intuitive for outcomes that measure the dynamic within the couple (e.g., conflict resolution skills), it is also useful for outcomes that measure the behavior of the individuals within the couple, such as illicit drug use. In essence, the comparison made in the latent growth curve models is of the average status on these indicators for treatment couples relative to comparison couples over time. All outcome variables were explored using the latent growth curve approach except for recidivism, which was only measured for men, and employment, which was not measured with the exact same reference period for men and women at baseline.

We used a recent extension of the growth model to dyadic data called the common fate growth model (Ledermann & Macho, 2014; see also Whittaker, Beretvas, and Falbo, 2014). This model allows us to estimate whether each couple changes over time and whether the average couple-level change varies between the treatment and comparison groups. This allows us to compare the trajectories of treatment couples to those of comparison couples, to understand whether treatment couples improved more (or deteriorated less) than the comparison couples over time, beginning with baseline.

**Exhibit 3-7** provides an illustration of random and fixed effects for four individuals on a hypothetical outcome. Conceptually, each person has a random intercept  $I$ , which is their value on the outcome at baseline, and a random slope  $S$ , which is their rate of change during the study follow-up period. The intercepts and slopes represent unobserved (or latent) random variables in that we do not observe each person's rate of change directly, but can estimate it from their data. The variance of the random effects estimates how much inter-individual variability there is (i.e., how different the values are among the four individuals) in the outcome at baseline,  $V(I)$ , and how much variability there is in rates of change over time  $V(S)$ . The fixed effects are the average of the random effects, where  $E(I)$  indicates the average baseline value and  $S(I)$  is the average rate of change in the sample. The latent growth curve model estimates the parameters  $E(I)$ ,  $E(S)$ ,  $V(I)$ , and  $V(S)$ .<sup>26</sup>

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<sup>26</sup> The model also estimates the covariance between the intercepts and slope  $Cov(I,S)$

**Exhibit 3-7. Example of Random Intercepts and Random Slopes**

The random intercepts and slopes can be specified at the individual or couple level. The fixed effect  $E(s)$  summarizes how much change there was on average in the sample during the study. If this average is positive, this indicates that the sample improved on average for the outcome, while a negative value indicates deterioration. We can estimate the average separately in the treatment and comparison groups. Then we can test whether these two averages are different from one another to determine whether the average rate of change in the treatment group was significantly different from that of the comparison group. This constitutes the estimate of the treatment effect in the latent growth curve modeling framework. For example, if relationship status deteriorated over time for both groups, but deteriorated faster in the comparison group than the treatment group (i.e., the average slope in the treatment group was negative but smaller than the negative average slope in the comparison group), these results would suggest that the treatment protected against deterioration in relationship status over time. For additional details about latent growth curve modeling, see **Appendix A**.

In conducting the latent growth curve modeling, we estimated the average intercept and slope for the treatment and comparison couples and compared the average slopes between treatment and comparison couples to assess whether couples in the intervention group had significantly better trajectories on a given outcome variable over time than comparison group couples. For the New Jersey and New York samples, change was measured over an 18-month period; for the Indiana and Ohio samples, the follow-up period extended to 34 months post-baseline. Within the latent growth curve models, the sensitivity analysis to see whether differences in the male partner's incarceration trajectory affected the findings entailed the following steps: each model was run both with and without controlling for whether the male partner had any community exposure time, to determine whether any treatment effects were

affected by community exposure, as well as to learn whether community exposure was significantly associated with the outcomes of interest.

Several interrelated factors must be kept in mind when comparing findings based on the latent growth curve modeling to those based on the comparison of weighted means approach. The findings based on latent growth curve modeling tell us whether the average change among treatment couples in a given site for a given outcome was better than the average change among comparison couples in that site over the entire follow-up period. The findings based on the comparison of weighted means approach tell us whether 1) treatment men in a given site had more positive values for a given outcome, on average, than comparison men in the same site for each follow-up time point and 2) treatment women in a given site had more positive values for a given outcome, on average, than comparison women in the same site for each follow-up point. Therefore, not only do findings based on the latent growth curve model estimate change over the entire follow-up period (in contrast to the wave-specific comparisons employed in the comparison of weighted means approach) but they focus on the average change within couples rather than the average change for the total male and female samples. Not all sample members completed each follow-up wave (i.e., data could be missing for one or both members of a couple at each time point), and the manner in which the two analytic approaches handle missing data affects the samples included in each analysis. Because one of the advantages of latent growth curve modeling is that it accommodates missing data (any sample member with at least one observation can be retained in the analysis), our approach was to include in the models all study couples for whom at least one member of the study couple completed one follow-up interview. In contrast, individual men or women who were missing a particular follow-up interview could not be included in the comparison of weighted means analyses for that particular time point. The variation in the samples included in the two sets of analyses (with the latent growth curve models based on a larger sample) can affect the findings that are evident with each approach.

### *Additional Analyses*

In addition to the two statistical approaches described above (which entail examining a number of individual outcome variables for men, women, and couples), we used factor analysis as a supplemental approach to better understand the overall pattern of outcomes within each domain. Also, given the large number of statistical tests that were conducted in the impact study, the probability that some findings might emerge as significant by chance was fairly high. To account for this issue (known as the multiple comparisons problem), we used the Holm-Bonferroni method to adjust the p-values for the outcomes. Additional details about the factor analysis methodology and adjustment for multiple comparisons are presented in **Appendix A** and the results of these supplemental analyses are summarized in **Chapter 8**, with more detailed findings included in **Appendices C-E**.

# Chapter 4. Characteristics of Study Participants

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This chapter describes the male and female demographic and other background characteristics at baseline. In addition, we summarize the major patterns of men’s incarceration trajectories over the study follow-up period. Men’s incarceration trajectories over time are a unique feature of the MFS-IP evaluation and are needed to interpret the impact findings. Finally, to document the extent to which a “treatment differential” exists, this chapter summarizes the services received by treatment and comparison group members over time.

## Sample Baseline Characteristics

This section summarizes basic demographic and other background characteristics of the male and female impact analysis samples in each site at the time of their baseline interviews. For more detailed information on the baseline characteristics of all respondents interviewed for the impact study—including their characteristics before their baseline incarcerations, experiences during the male partner’s baseline incarceration, and expectations for release—see Lindquist, McKay, Bir, and Steffey, 2015b.

Cross-site differences in sample characteristics are to be expected, given variation in the prisoner populations across the four states that were included in this study and differences in the specific prisoner populations that were targeted for the program component(s) that were evaluated. As described in **Chapter 2**, the Indiana and New Jersey programs targeted special populations for their OFA-funded programming, including men residing in character-/faith-based units in Indiana and men with substance abuse issues who were released after serving their entire sentence without post-release supervision in New Jersey. Ohio and New York served men in the general prison population. However, because of the voluntary nature of the programs and the focus on relationship strengthening, the MFS-IP study sample members in all sites likely reflect the subset of incarcerated men (and partners of incarcerated men) who were parents, in committed relationships, and interested in maintaining family contact during the incarceration.

### *Male Sample*

On average, the men were in their early to mid-30s at the time of the baseline interview, with the New York sample slightly older (see **Exhibit 4-1**, which shows demographic characteristics

**Exhibit 4-1. Demographic Characteristics of Male Impact Analysis Sample, by Site and Group (Weighted)**

	IN		OH		NJ		NY	
	Treatment Group (n=272)	Comparison Group (n=387)	Treatment Group (n=462)	Comparison Group (n=166)	Treatment Group (n=133)	Comparison Group (n=82)	Treatment Group (n=118)	Comparison Group (n=48)
Age (mean years)	34.5	34.2	32.1	31.9	34.3	33.8	38.3	36.2
Relationship status								
Married	25%	24%	22%	18%	19%	16%	60%	45%
In an intimate relationship	72%	71%	69%	72%	74%	79%	36%	52%
In a coparenting relationship only	3%	5%	9%	10%	8%	4%	4%	4%
Has children under 18	81%	84%	93%	90%	91%	89%	68%	67%
Number of children (mean)	3.0	3.1	3.1	3.2	2.6	2.6	2.3	2.2
Average age of focal child (years)	8.5	8.1	8.0	7.6	8.1	7.4	10.1	8.0
Race/ethnicity								
White, non-Hispanic	45%	41%	23%	23%	11%	9%	10%	6%
Black, non-Hispanic	46%	47%	60%	62%	72%	74%	65%	60%
Other, non-Hispanic	2%	2%	2%	0%	3%	14%	1%	2%
Hispanic (all races)	4%	6%	9%	6%	13%	3%	21%	9%
Multiracial	3%	4%	6%	8%	2%	0%	4%	23%
Born outside of United States	1%	2%	1%	1%	7%	6%	12%	24%
Highest educational attainment								
Less than H.S.	28%	27%	39%	39%	40%	47%	21%	28%
GED	18%	23%	27%	29%	23%	24%	30%	31%
H.S. diploma	9%	9%	12%	8%	22%	20%	9%	4%
Vocational	5%	7%	1%	2%	2%	6%	1%	1%
Some college	21%	21%	16%	18%	11%	4%	20%	27%
Advanced degree	18%	14%	5%	4%	2%	0%	19%	8%
Ever repeated grade	38%	36%	53%	44%	46%	53%	40%	40%
Ever been suspended/ expelled	76%	78%	88%	86%	81%	87%	67%	89%

for the male sample, by site and group<sup>27</sup>). The majority of men in Indiana, Ohio, and New Jersey reported being in intimate nonmarried relationships with their survey partners at baseline. In New York, larger proportions of men—particularly those in the treatment group—were married to their survey partners.

The vast majority of men—particularly those in Indiana, Ohio, and New Jersey—were fathers of minor children, reporting an average of about three children. The racial/ethnic composition of the samples varied by site, with Indiana having the largest proportion of White sample members, New Jersey the largest proportion of Black sample members, and New York the largest proportion of Hispanic sample members. The New York sample also had a relatively high proportion of men who reported having been born outside the United States.

With regard to educational experiences, the Ohio and New Jersey samples had lower average educational attainment and were more likely to have ever repeated a grade than the Indiana and New York samples.

**Exhibit 4-2** shows the men’s criminal history by site and group. In each site, the men had fairly extensive criminal histories based on number of arrests, previous adult incarcerations, and juvenile incarcerations. Men in Ohio and New Jersey appear to have more extensive criminal histories than those in Indiana and New York. On average, men in Indiana, Ohio, and New Jersey had been in prison (for their baseline incarcerations) about three years at the time of their baseline interviews—which represented just one third of the average baseline incarceration time of the men in the New York sample.

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<sup>27</sup> Exhibits 4-1 and 4-2 present data for men who completed at least one follow-up interview. The data are presented separately for treatment and comparison group members and are therefore weighted using the propensity model weights developed to adjust for selection bias.

**Exhibit 4-2. Criminal History of Male Impact Analysis Sample, by Site and Group (Weighted)**

	IN		OH		NJ		NY	
	Treatment Group (n=272)	Comparison Group (n=387)	Treatment Group (n=462)	Comparison Group (n=166)	Treatment Group (n=133)	Comparison Group (n=82)	Treatment Group (n=118)	Comparison Group (n=48)
Number of arrests (mean)	9.7	10.5	13.3	13.8	13.1	14.1	8.4	9.7
Number of previous adult incarcerations (mean)	5.3	5.4	6.1	6.5	5.2	4.9	2.9	4.4
Number of convictions (mean)	4.6	4.8	5.8	5.2	5.4	5.6	3.3	3.2
Any juvenile incarceration	50%	46%	62%	64%	57%	53%	25%	49%
(if yes) Number of juvenile incarcerations (mean)	3.0	3.9	3.6	4.1	2.7	3.2	1.5	3.4
Age at first arrest (mean)	17.5	17.4	15.9	16.3	17.1	16.9	17.4	16.7
Duration of baseline incarceration, in years, at time of baseline interview (mean)	3.2	3.1	3.3	3.3	2.8	2.9	9.6	9.2

*Female Sample*

**Exhibit 4-3** shows demographic characteristics for the female sample,<sup>28</sup> by site and group, with the data weighted to adjust for selection bias. Similar to the male sample, women in New York appear slightly older and more likely to be married to their survey partners than women in the other sites. The majority of women reported having minor children, with the average number of children ranging from 2.1 to 2.6. The female samples were racially and ethnically diverse, with Indiana having the largest proportion of White women and New Jersey the highest proportion of Black women. Relatively large numbers of Hispanic women were represented in the New Jersey and New York samples, and one-fifth of the New York female sample was born outside the United States. Over a third of the women reported having completed some college or an advanced degree. Having repeated a grade in school was fairly uncommon, but sizable proportions of women in each site had ever been suspended or expelled from school. More detailed information on the baseline characteristics of all women interviewed for the impact study can be found in Lindquist, McKay, Bir, and Steffey, 2015b.

<sup>28</sup> Exhibit 4-3 presents data for women who completed the baseline interview and at least one follow-up interview.

**Exhibit 4-3. Demographic Characteristics of Female Impact Analysis Sample, by Site and Group (Weighted)**

	IN		OH		NJ		NY	
	Treatment Group (n=255)	Comparison Group (n=294)	Treatment Group (n=362)	Comparison Group (n=126)	Treatment Group (n=95)	Comparison Group (n=60)	Treatment Group (n=67)	Comparison Group (n=32)
Age (mean years)	32.7	32.8	30.6	30.8	34.2	33.3	38.0	36.9
Relationship status								
Married	23%	25%	22%	18%	23%	17%	65%	52%
In an intimate relationship	70%	59%	60%	61%	61%	74%	26%	38%
In a coparenting relationship only	8%	16%	18%	21%	16%	9%	9%	9%
Has children under 18	74%	78%	87%	91%	82%	87%	75%	57%
Number of children (mean)	2.4	2.4	2.5	2.6	2.1	2.2	2.6	2.0
Average age of children (years)	7.8	7.7	7.5	7.2	8.0	7.6	9.3	7.1
Race/ethnicity								
White, non-Hispanic	55%	53%	30%	32%	12%	16%	16%	28%
Black, non-Hispanic	36%	38%	55%	54%	72%	70%	56%	56%
Other, non-Hispanic	1%	1%	2%	0%	1%	1%	6%	2%
Hispanic (all races)	3%	4%	7%	7%	15%	12%	22%	13%
Multiracial	5%	3%	7%	6%	0%	2%	0%	2%
Born outside of United States	0%	1%	1%	1%	1%	3%	20%	20%
Highest educational attainment								
Less than H.S.	18%	29%	29%	20%	18%	27%	22%	31%
GED	11%	9%	7%	8%	5%	3%	8%	2%
H.S. diploma	23%	21%	19%	20%	28%	36%	14%	11%
Vocational	4%	6%	7%	8%	8%	4%	5%	8%
Some college	31%	27%	30%	30%	29%	21%	32%	29%
Advanced degree	13%	9%	9%	14%	12%	9%	18%	18%
Learning problems score	4.7	5.2	5.0	4.5	4.0	4.8	4.7	4.3
Ever repeated grade	20%	24%	26%	27%	22%	25%	25%	9%
Ever been suspended/ expelled	41%	47%	55%	49%	45%	48%	29%	31%

## Men’s Incarceration Trajectories over Time

One of the unique features of the MFS-IP impact sample is that all the men were incarcerated at baseline but experienced different incarceration and release trajectories after that point (see sidebar). Therefore, incarceration status is a major source of variability among the sample and an important factor to consider in the impact analyses.

**Exhibit 4-4** shows these trajectories for the men in each of the four impact sites. As shown, all men were incarcerated at baseline and, with the exception of the New Jersey sample, most were still incarcerated nine months later. (The New Jersey program specifically targeted men who would soon be released, so this site’s very different incarceration trajectory is expected.) Even 18 months after baseline, large proportions of the Indiana, Ohio, and New York samples were still incarcerated. By the 34-month interviews (only conducted in Indiana and Ohio), the majority of men in Ohio and Indiana had been released, but 31 percent of Ohio men and 24 percent of Indiana men were still serving the same sentence they were serving when they were initially interviewed for the study.

**Implications of Men’s Incarceration Trajectories on the Evaluation Design**

As discussed in **Chapter 2**, the demonstration programs were generally not designed as reentry programs and three of the four sites enrolled men at any point during their incarceration. This program design feature meant that the impact study follow-up periods could not be timed to coincide with the men’s release. Therefore, the men included in the impact study had very different incarceration and release experiences over the follow-up period. Some men were still serving time for their baseline incarcerations at their 9-, 18-, or even 34-month follow-up interviews. In contrast, other men were released at some point after the baseline interview but before the end of the follow-up period and were therefore living in the community at the time of their 9-, 18-, or 34-month interviews.

**Exhibit 4-4. Men’s Incarceration Trajectories, by Site**

	Baseline	Nine Month		18 Month		34 Month	
	Incarcerated	Still Incarcerated	Released	Still Incarcerated	Released <sup>a</sup>	Still Incarcerated	Released <sup>b</sup>
IN	100% (n=686)	66% (n=453)	20% (n=139)	45% (n=307)	38% (n=257)	24% (n=162)	55% (n=377)
OH	100% (n=688)	57% (n=395)	18% (n=121)	43% (n=294)	30% (n=208)	31% (n=210)	41% (n=285)
NJ	100% (n=309)	9% (n=29)	47% (n=146)	3% (n=9)	53% (n=164)	n/a	n/a
NY	100% (n=201)	64% (n=129)	8% (n=16)	51% (n=103)	16% (n=32)	n/a	n/a

Note: Percentages for the nine-, 18-, and 34-month time points are based on the male baseline sample size for the site. The percentages do not add to 100% because of attrition at each follow-up wave.

<sup>a</sup>Of the men who were released by the 18-month interview, the following proportions were newly released between the 9- and 18-month interviews (with the remaining men released before the 9-month interview): IN, 18% (n=125); OH, 12% (n=80); NJ, 5% (n=15); NY, 9% (n=18).

<sup>b</sup>Of the men who were released by the 34-month interview, the following proportions were newly released between the 18- and 34-month interviews (with the remaining men released before the 18-month interview): IN, 18% (n=120); OH, 12% (n=81).

As discussed in **Chapter 3** the follow-up instruments were designed to accommodate variability in incarceration trajectories, with many skip patterns based on this variation. Specifically:

- Detailed information was captured about the time period immediately following the man’s release from the baseline incarceration. Therefore, some questions were only asked of men who completed their first follow-up interview since their release from the baseline incarceration (which could have been the 9-, 18-, or even 34-month interview). In addition, for these men, the majority of behaviorally specific questions in the interview used “since your release” as the reference period, whereas for other men, the reference period was “since your last interview.”
- For men who had not been released from their baseline incarcerations at a given follow-up interview, their follow-up interviews captured detailed information about their continued contact with their families (while in prison) since the previous interviews. Other men did not get these questions.<sup>29</sup>

When interpreting the overall impact findings, therefore, it is important to bear in mind the way that couples’ experiences, and the meaning of certain outcomes, may have varied based on whether the male partner had spent any time out in the community. The sensitivity analysis that was conducted (see **Chapter 3** for a description of the methodology and **Chapter 7** for a summary of the findings) was intended to allow for a better understanding of whether differences in the male partners’ incarceration trajectories affect any impact findings.

## Service Receipt

A final set of sample characteristics necessary to fully understand the impact findings is the extent of the **treatment differential** between the treatment and comparison groups in each site. The treatment differential tells us whether the treatment group actually received more services than the comparison group. Documenting actual treatment receipt among treatment and control/comparison group members is critical to understanding and interpreting impact findings (see sidebar). This is particularly important in Ohio and New Jersey, where all couples who enrolled in the couples-based program component(s) being evaluated were classified as treatment group members, regardless of whether they completed the component. As described in **Chapter 2**, the site-specific study designs were intended to isolate the impact of couples’ retreats in Indiana, couples’ seminars in New York, the first healthy relationship course in a series of offerings in Ohio, and a holistic case management and curriculum-based program in New Jersey. However, in most sites, treatment and comparison group members—

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<sup>29</sup> In addition to these major patterns, some skip patterns in the instrument were simply based on a man’s current incarceration status—regardless of whether it was still the baseline incarceration or whether it was a new incarceration. For example, all men who were incarcerated at a particular follow-up were asked questions about their expected release date, the number of transfers, and their expectations about release. In addition, some sections of the instrument were skipped for men who were incarcerated during the entire reference period for an incarceration that was not the baseline incarceration (i.e., they had been released and reincarcerated at their last interview and did not get released from that incarceration before the next interview). These men had no community exposure during the follow-up period and, because they were not still serving time for their baseline incarceration, we were less interested in their incarceration experiences.

particularly men—could have received additional services available in their correctional facilities or from community agencies (upon release).

The baseline, 9-month, and 18-month interviews included detailed questions asking the respondent whether he or she had received each of 17 services. We relied on self-reported service receipt data because there was no source of administrative data that could serve this purpose. Although program staff often kept some service receipt records for treatment group members, these data were not sufficiently detailed and, more importantly, a similar source of data was not available for comparison group members (who accessed services not delivered by the grantee agency). Although self-reported service receipt has some limitations—mainly that respondents may not understand generic wording used to elicit responses about particular services or be able to accurately report the dosage of services they received—such limitations should apply equally to the treatment and comparison groups and should not, therefore, bias estimates of the treatment differential.

#### Establishing a Treatment Differential

Many evaluations assume there is a difference in treatment received, based solely on the study design implemented. However, this assumption does not always hold. Among the treatment group, lack of implementation fidelity, low participant engagement, and attrition can result in these individuals not receiving the intended treatment. In addition, comparison group members can often access similar available services on their own. The alternative to treatment is rarely “nothing.” Even in experimental studies, those assigned to the control group may still receive services, due to lack of fidelity to experimental design and/or lack of control over self-initiated services. Not documenting the treatment differential can lead to erroneous conclusions, such as that the treatment had no impact, when a very small difference between what treatment and control/comparison group members actually received prevented the observed difference in outcomes between the two groups from measuring the effect of the treatment *per se*.

**Appendix B** shows, for each of the 17 services, whether a significantly higher proportion of treatment group members than comparison group members reported receiving the service at baseline, nine months, and 18 months. The propensity weights to adjust for selection bias and attrition bias were applied to the data. Detailed tables showing the proportion of treatment and comparison group members who received each service, by site and wave, and the effect sizes, are also included in the appendix.

For *relationship education classes/workshops*—the primary program component that was evaluated in each site<sup>30</sup>—a significant treatment differential was evident for each site and for men and women. This differential was evident at baseline<sup>31</sup> (except for the male sample in Indiana and the female sample in New Jersey) and at nine months (for both men and women in all sites)—a finding that is largely consistent with the nature of the study design and program components being evaluated in each site. The proportion of men in the treatment group who reported having received healthy relationship education at *any* interview wave ranged from

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<sup>30</sup> The relationship education was delivered in the format of a couples’ retreat in Indiana and a couples’ seminar in New York. The interview question asked about “group classes or workshops on healthy marriage or romantic relationships,” with the intention of picking up seminar and ongoing course formats.

<sup>31</sup> As discussed in **Chapter 2**, the baseline interview was not a true pre-intervention interview in Ohio and New Jersey. Therefore, a treatment differential for relationship education at baseline was expected in both sites.

68 percent (Ohio) to 88 percent (New York) (see **Exhibit 4-5**). Although these proportions are higher than among comparison men, the difference was modest.<sup>32</sup> Among women, over three-quarters (77%) of treatment women in Indiana reported having received relationship education at any point; these proportions were much lower in the remaining sites (31% in Ohio, 43% in New York, and 44% in New Jersey) yet were still substantially higher than among comparison women in these sites.<sup>33</sup>

**Exhibit 4-5. Proportion of Treatment and Comparison Men and Women who Received Relationship Classes/Workshops at Any Wave**

	Indiana	Ohio	New Jersey	New York
<b>Men</b>				
Treatment group	76%	68%	80%	88%
Comparison group	56%	50%	17%	28%
Significance (difference)	+++	+++	+++	+++
<b>Women</b>				
Treatment group	77%	31%	44%	43%
Comparison group	12%	18%	3%	0%
Significance (difference)	+++	++	+++	n.s

+++/++ Statistically significant positive impact at the .01/.05 level.

Note: Data are weighted to adjust for selection bias.

For women, very few services besides relationship education classes/workshops were significantly more likely to be reported by the treatment group than the comparison group, and some services were *less* likely to be received by the treatment group (see **Appendix B**). Lack of a major treatment differential for women is not surprising, given that in three of the four impact sites, relationship skills education was the only service the program offered to women (see **Chapter 2**).

<sup>32</sup> The lack of a large treatment differential in Indiana is not surprising because treatment and comparison men both received classroom-based relationship education classes and the question wording for this item would have captured this format as well as the couples' retreats, which only treatment men received.

<sup>33</sup> The low proportion of treatment women who reported relationship education in Ohio is not surprising because women did not have to attend relationship education classes. However, much larger proportions of treatment women in New Jersey and New York should have participated in relationship education (based on the study design). This suggests that the wording of the survey item used to measure receipt of relationship education classes/workshops may not have resonated with respondents.

### Qualitative Findings on Challenges to Partner Engagement in Programs

Analysis of interview data from the MFS-IP qualitative sub-study identified several common themes regarding challenges that arose for female partners engaging in demonstration programs and in generally maintaining contact with an incarcerated partner.

First, the distance between people's residences and prisons was frequently identified as a barrier for women being able to attend programs. The lack of ability to secure transportation to attend the program created conflict for one couple because the woman perceived her partner's participation in the program without her as a sign that he was not invested in their relationship:

*I can't afford to take care of my kid, you want me to pay somebody gas to bring me there to participate in this program? I would love to participate in it because we need it. And naturally I get mad when I see he [participated without her] -- because to me, if our marriage meant anything, you would have been all over that program like look, this is for me and my wife and she is not here and so what is this accomplishing?*

Second, the treatment women and children received when visiting prisoners dissuaded some women from coming to the prison. Women were particularly sensitive to their children's experiences with security measures and correctional personnel. One man provided a clear juxtaposition of how programs and institutional policies can be in disaccord. He spoke highly of the program in which he participated, but felt that the institutional treatment of his family members discouraged visiting:

*Well, I give the PLUS Program credit. They got quite a few parenting, you know, classes. So as far as that, you know, yeah, pretty good. But other things as far as the institution, they make it pretty hard because a lot -- they say they [want] to keep families together and do what they can. But what they do is a lot of guards they seem like they would discourage, they would like treat your family like they're criminals or something, you know what I mean?*

Finally, women described challenging life circumstances that limited the amount of attention they could afford to give their incarcerated partner. Trying to take care of multiple other competing demands sometimes reduced the energy they could put into program participation and their relationships. As one woman stated:

*It's like I have so many responsibilities with my kids and I had to do on my own. I had a lot of help from my mother, but on my own. And then he was in the other ear [on the telephone]. I'm like, ah, I've got to go a teacher conference. I've got to do this. I've got to do that. I've got to go to a field trip. I've got to do this. And then he's saying, "Are you coming to see me? Are you coming to visit me?" Blah, blah, blah. And I'm like -- I just -- just -- that's all. Just doing everything. Hardest thing about parenting is doing it by yourself.*

A slightly more widespread treatment differential was observed among men, the primary targets of the demonstration programming. Many of the differences, such as the significantly higher proportion of treatment men than comparison men receiving parenting classes, substance abuse treatment, and life skills education in New Jersey, are consistent with the programs' offerings and the study design.<sup>34</sup> (A differential for parenting classes was not expected in Indiana and New York, even though those programs delivered parenting classes as part of their programs, because the impact study design was intended to isolate only the impact of couples' healthy relationship retreats in Indiana and seminars in New York). Several other differences in service receipt may have been indirectly associated with program participation (e.g., through referrals to other services).

In sum, the primary difference in service receipt was that men and women in the treatment group were significantly more likely than comparison couples to report having received relationship education classes/workshops in all sites. However, even this difference was fairly modest. Not all treatment group members—particularly women—received relationship education classes and not all comparison group members received “nothing.” Although the challenges already noted with measuring service receipt via self-report may limit the utility of the treatment differential findings, the modest treatment differential—likely due to low program dosage and some Ohio and New Jersey sample members enrolling in the program component(s) that was evaluated but not ever participating—should be kept in mind when interpreting the impact findings in the following chapters.

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<sup>34</sup> However, as with the women in New Jersey, men in the New Jersey treatment group were no more likely to report receiving case management than the comparison group, which is not consistent with the program offerings and study design.

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# Chapter 5. Impacts on Intimate Relationship Status and Quality

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## Chapter Overview

### *Summary of Approach*

This chapter presents findings on the effects of the couples-based healthy relationship intervention on intimate relationship status and quality outcomes in the four impact sites. Summary results for the set of outcomes most closely related to the interventions being evaluated are highlighted in this chapter, including relationship status, communication skills, beliefs about healthy relationships, conflict resolution skills, and self-reported happiness with the couples' relationship. Other outcomes in this domain that were explored in the impact analyses may not have been directly targeted by the interventions but are important

outcomes that were explored due to various plausible pathways by which they could have been impacted. They include fidelity, attitudes toward marriage, partner violence, coresidence, and many other dimensions of intimate relationship quality.<sup>35</sup> A description of the measurement of all outcomes, as well as all detailed findings for each, are included in **Appendix C**. All outcomes are based on self-reported data and, within a couple, men and women could have provided different responses to the same survey question.

#### **Connecting Intimate Relationship Quality Impacts to the Programming Evaluated**

The program component(s) evaluated in each of the four impact sites could reasonably be expected to have direct or indirect impacts on several outcomes in the intimate relationship status and quality domain. Each site implemented a healthy relationship education component, with the curricula focusing on relationship attitudes and skills, including communication and conflict resolution.

Findings are based on the two analytic techniques used to assess program impact. The first set of findings are **comparisons of weighted means** between **treatment and comparison men and women at each follow-up time point**. These findings show whether men and women who received the intervention that was evaluated in each site had better outcomes at the 9-, 18-, and, in Indiana and Ohio, 34-month follow-up waves than men and women who received "treatment as usual." These comparisons control for sample members' baseline values of each outcome and adjust for both selection and attrition bias (see **Chapter 3** for additional details).

Next, we present the results of the latent growth curve models, which **compare the trajectories of treatment and comparison couples** over the **entire study follow-up period**. These comparisons show whether, on average, couples who received the intervention that was evaluated in each site had more positive trajectories over time than couples who received

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<sup>35</sup> The results of statistical adjustments made to minimize bias associated with the numerous comparisons that were made in these analyses are discussed in **Appendix C**.

“treatment as usual.” These comparisons also control for sample members’ baseline values of each outcome and adjust for selection and attrition bias.

The couples-based trajectory models are based on a larger number of sample members than the comparison of weighted means approach because of the manner in which missing data are handled (see **Chapter 3** for additional details). Because of these differences in the three samples (men, women, and couples) and the fact that all analyses were based on self-reported interview data (in which men and women could have provided different responses to the same survey question), findings for men, women, and couples may not be consistent.

Detailed tables showing the actual weighted means, p values, and other statistics for all comparisons summarized in this chapter are included in **Appendix C**. The appendix also presents the results of the sensitivity analyses, in which the role of the male partner’s community exposure is explored using both statistical techniques, and the results of the factor analysis, in which the individual outcomes in the intimate relationship status and quality domain are grouped into five empirically distinct “factors” underlying the outcomes and both sets of analyses (comparison of weighted means and latent growth curve modeling) are conducted at the factor level to see the overall pattern of findings in this domain.

### *Summary of Findings by Site*

#### **Indiana**

The healthy relationship retreats delivered within the character- and faith-based housing prison units were associated with moderate, statistically significant, improvements in intimate relationship quality for men, women, and couples over the 34-month follow-up period.

- Men who participated in the couples’ healthy relationship retreats were consistently (i.e., for at least two of the three follow-up interview waves) more likely to remain in intimate relationships with their survey partners, have no other intimate partners, and report greater happiness and higher levels of dyadic adjustment, bonding, and encouragement in their relationships with their survey partners than men who did not participate. Among married men, those in the treatment group also expressed more commitment to staying married than those in the comparison group. After

#### **Context behind the Indiana Findings: Program Summary and Evaluation Design**

In Indiana, the impact of a one-time, weekend healthy relationship retreat was evaluated. The participants were incarcerated men residing in faith- and character-based housing units and their female partners. Lodging was provided to the partners, who were also provided transportation from their home to a hotel near the facility. The retreats were facilitated by IDOC staff, including chaplains and other PLUS administrators from the facility, and community volunteers, including former prisoners. Using a commercially available curriculum, activities consisted of lectures, workbooks, video clips, and interactive activities.

Both the treatment and comparison group resided in the character/faith-based units and had access to a men’s relationship education class and a parenting class, with the only difference between the two groups being receipt of the couples’ healthy relationship retreats. See **Chapter 2** for more details.

release, men in the treatment group were more likely to live with their survey partners and reported both providing and receiving higher levels of emotional support from their partners than comparison men. Among men who remained incarcerated, those in the treatment group were more likely to have telephone and in-person contact with their partners than those in the comparison group. No negative findings for intimate relationship quality outcomes were observed for men in Indiana.

- The results for women were similar, but the findings were not as strong as those for men. Consistently across the 34-month follow-up period, treatment group women were more likely to remain in intimate relationships with their survey partners, have better conflict resolution skills and dyadic adjustment, and report higher levels of bonding and encouragement from their survey partners. Among married women, those in the treatment group also expressed more commitment to staying married than those in the comparison group. A few other positive treatment effects were evident for at least one follow-up wave: women in the treatment group had better communication skills, reported greater happiness in their relationships with their survey partners, were more likely to live with their partners (for those whose partners got released), and had more in-prison personal visits with their partners (for those whose partners remained incarcerated) than women in the comparison group. Three negative treatment effects were found at the 34-month follow-up wave only: treatment group women who were unmarried expressed less commitment to getting and staying married than unmarried women in the comparison group and treatment group women whose partners were released were more likely to report both frequent emotional and physical abuse victimization than comparison women.
- The couples-based latent growth curve models found that after adjusting for the fact that the couples who participated in the retreats started off with more positive relationships than the comparison couples, treatment group couples were more likely to remain in intimate relationships with one another over time, have no other intimate partners, and have more positive trajectories for several other outcomes including bonding, encouragement from their survey partners, and commitment to staying married (among married couples) than comparison couples. They were also more likely to live together and less likely to report frequent physical abuse perpetration after the man's release. However, among unmarried couples, those who participated in the retreats expressed less commitment to getting and staying married than those who did not, and among couples in which the man remained incarcerated, those who participated in the retreats had more negative trajectories with regard to the frequency of personal visits than couples who did not participate.

## Ohio

Enrollment in the couples' communication course was not associated with sustained positive treatment effects for intimate relationship quality outcomes over the 34-month follow-up period. Scattered positive and negative effects emerged at individual follow-up waves. The couples' analyses found that couples who enrolled in the course did show improvements in a

few outcomes relative to comparison couples, despite the treatment couples' having lower relationship quality at baseline than comparison couples.

- For men, few significant difference in intimate relationship quality outcomes were evident between those who enrolled in the couple communication course and those who were on a waiting list for the program. At the 18-month follow-up wave, men in the treatment group reported less perpetration of severe physical or sexual abuse toward their partners after release. Some negative effects were also found, particularly at the 9-month follow-up wave, with men in the treatment group reporting lower levels of bonding with and encouragement from their survey partners, less commitment to staying married (among married men), less emotional support provided to their survey partners (among men who got released), and less telephone contact with their survey partners (among men who remained incarcerated).
- Among women, scattered positive and negative effects were found. At the 34-month follow-up wave, women in the treatment group whose partners had been released received more emotional support from their partners. Negative effects were found in one of three follow-up periods (typically the 9-month follow-up wave): women in the treatment group scored lower on a healthy relationship beliefs scale, reported less encouragement from their partners, expressed less commitment to getting and staying married (among unmarried mothers), reported fewer phone calls and personal visits with their partners (among those whose partners remained incarcerated). Findings for partner violence outcomes were mixed. Although women in the treatment group were *more* likely to experience emotional abuse and severe physical or sexual abuse victimization from their partners (among those whose partners were released) at the 9-month follow-up wave, and more likely to perpetrate physical and emotional abuse against their partners at the 18-month follow-up wave, they were *less* likely to perpetrate severe physical or sexual abuse against their partners at the 34-month follow-up wave.
- Couples-based analyses yielded largely insignificant results but showed improvement for some outcomes. Treatment couples started out with lower quality relationships than comparison couples at the time of the baseline interviews, but over the follow-up period

**Context behind the Ohio Findings: Program Summary and Evaluation Design**

In **Ohio**, the impact of a 12-week couples' communication course (which was optional for partners), the first in a series of four family relationship courses, was assessed. The course was delivered in a facility classroom and was based on a commercially available curriculum. Modules focused on helping couples learn relationship skills, such as effective communication and conflict resolution. Because partners were not required to participate, the classes consisted of men without partners present as well as couples.

The comparison couples only had access to whatever services were available through "treatment as usual" at the male partner's facility. The treatment group was enrolled in the couples' communication course and had access to the other courses, as well as visitation support and referrals, offered by RIDGE. See **Chapter 2** for more detail.

they showed more improvement in their communication skills in their relationships, a reduced likelihood of cheating on their partners, and, after the male partner’s release, a lower likelihood of experiencing physical abuse victimization or perpetrating severe physical abuse against their partners than comparison couples. Negative findings were evident for several outcomes in this domain, with treatment couples expressing less commitment to staying married (among married couples) and being more likely to perpetrate any physical abuse, any emotional abuse, or frequent emotional abuse after the male partner’s release than comparison couples.

## New Jersey

Men and women who received the couples’ healthy relationship education and case management services generally did not have better intimate relationship quality outcomes than the comparison group over the 18-month follow-up period. The couples’ analyses found that couples who enrolled in the program did show improvements in some outcomes relative to comparison couples, despite starting out with lower quality relationships at the time of the baseline interviews.

- For men, there were scattered positive and negative effects. Men in the treatment group were less likely to perpetrate severe physical or sexual abuse after release at both follow-up waves and less likely to perpetrate emotional abuse at the 18-month wave. There were negative findings at the nine month wave: treatment men were less likely to report that the couple had remained in an intimate relationship and among those who were released, that the couple was living together. Not surprisingly, given the relationship dissolution and lack of coresidence, men in the treatment group also reported less encouragement from their partners, expressed less commitment to staying married (among married men), and reported worse communication skills with their partners than comparison men.
- Scattered positive and negative effects were also found for women at the 9 month follow-up wave. Women in the treatment group whose partners had been released were less likely to perpetrate any emotional abuse or frequent emotional abuse against their partners but women in the treatment group also were less likely to report that the couple was living together. Contrary to the findings for men, women in the treatment group were more likely

### Context behind the New Jersey Findings: Program Summary and Evaluation Design

In New Jersey, the impact of enrollment in a holistic, case management-based program was evaluated. The program included couples-based relationship and parenting courses (using commercially available curricula and with some partners participating via distance learning), a domestic violence education workshop, intensive reentry case management, and a substance abuse intervention. The clients were max-out offenders with addiction issues and their partners.

The comparison couples only had access to whatever services were available through “treatment as usual” at the male partner’s facility whereas the treatment group (including both men and women) received group instruction and individualized supports both prior to and after the male partner’s release. See **Chapter 2** for more detail.

to report severe physical or sexual abuse victimization and frequent emotional abuse victimization in one of the follow-up periods.

- The latent growth curve models showed that treatment couples appeared to have started at a disadvantage relative to comparison couples in terms of their baseline intimate relationship quality but that over time, treatment couples did better for a few outcomes in this domain. Specifically, treatment couples had more positive trajectories for conflict resolution skills, physical abuse victimization, and severe and frequent physical abuse perpetration than comparison couples. However, they had more negative trajectories over time with regard to their commitment to staying married (among married couples) and their likelihood of reporting that the couple had any telephone contact (among couples in which the male partner remained incarcerated).

## **New York**

Effects for men and women who participated in healthy relationship seminars were largely nonsignificant over the 18-month follow-up period but the small number of couples included in the impact study created difficulty in detecting differences between the treatment and comparison groups. Couples' analyses found that couples who enrolled in the seminars had more positive findings for some outcomes.

- Overall, there were no sustained significant difference in outcomes in the intimate relationship quality domain for men. Men who participated in the seminars did better on some outcomes at the 18-month follow-up wave: they were more likely to report not having any intimate partners other than their survey partner, to indicate that they had not cheated on their partners, and to report more commitment to staying married (among married men). One negative effect was found at the 9-month follow-up wave: unmarried men who participated in the seminars expressed less commitment to getting and staying married.
- Two significant differences in the intimate relationship quality domain were found for women at the 9-month follow-up wave: women in the treatment group whose partners remained incarcerated were more likely to report visiting their partners in person while incarcerated and reported a greater frequency of in-person visits than comparison women.

### **Context behind the New York Findings: Program Summary and Evaluation Design**

In New York, the impact of a one-day, couples-based healthy relationship seminar was evaluated. The healthy relationship seminar represented a condensed version of a men's relationship education course (using a commercially available curriculum).

Comparison men, who were not in the same facilities as treatment men, participated in a parenting class and had access to whatever other services were available through "treatment as usual" at the male partner's facility. Treatment men had access to parenting, cognitive behavioral, and men's-only relationship classes, child-friendly visitation and the opportunity to participate in relationship counseling in addition to the one-day couples' healthy relationship seminar with their partners. See **Chapter 2** for more details.

- Couples-based trajectory analyses found positive findings for one intimate relationship quality outcome and no negative ones. Couples who received the healthy relationship seminars were less likely than comparison couples to perpetrate any emotional abuse over time.

The remainder of this chapter presents more detailed results from the wave-by-wave comparisons of weighted means (for the total samples of men and women) followed by results of trajectory analyses (for couples) for intimate relationship quality outcomes.

## Differences in Weighted Means by Wave

### Total Male Sample

When exploring differences between treatment and comparison group men in intimate relationship quality outcomes at individual follow-up periods, the general pattern for men is significant, positive differences in Indiana and few sustained treatment effects in the other sites. This pattern can be seen in the summary results for selected outcomes, shown in **Exhibit 5-1**.<sup>36</sup>

In Indiana, men who participated in the retreats were more likely to be in relationships with their partners at the 9-, 18-, and 34-month follow-up waves than comparison group members. Specifically, 57 percent of men in the treatment group were still in an intimate relationship with their partners at 34 months, compared to 42 percent of men in the comparison group. In addition, treatment group men reported greater relationship happiness than comparison men at both 9- and 18-month follow-up waves. Other findings in the intimate relationship quality domain were that men who participated in the couples' healthy relationship retreats were consistently (i.e., for at least two of the three follow-up interview waves) more likely to report

**Exhibit 5-1. Treatment-Comparison Differences in Selected Intimate Relationship Quality Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Relationship status (romantically involved)								
9M	+++	0.94	n.s.	-0.37	-	-0.81	n.s.	-0.26
18M	+++	0.66	n.s.	-0.12	n.s.	-0.59	n.s.	0.46
34M	+++	0.61	n.s.	-0.06	n/a		n/a	
Communication skills								
9M	n.s.	0.07	n.s.	-0.07	--	-0.51	n.s.	0.10

<sup>36</sup> The exhibit illustrates whether each comparison is statistically significant. For significant findings, the degree of significance and the direction of the comparison are shown. Positive symbols indicate that the outcome was better for the treatment than the comparison group; negative symbols indicate that the outcome was worse for the treatment than the comparison group.

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
18M	n.s.	-0.01	n.s.	0.02	n.s.	-0.03	n.s.	0.18
34M	n.s.	0.04	n.s.	-0.05	n/a		n/a	
Healthy relationship beliefs scale								
9M	n.s.	0.17	n.s.	-0.32	n.s.	0.00	n.s.	-0.07
18M	n.s.	0.03	n.s.	0.06	n.s.	0.03	n.s.	0.19
34M	n.s.	0.09	n.s.	-0.13	n/a		n/a	
Conflict resolution skills								
9M	n.s.	0.08	n.s.	-0.19	n.s.	0.10	n.s.	0.09
18M	n.s.	-0.02	n.s.	-0.06	n.s.	0.06	n.s.	0.18
34M	n.s.	0.02	n.s.	-0.18	n/a		n/a	
Happiness with relationship								
9M	+++	0.39	n.s.	0.07	n.s.	-0.38	n.s.	0.09
18M	+++	0.33	n.s.	-0.06	n.s.	-0.08	n.s.	0.03
34M	n.s.	0.14	n.s.	-0.03	n/a		n/a	
Sample sizes								
9M	592 (T=249, C=343)	592 (T=249, C=343)	516 (T=387, C=129)	516 (T=387, C=129)	175 (T=108, C=67)	175 (T=108, C=67)	145 (T=102, C=43)	145 (T=102, C=43)
18M	564 (T=242, C=322)	564 (T=242, C=322)	502 (T=361, C=141)	502 (T=361, C=141)	172 (T=107, C=65)	172 (T=107, C=65)	135 (T=98, C=37)	135 (T=98, C=37)
34M	539 (T=229, C=310)	539 (T=229, C=310)	494 (T=359, C=135)	494 (T=359, C=135)	n/a	n/a	n/a	n/a

n/a Not applicable.  
n.s. No statistically significant impact.  
+++ / ++ / + Statistically significant positive impact at the .01 / .05 / .10 level.  
-- / - / - Statistically significant negative impact at the .01 / .05 / .10 level.

having no other intimate partners and higher levels of dyadic adjustment, bonding, and encouragement in their relationships with their survey partners than men who did not participate (see **Appendix C, Exhibits C-2 through C-4** for the summary results and **Exhibit C-57** for detailed findings for Indiana men). Among married men, those in the treatment group also expressed more commitment to staying married than those in the comparison group. After release, men in the treatment group were more likely to live with their survey partners and reported both providing and receiving higher levels of emotional support from their partners than comparison men. Among men who remained incarcerated, those in the treatment group were more likely to have telephone and in-person contact with their partners than those in the comparison group. When considering the magnitude of the positive treatment effects found for men in Indiana, the effects tended to be moderate to large (with an average effect size of .61). No negative findings for intimate relationship quality outcomes were observed for men in Indiana.

The Ohio results for men include scattered positive and negative effects at individual follow-up waves (see **Appendix C, Exhibits C-2 through C-4** for summary results and **Exhibit C-58** for the detailed findings for Ohio men). At the 18-month follow-up wave, men in the treatment group reported less perpetration of severe physical or sexual abuse toward their partners after release. Specifically, 97 percent of men in the treatment group and 89 percent of men in the comparison group reported no perpetration of severe physical or sexual abuse toward their partners at the 18-month follow-up interview. Some negative effects were also found, particularly at the 9-month follow-up wave: men in the treatment group reported lower levels of bonding with and encouragement from their survey partners, less commitment to staying married (among married men), less emotional support provided to their survey partners (among men who got released), and less telephone contact with their survey partners (among men who remained incarcerated).

Similarly, in New Jersey, there were few sustained significant differences in outcomes between men who enrolled in the program and the matched comparison group of fathers (see **Appendix C, Exhibits C-2 through C-4** for summary results and **Exhibit C-59** for the detailed New Jersey findings for men). Men in the treatment group were less likely to perpetrate severe physical or sexual abuse at both follow-up waves and less likely to perpetrate emotional abuse at the 18-month wave (with these effect sizes being large). Some negative findings were also evident. At the 9-month wave, treatment men were less likely to report that the couple had remained in an intimate relationship and among those who were released, treatment men were less likely than comparison men to live with their survey partners (52% compared to 74%). Not surprisingly, given the relationship dissolution and lack of coresidence, men in the treatment group also reported less encouragement from their partners, expressed less commitment to staying married (among married men), and reported worse communication skills with their partners than comparison men.

The general pattern of lack of sustained significant difference in intimate relationship quality outcomes was also evident in New York (see **Appendix C, Exhibits C-2 through C-4** for summary results and **Exhibit C-60** for the detailed New York findings for men). Men who participated in the seminars did better than comparison men on some outcomes at the 18-month follow-up wave: they were more likely to report not having any intimate partners other than their survey partner (96% of treatment men compared to 82% of comparison men), indicate that they had not cheated on their partners, and express more commitment to staying married (among married men). Most of these effect sizes were large. However, one negative effect was found at the 9-month follow-up waves: unmarried men who participated in the seminars expressed less commitment to getting and staying married.

### Total Female Sample

The general pattern of findings for women is similar to what was observed for men: significant, positive differences in Indiana (although not as strong as the results for men) and a lack of sustained treatment effects in the other sites. This pattern can be seen in the summary results for selected outcomes, shown in **Exhibit 5-2**.

In Indiana, treatment group women were consistently more likely to remain in intimate relationships with their survey partners (for example, at the 34-month follow-up interview, 56% of treatment women and 42% of comparison women reported being romantically involved with their survey partner) and had better conflict resolution skills than comparison women (see **Exhibit 5-2**). They also had better dyadic adjustment and reported higher levels of bonding and encouragement from their survey partners consistently across the 34-month follow-up period (see **Appendix C, Exhibits C-5 through C-7**, with detailed data for Indiana women shown in **Exhibit C-61**). Among married women, those in the treatment group also expressed more commitment to staying married than those in the comparison group. A few other positive treatment effects were evident at individual follow-up waves: at specific follow-up periods, women in the treatment group had better communication skills, reported greater happiness in their relationships with their survey partners, were more likely to live with their partners (for those whose partners got released), and had more in-prison personal visits with their partners (for those whose partners remained incarcerated) than women in the comparison group. On average, the positive treatment effects found for women in Indiana were in the moderate range and smaller than those found for men, with an average effect size of .41. Three negative treatment effects were found at the 34-month follow-up wave only: treatment group women who were unmarried expressed less commitment to getting and staying married than unmarried women in the comparison group, and treatment group women whose partners were released were more likely to report frequent emotional abuse victimization and frequent physical abuse victimization than comparison women.

#### Women's Participation in Programming

Female partners had to participate for their male counterparts to be eligible for the program component(s) being evaluated in Indiana, New Jersey, and New York. In Ohio, partners were invited but did not necessarily have to attend. The fairly large treatment differential observed for relationship education among women in Indiana (see **Chapter 4**) may explain why positive impacts were observed among women in Indiana, even though the intervention dosage was fairly low (one weekend retreat). Outcomes for women in New Jersey were not as robust as in Indiana but participation was not always in person. Partners with logistical problems, such as a long commute or lack of child care, participated through a distance learning component. The effectiveness of this delivery mechanism has not been tested.

**Exhibit 5-2. Treatment-Comparison Differences in Selected Intimate Relationship Quality Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Relationship status (romantically involved)								
9M	n.s.	0.31	n.s.	0.17	n.s.	-0.16	n.s.	-0.01
18M	+++	0.56	n.s.	0.13	n.s.	-0.05	n.s.	0.22
34M	++	0.48	n.s.	-0.25	n/a		n/a	
Communication skills								
9M	+	0.13	n.s.	0.07	n.s.	-0.26	n.s.	0.25
18M	n.s.	0.06	n.s.	-0.11	n.s.	-0.14	n.s.	0.47
34M	n.s.	0.16	n.s.	0.06	n/a		n/a	
Healthy relationship beliefs scale								
9M	n.s.	0.33	n.s.	-0.07	n.s.	0.06	n.s.	0.16
18M	n.s.	0.24	n.s.	0.04	n.s.	0.49	n.s.	0.16
34M	n.s.	0.13	-	-0.17	n/a		n/a	
Conflict resolution skills								
9M	+	0.17	n.s.	-0.1	n.s.	0.05	n.s.	0.17
18M	+	0.19	n.s.	-0.14	n.s.	-0.15	n.s.	0.15
34M	n.s.	0.03	n.s.	-0.04	n/a		n/a	
Happiness with relationship								
9M	++	0.28	n.s.	-0.08	n.s.	-0.13	n.s.	0.25
18M	n.s.	0.16	n.s.	0.12	n.s.	-0.18	n.s.	0.28
34M	n.s.	0.18	n.s.	-0.13	n/a		n/a	
Sample sizes								
9M	592 (T=249, C=343)	592 (T=249, C=343)	516 (T=387, C=129)	516 (T=387, C=129)	175 (T=108, C=67)	175 (T=108, C=67)	145 (T=102, C=43)	145 (T=102, C=43)
18M	564 (T=242, C=322)	564 (T=242, C=322)	502 (T=361, C=141)	502 (T=361, C=141)	172 (T=107, C=65)	172 (T=107, C=65)	135 (T=98, C=37)	135 (T=98, C=37)
34M	539 (T=229, C=310)	539 (T=229, C=310)	494 (T=359, C=135)	494 (T=359, C=135)	n/a	n/a	n/a	n/a

n/a Not applicable.  
n.s. No statistically significant impact.  
+++ / ++ / + Statistically significant positive impact at the .01 / .05 / .10 level.  
-- / - / - Statistically significant negative impact at the .01 / .05 / .10 level.

In Ohio, as with men, there were a small number of positive and negative differences in intimate relationship quality outcomes between the treatment and comparison group women. The few positive treatment effects were large and included the following: at the 34-month follow-up wave, women in the treatment group whose partners were released received more emotional support from their partners and were less likely to perpetrate severe physical or sexual abuse against their partners than women in the comparison group (for example, 96% of treatment women and 88% of comparison women reported not perpetrating any severe physical or sexual abuse against their partners at the 34-month follow-up interview). Some negative effects were found in one of three follow-up periods (typically the 9-month follow-up wave): relative to women in the comparison group, women in the treatment group scored lower on a healthy relationship beliefs scale, reported less encouragement from their partners, expressed less commitment to getting and staying married (among unmarried mothers), reported fewer phone calls and personal visits with their partners (among those whose partners remained incarcerated), and were more likely to perpetrate physical and emotional abuse and experience emotional abuse and severe physical or sexual abuse victimization from their partners (among those whose partners were released). (See **Appendix C, Exhibits C-5 through C-7** for summary findings and **Exhibit C-62** for detailed data for Ohio women.)

The New Jersey findings for women also include a small number of positive and negative findings. Although women in the treatment group whose partners had been released were less likely to perpetrate any emotional abuse (70% of treatment women compared to 52% of comparison women reported no emotional abuse perpetration at the 9-month follow-up interview) or frequent emotional abuse against their partners at the 9-month follow-up wave (with large effect sizes observed), some negative effects in the intimate relationship quality domain were evident. At the 9-month wave, women in the treatment group were less likely than comparison women to report that the couple was living together, and women in the treatment group were more likely to report any severe physical or sexual abuse victimization and frequent emotional abuse victimization than women in the comparison group in one of the follow-up periods. (See **Appendix C, Exhibits C-5 through C-7** for summary findings and **Exhibit C-63** for detailed data for New Jersey women.)

In New York, only two significant differences—both positive treatment effects with large effect sizes—between women in the treatment and comparison groups were found. At the 9-month follow-up wave, women in the treatment group more likely to report visiting their partners in person while incarcerated (98% of treatment women compared to 58% of comparison women) and reported a greater frequency of in-person visits than comparison women. (See **Appendix C, Exhibits C-5 through C-7** for summary findings and **Exhibit C-64** for detailed data for New York women.)

## **Differences in Treatment-Comparison Couple Trajectories over Time**

The couples-based trajectory modeling demonstrated a number of positive findings in Indiana and yielded more promising results in Ohio and New Jersey than the comparison of weighted

means approach (based on the total male and female samples). **Exhibit 5-3**<sup>37</sup> shows summary results from the latent growth curve models for the selected variables within the intimate relationship quality domain. **Exhibits 5-4** through **5-8** show the nature of the trajectories over time for these outcomes for treatment and comparison men and women in each site, along with the couples' averages. For relationship status and relationship happiness, the clear pattern for all groups in each site is deterioration over time. The patterns for the remaining outcomes are less consistent, but most slopes are negative, indicating overall deterioration over time (despite an apparent increase in communication skills for treatment couples in most sites between baseline and nine months). Therefore, the few positive differences between the slopes of treatment and comparison couples discussed in the remainder of this section reflect that the treatment group deteriorated less than the comparison group over time, not that they improved more.

In Indiana, the couples-based models found that even after adjusting for the fact that the couples participating in the retreats started off in a better place than the comparison couples (as evident by the significant, positive differences in the intercepts shown for several outcomes in **Exhibit 5-3**), over time, treatment group couples were more likely to remain in intimate relationships with one another. In addition, as shown in **Appendix C, Exhibit C-8**, they were more likely to have no other intimate partners, and had more positive trajectories for several other outcomes including bonding, encouragement from their survey partners, and commitment to staying married (among married couples) than comparison couples. They were also more likely to live together and less likely to report frequent physical abuse perpetration after the man's release (see **Appendix C, Exhibit C-8**). The positive treatment effect observed for couples' trajectories with regard to frequent physical abuse perpetration appears to be incongruent with the negative findings based on the weighted means approach for women. Negative treatment effects were found for frequent emotional abuse victimization and frequent physical abuse victimization for women at the 34-month wave. However, because the latent growth curve approach compares the overall trajectories between treatment and comparison couples over time and uses all available data (even if one member of the couple did not participate in a particular follow-up wave) whereas the differences in means approach compares the values for treatment and comparison women (and men) at a given point in time, such discrepancies are not surprising.<sup>38</sup> Overall, in Indiana, the effect sizes for the positive

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<sup>37</sup> The summary indicators illustrate whether the intercepts (i.e., baseline values) were significantly different between treatment and comparison couples in each site. The exhibit also shows whether the slopes (i.e., rates of change over time) differed significantly (in either a positive or negative manner) for treatment and comparison couples in each site.

<sup>38</sup> Many explanations could account for this discrepancy. For example, the overall pattern for treatment couples over the 34-month follow-up period could have been one of improvement (relative to the trajectory of the comparison group) but that there was a drop-off in this improvement at the 34-month interview from the female partner's perspective.

**Exhibit 5-3. Treatment-Comparison (T-C) Differences in Selected Intimate Relationship Quality Outcomes at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Relationship status	++	0.089	+++	0.176	n.s.	0.007	n.s.	-0.031	n.s.	-0.064	n.s.	-0.006	n.s.	-0.001	n.s.	0.004
Communication skills	n.s.	0.002	n.s.	0.03	—	-0.089	++	0.086	—	-0.139	n.s.	0.076	n.s.	0.035	n.s.	0.013
Healthy relationship beliefs	+++	0.137	n.s.	-0.049	n.s.	-0.042	n.s.	0.015	n.s.	0.014	n.s.	0.025	n.s.	0.057	n.s.	-0.071
Conflict resolution skills	n.s.	0.036	n.s.	-0.027	—	-0.094	n.s.	0.029	-	-0.097	+	0.103	n.s.	0.019	n.s.	0.031
Happiness with relationship (0-10)	+++	0.191	n.s.	-0.039	n.s.	-0.009	n.s.	-0.019	n.s.	-0.076	n.s.	0.001	n.s.	0.068	n.s.	-0.007
Samples sizes	688	688	688	688	686	686	686	686	309	309	309	309	201	201	201	201

Note: Analyses were limited to couples for which at least one member completed one follow-up interview.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

—/—/— Statistically significant negative impact at the .01/.05/.10 level.

Exhibit 5-4. Trajectories for Relationship Status Based on Latent Growth Curve Model, by Site and Group

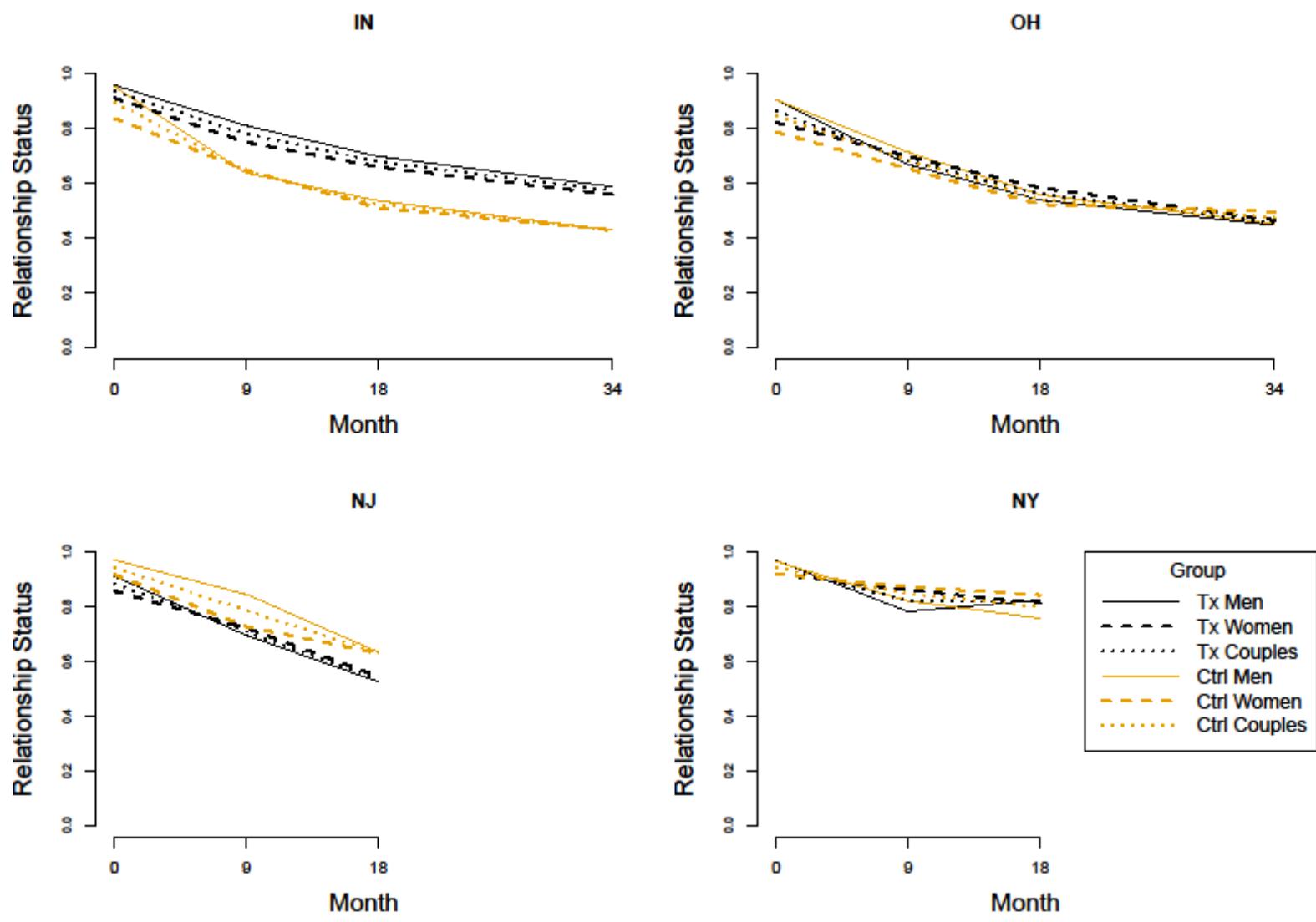


Exhibit 5-5. Trajectories for Communication Skills Based on Latent Growth Curve Model, by Site and Group

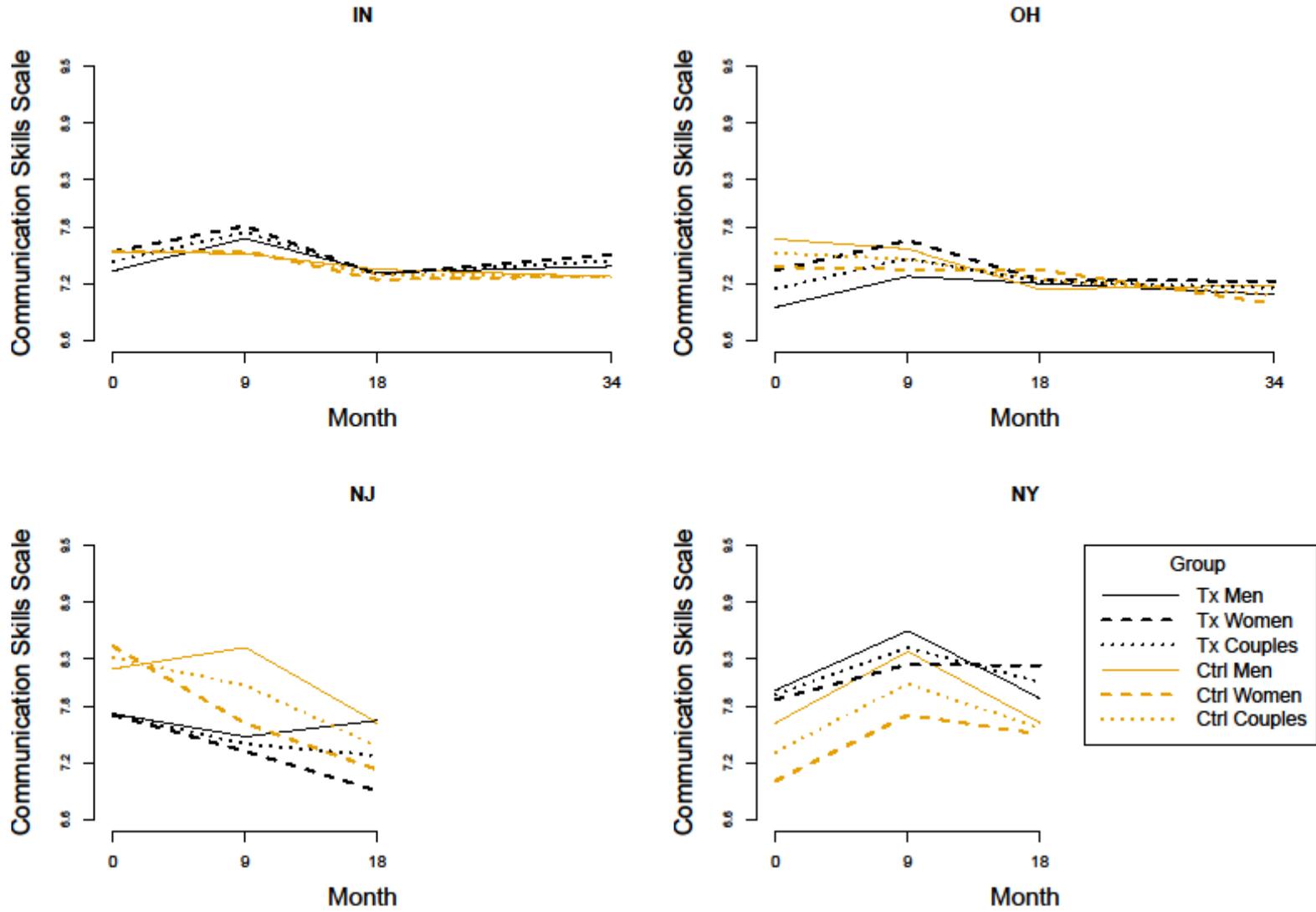


Exhibit 5-6. Trajectories for Healthy Relationship Beliefs Based on Latent Growth Curve Model, by Site and Group

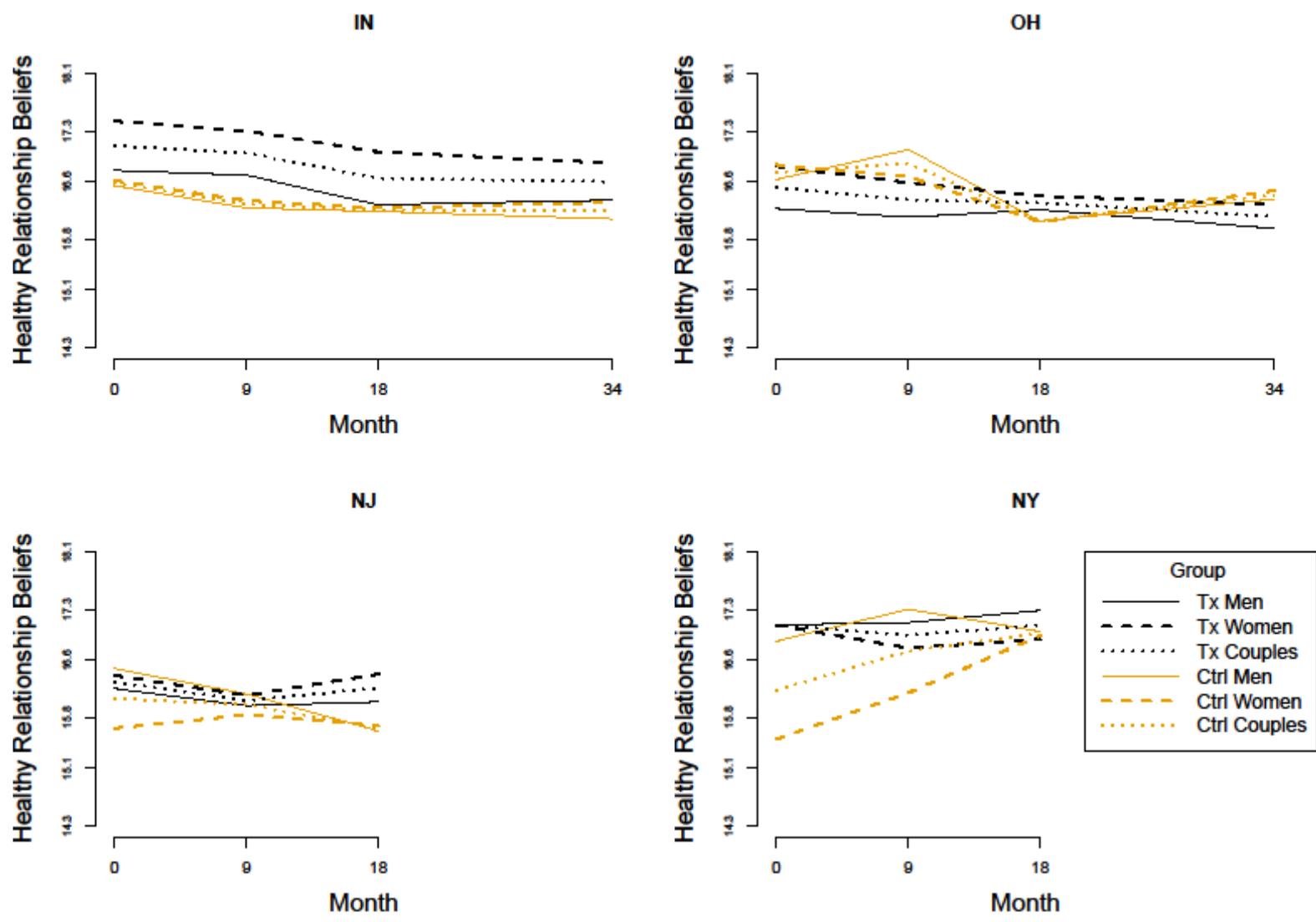


Exhibit 5-7. Trajectories for Conflict Resolution Skills Based on Latent Growth Curve Model, by Site and Group

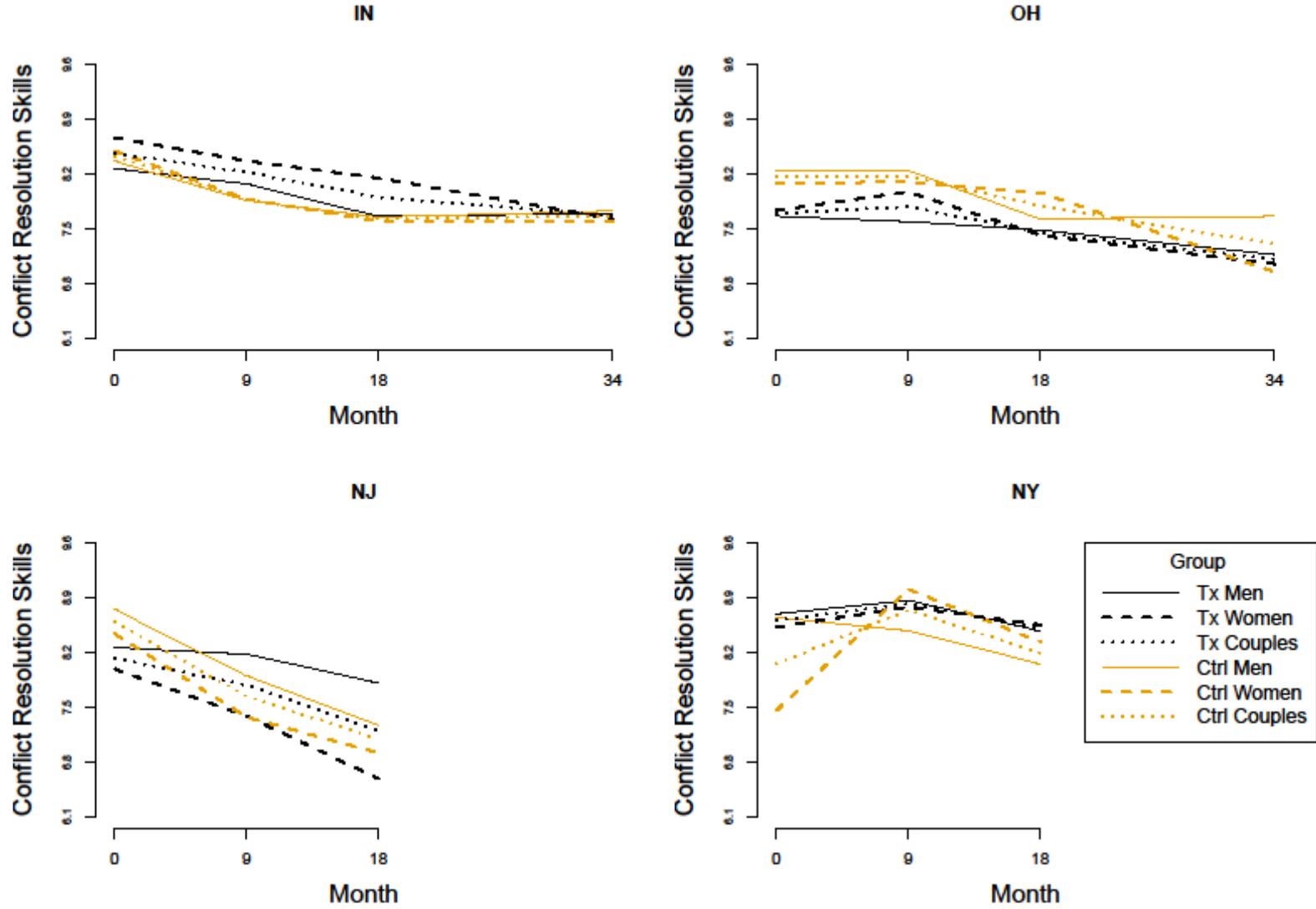
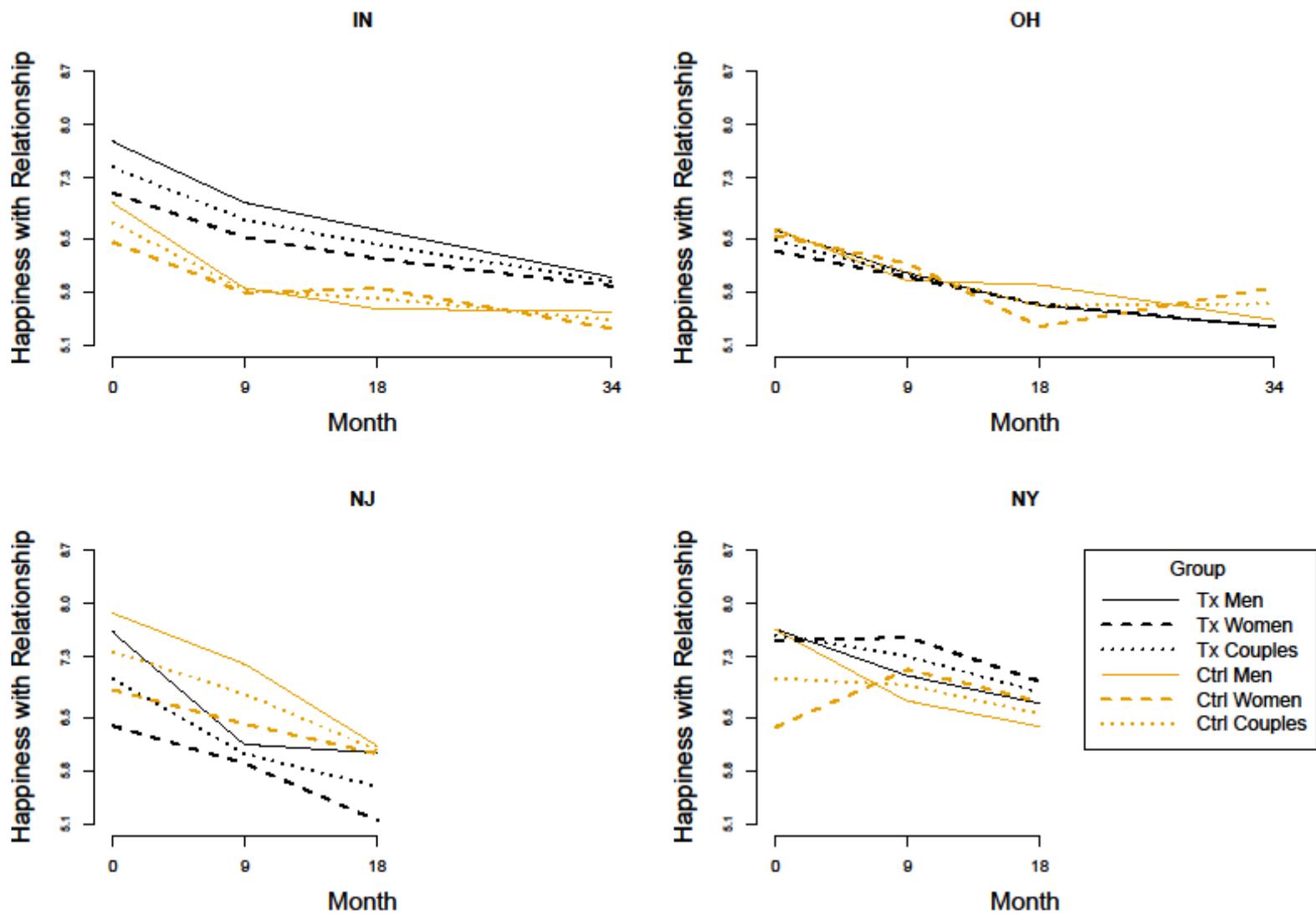


Exhibit 5-8. Trajectories for Happiness with Relationship Based on Latent Growth Curve Model, by Site and Group



treatment effects for couples tended to be small (with an average effect size of .12),<sup>39</sup> and a few negative treatment effects were evident. Among unmarried couples, those who participated in the retreats expressed less commitment to getting and staying married over time than those who did not, and among couples in which the man remained incarcerated, those who participated in the retreats had less frequent personal visits than couples who did not participate. (See **Appendix C, Exhibit C-65** for detailed data for the latent growth curve models run for Indiana couples.)

Among the Ohio couples, the treatment couples started out with lower quality relationships than comparison couples at the time of the baseline interviews (as evidenced by several significant, negative intercepts in **Exhibit 5-3**). Over the follow-up period, however, they showed more improvement in their communication skills in their relationships. In addition, over time, they had a reduced likelihood of cheating on their partners, experiencing physical abuse victimization, or perpetrating severe physical abuse against their partners than comparison couples (see **Appendix C, Exhibits C-8, C-21, and C-33**). Effect sizes for these positive effects tended to be small. Negative findings were evident for several outcomes in this domain, however, with treatment couples expressing less commitment to staying married (among married couples) and being more likely to perpetrate any physical abuse, any emotional abuse, or frequent emotional abuse than comparison couples. (**Appendix C, Exhibit C-66** presents detailed findings for the latent growth curve models run for Ohio couples.)

The pattern is similar in New Jersey. Treatment couples appeared to have started at a disadvantage relative to comparison couples in terms of their baseline intimate relationship quality. Even so, the models showed that treatment couples showed greater improvements in conflict resolution skills over time than comparison couples (**Exhibit 5-3**). In addition, they reported less physical abuse victimization, and less severe and frequent physical abuse perpetration than comparison couples over time (see **Appendix C, Exhibits C-8, C-21, and C-33**). These effects tended to be small, though statistically significant. Treatment couples did worse over time with regard to their commitment to staying married (among married couples) and their likelihood of reporting that the couple had any telephone contact (among couples for which the male partner remained incarcerated). (**Appendix C, Exhibit C-67** presents detailed latent growth curve model data for New Jersey couples.) As in Indiana, the positive treatment effect observed for couples' trajectories with regard to some partner violence outcomes (physical abuse victimization and severe and frequent physical abuse perpetration) appears to be incongruent with a few of the negative findings for these outcomes based on the weighted means approach (among women, a negative treatment effect was found for severe physical or sexual abuse victimization and frequent emotional abuse victimization at one of the follow-up periods). However, such inconsistencies are expected because of the differences in the two

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<sup>39</sup> Smaller effect sizes are expected for the latent growth curve models than the comparison of weighted means approach because the effect sizes based on the former approach convey the magnitude of the treatment effect on **changes** in the outcome over the entire follow-up period, whereas effect sizes based on the latter convey the magnitude of the treatment effect on the outcome itself at a given time point.

modeling approaches, the manner in which missing data is handled, and differences in reporting between men and women.

In New York, the latent growth curve models generally found no significant differences for either the initial intercepts or trajectories of treatment and comparison couples, which suggests that the couples were comparable in their relationship quality at baseline and experienced similar trajectories over time. However, couples who received the healthy relationship seminars did have more positive trajectories over time than comparison couples in their likelihood of perpetrating any emotional abuse (see **Appendix C, Exhibit C-21**). A large effect size was observed for this finding. (**Appendix C, Exhibit C-68** presents detailed latent growth curve model data for New York couples.)

### Perspectives from RIDGE Program Participants

Analysis of interview data from the MFS-IP qualitative sub-study identified several common themes regarding participants' experiences in the Ohio RIDGE program. First, most program participants tended to remember the program, and some could recall specific topics or activities, such as cultivating communication skills. Both men and women suggested that the program had helped them to strengthen their relationships with their committed partners. One male participant remembers how the program helped him communicate his support for his partner while he was incarcerated:

*I did some Couple Communications classes with [partner] through this thing called the RIDGE Project, where she came in like eight weeks out of 16 or something. And you know, that helped me communicate better with her, you know. Saying, 'I am here,' you know. 'I am not at home but I am here for you.'*

One female participant recalled several different aspects of the course content, and noted that although she was only able to attend one (prison-based) class in person, the class and the course materials provided afterward had been valuable to her and her partner:

*It was a program that they helped couples stay together while they were incarcerated. I only made it to one class, but it was a pretty good class. You know, they talked about financial situations, how to listen to each other, you know, arguments. That helped us a lot because we—they sent us home with a lot of things like books and pamphlets and all this type of stuff. So that was a pretty good program.*

However, other Ohio RIDGE program participants either did not recall participating in the program or did not feel it had been beneficial. One female participant expressed anger at the prison system and correctional programming in general, and suggested that the RIDGE Project program had set people up to expect help and then let them down.

*The prisons are a joke. Their programs are jokes. We want to help keep your families together. You know we want to help you guys, [help] you straighten your lives out so that you can be this for your family. But what do they do? They don't do nothing. You do. You know what I am saying. Now don't get me wrong, it is not their job. You put yourself there, so it is not their responsibility. But if you are going to open your mouth, get funding and say, "We have this program that does this and does this and this is what we are going to do and this is our goal," then do it. Because you know what? By you not doing it, you ain't doing nothing but letting us down like what we are used to, which is a lot of the reasons why we are in the street and so. So you know what, it is just like everybody and anybody else. You don't give a [expletive], so why should I?*

## Synthesis

The predominant pattern suggested by the results presented in this chapter is that the couples-based healthy relationship programming provided in the context of faith- and character-based residential units in Indiana was consistently associated with better outcomes in the intimate relationship quality domain. Stronger treatment effects were found for men than women, and the effects were generally in the moderate range. Even after accounting for the fact that the couples who received the retreats started off with higher quality relationships than comparison couples at baseline, these couples were more likely to stay together over time, remain in exclusive relationships, live together (after the male partner's release) and have more positive trajectories over time on several other dimensions of relationship quality than comparison couples. Although they did not seem to have improved their communication skills or beliefs about healthy relationships—improvements that could reasonably be expected to result from participation in the retreats—the overall pattern appears to suggest that the retreats were effective at promoting many aspects of relationship quality. The findings for Indiana suggest that delivering couples' healthy relationship retreats in the context of a broader faith- and character-based unit may help reinforce the skills learned through a broader emphasis on self-improvement.

For the programming that was evaluated in the other sites, which included healthy relationship courses in Ohio, a classroom- and case management-based program in New Jersey, and a one-day couples' healthy relationship seminar in New York, the findings were largely insignificant. However, the mixed, weak findings in this domain should not be discounted. In Ohio, couples who enrolled in the healthy relationship course showed significant improvement in communication skills and fidelity over time relative to couples who were waitlisted for the program—a pattern that is notable given that the treatment couples started off with significantly lower quality relationships (on several dimensions) than comparison couples. In New Jersey—where the couples who received the intervention also had significantly lower-quality relationships than comparison couples at baseline—the couples who enrolled in the OFA-funded demonstration program showed significant improvement in conflict resolution skills and several partner violence outcomes relative to couples in the comparison group. In New York, the treatment and comparison couples started off with similar-quality relationships and did not appear to differ in their trajectories over time. However, the small number of individuals enrolled in the impact study in New York created difficulty in detecting differences between the treatment and comparison groups.

### Perspectives from Indiana Program Participants

Participants in IDOC's PREP weekend seminar (Indiana) shared several distinct perspectives on their program experiences, based on qualitative interview data from the MFS-IP qualitative sub-study. Men and women vividly remembered their participation in the IDOC's weekend PREP seminar. Many participants described it at great length, animatedly recalling its substance (course topics and activities) and other details that made the experience feel special:

*They put us in this relationship program where it was really nice. And I got to go to the hotel by myself. It was a suite. It was very relaxing. And then in the morning time we would have to wake up and this bus would come and get us and they'll take us to the—where they was at—where the inmates was at...and when we get in the room it would have on the table like [a table tent with the couple's initials] with a rose. And we got to sit there. We got to spend all day with them from like—I think it was like 6:30 or 7:00 in the morning, all the way until like seven o'clock that evening. We was together and there was no shackles, no nothing. We got to sit side-by-side at this table. And we got—we was talking about relationships, and we played games, and they asked us little questions, and...you get to give him a kiss and a hug, or the men gets to get up and give you a massage in front of the whole class and all this fun stuff...and then we ate lunch together. They got to eat some kind of good stuff versus jail food, it's fried and chips and all that.*

Experiences with applying the concepts learned in the IDOC's weekend PREP seminar varied. Some participants described how they used the skills they gained from the course to improve their partner relationships both during and after the male partner's incarceration:

*Part of [the seminar] was about, are you loving the person in the way that they need to be loved?...It was amazing how on the spot on we were with that exercise...We've used those words here to say, "Here's what I need from you for the next three months, because I'm scared about this, right, I've made it bigger than it is." I think we're really good at that, partly from that course. So that's great.*

Others found that, although they enjoyed the course, the content was difficult to apply in the context of post-release challenges. One participant noted that "at the time it seemed like it helped," but that she and her partner had returned to old patterns of arguing after he was released. Another felt that the program offered meaningful skills, but that her partner's post-release alcohol abuse made it impossible to use them in communication with him:

*I liked it. It was the fact that it was teaching you how to communicate with your partner. They gave us a packet of how to talk, how to settle through an argument if you had an argument, how to talk it out and if you say something to make sure the person repeats it and you get to understand what you're saying and what they're saying. (Did you get to use it in relationship to E---?) I tried it, but it didn't work. (How come?) Because he was drunk. [Participant laughs.] But I did. He was drunk. Never wanted to talk while he was sober. When he was sober he was quiet, and if he did open his mouth he had an attitude, because he wasn't drunk...but I really enjoyed that class, I really did. That whole weekend was really nice. I did enjoy that.*

The analysis also indicated that on the whole, relationship quality appeared to deteriorate over time for most study couples. Intervention during the male partner's incarceration may have *delayed or somewhat reduced the deterioration* for some aspects of relationship quality for treatment couples (in particular sites and for particular outcomes) but did *not substantially improve* relationship quality relative to baseline levels. It is possible that the pattern of deterioration is simply due to the lengthy follow-up period in the current study, in which couples were followed over an 18- (New Jersey and New York) or 34-month (Indiana and Ohio) period; similar studies showing improvements in relationship quality relative to baseline have measured change over a much shorter period. However, it is also possible that the unique context of incarceration is more likely to be associated with a pattern of deterioration in relationship quality over time, given the numerous stressors facing already disadvantaged couples during incarceration and after the male partner's release.

#### Relationship Quality Decline in General Population Studies

Decline in intimate relationship quality over time in the general public has been studied and documented in the existing literature. Several longitudinal studies of married, non-justice-involved couples found that relationship quality (as assessed by self-reported measures of happiness, communication, and conflict, among others) declined consistently over multi-year periods. Two multi-decade longitudinal studies of married couples found declines in relationship quality across all time points (Glenn, 1998; VanLangingham, Johnson & Amato, 2001). A 31-year study found that women's self-reported marital happiness and marital communication declined from year to year in a linear manner; conflict also declined but not in a linear manner (following marriage, it initially improved but then ultimately declined; James, 2014). Together, these studies support a model of relationship quality decline over time. This is increasingly replacing an earlier belief that relationships follow a "U-shaped" trajectory in which quality initially declines and subsequently improves.

# Chapter 6. Impacts on Parenting and Coparenting Outcomes

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## Chapter Overview

### *Summary of Approach*

This chapter presents findings on the effects of the couples-based healthy relationship intervention on parenting and coparenting outcomes in the four impact sites. Summary results for selected outcomes are highlighted in this chapter, including parent-child relationship quality, self-rating as a parent, and whether decisions about the focal child are made jointly by both members of the couple. Several additional parenting-related outcomes (e.g., parental warmth, partner fulfillment of coparenting responsibilities) were explored as additional outcomes. A description of the measurement of all outcomes, as well as all detailed findings for each, are included in **Appendix D**.

Findings are based on the two analytic techniques used to assess program impact. The first set of findings are **comparisons of weighted means between treatment and comparison men and women at each follow-up time point**. Next, we present the results of the latent growth curve models, which **compare the trajectories of treatment and comparison couples over the entire study follow-up period**. These findings show whether men, women, and couples who received the intervention had better outcomes at the 9-, 18-, and, in Indiana and Ohio, 34-month follow-up waves than men, women, and couples who received “treatment as usual.” These comparisons control for baseline values of each outcome and adjust for both selection and attrition bias (see **Chapter 3** for additional details).

Detailed tables showing the actual weighted means, p values, and other statistics for all comparisons summarized in this chapter are included in **Appendix D**. The appendix also presents the results of the sensitivity analyses, in which the role of the male partner’s community exposure is explored using both statistical techniques, and the results of the factor analysis, in which the individual outcomes in the parenting and coparenting domain are

### **Connecting Parenting and Coparenting Impacts to the Programming Evaluated**

All four impact sites provided parenting education to fathers (the New Jersey program also included partners in its parenting education course). Some also promoted father-child contact during incarceration. In some sites, both the treatment and comparison fathers participated in these parenting courses or had access to other parenting courses. For more detail see **Chapter 2**. The impact study was designed to evaluate the couples-based program components in each site and not the parenting component of the OFA-funded program. Therefore, it was expected that the study was unlikely to detect substantial differences between treatment and comparison couples on parenting and coparenting outcomes.

grouped into three empirically distinct “factors” underlying the outcomes and both sets of analyses (comparison of weighted means and latent growth curve modeling) are conducted at the factor level to see the overall pattern of findings in this domain.

### *Summary of Findings by Site*

#### **Indiana**

The healthy relationship retreats delivered within the character- and faith-based housing prison units were associated with positive, moderate treatment effects on several coparenting outcomes as well as on fathers’ involvement with their focal children.

- Men who participated in the healthy relationship retreats had more positive outcomes related to parenting and coparenting than men in the comparison group. Consistently across the 34-month follow-up period, treatment group fathers were more likely than comparisons to make decisions about their focal children jointly with their survey partners. Among fathers who were released from incarceration, those in the treatment group were more likely to financially support their focal children, do frequent activities with their focal children, and report that the couple and focal child did family-oriented activities and enjoyed time together. Additional positive parenting effects were evident at individual follow-up waves. Only one negative treatment effect was found in the parenting and coparenting domain for fathers in Indiana: those who participated in the retreats were less likely to live with any of their children at the 9-month interview wave than comparison fathers.
- Among women, those who participated in the retreats were consistently more likely to report that the father provided financial support for the focal child (among those whose partners got released). Positive findings evident at individual follow-up waves were that mothers in the treatment group were more likely to report that the couple made decisions about the focal child jointly, that the father lived with the focal child (among those whose partners got released), and that the father sent mail to and received mail from the focal child (among those whose partners remained incarcerated). One negative finding was evident for parenting and coparenting outcomes among mothers in Indiana: those in the treatment group expressed less warmth/affection toward their focal children than those in the comparison group at the 34-month interview wave.
- The couples-based latent growth curve models found that treatment couples had better trajectories for several outcomes in this domain. They were more likely than comparison couples to make joint decisions about their focal children and to perceive one another as fulfilling their parenting responsibilities. After the father’s release, treatment couples were also more likely to report that he lived with, provided financial support for, and did frequent activities with his focal children, and that the couple and focal child did family-oriented activities and enjoyed time together. Two negative effects were found in this domain: treatment couples expressed less warmth/affection toward the focal child and were less

likely to report that the father sent mail to the focal child (during incarceration) than comparison couples.

### **Ohio**

Enrollment in the couples' communication course was not associated with sustained positive treatment effects in parenting and coparenting quality over the 34-month follow-up period. A few positive effects emerged for men at individual follow-up waves, but the other significant effects for men, women, and couples were negative.

- Among men, there were few significant differences in outcomes between fathers who enrolled in the couple communication course and fathers who were on a waiting list for the program in the parenting and coparenting quality domain. However, in at least one follow-up wave, fathers in the treatment group did report more parental warmth/affection toward their children, and, among those who remained incarcerated, were more likely to receive mail from their focal children. One negative effect was found for men: fathers in the treatment group were less likely than comparison fathers to send mail to the focal child (among fathers who remained incarcerated) at the 9-month follow-up wave.
- For women, only one significant difference between treatment and comparison women in parenting and coparenting outcomes was found, and it was a negative treatment effect. Relative to mothers in the comparison group, mothers in the treatment group were less likely to perceive their partners as fulfilling their parenting responsibilities at the 34-month follow-up period.
- Couples-based analyses found only one significant difference between treatment and comparison couples with regard to parenting and coparenting outcomes (a negative effect): treatment couples were less likely to perceive their partners as fulfilling their parenting responsibilities than comparison couples.

### **New Jersey**

Men and women who received the couples' healthy relationship education and case management services generally did not have better parenting and coparenting outcomes than the comparison group over the 18-month follow-up period. Several negative treatment effects were evident in this domain.

- For men, the only significant differences between fathers who enrolled in the program and the matched comparison group of fathers in this domain were negative. At the 9-month follow-up interview, treatment fathers were less likely than comparison fathers to live with any of their children after their release and were less likely to perceive their partners as fulfilling parenting responsibilities.
- The findings for women were similar. Mothers in the treatment group were less likely than comparison mothers to report that the father was living with the focal child after his

release. Treatment group mothers also reported less joint decision making about the focal child, less expression of warmth/affection toward the child, less likelihood of perceiving the father as fulfilling his parenting responsibilities, less likelihood of reporting that the father was providing financial support for the child, less frequent family-oriented activities with the child, and less time enjoyed together as a family than comparison mothers.

- The couples-based analyses found mixed results for parenting and coparenting outcomes. Although treatment couples did better than comparison couples over time in their self-ratings as parents, they did worse with regard to the father having any personal visits with the focal child (among couples in which the father remained incarcerated).

## **New York**

Effects on parenting and coparenting outcomes for men and women who participated in healthy relationship seminars were largely nonsignificant over the 18-month follow-up period but included scattered positive and negative findings.

- For men, the only significant treatment effects within the parenting and coparenting domain were negative: treatment group fathers were less likely to send mail to (at the 18-month follow-up period) or receive mail from (at the 9-month follow-up period) the focal child than comparison fathers (among those who remained incarcerated).
- For women, one positive treatment effect was found in this domain: at the 9-month follow-up wave, mothers who received the treatment were more likely to report that the couple made decisions about the focal child jointly. However, they also provided a more negative rating of themselves as parents (at the 9-month follow-up wave) than comparison mothers—a negative treatment effect.
- The couples-based analysis found one positive treatment effect: couples who participated in the seminars were more likely to report that the father lived with the focal child after release than comparison couples.

The remainder of this chapter presents more detailed results from the wave-by-wave comparisons of weighted means (for the total samples of men and women) followed by results of trajectory analyses (for couples) for parenting and coparenting outcomes. The couples-based trajectory models are based on a larger number of sample members than the comparison of weighted means approach because of the manner in which missing data are handled (see **Chapter 3** for additional details). Because of these differences in the three sets of samples (men, women, and couples) and the fact that all analyses were based on self-reported interview data (in which men and women could have provided different responses to the same survey question), findings for men, women, and couples may not be consistent.

## Differences in Means by Wave

### Total Male Sample

The general pattern of findings for men in the parenting and coparenting domain is one of positive treatment effects for fathers in Indiana and a lack of effects in the other sites. This pattern can be seen in the summary results for selected outcomes, shown in **Exhibit 6-1**.<sup>40</sup>

**Exhibit 6-1. Treatment-Comparison Differences in Selected Parenting and Coparenting Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Parent-child relationship quality								
9M	n.s.	0.12	n.s.	0.12	n.s.	-0.10	n.s.	-0.26
18M	+	0.25	n.s.	-0.10	n.s.	0.07	n.s.	0.00
34M	n.s.	0.13	n.s.	-0.04	n/a		n/a	
Self-rating as a parent								
9M	n.s.	0.05	n.s.	0.00	n.s.	0.23	n.s.	-0.19
18M	n.s.	-0.01	n.s.	-0.12	n.s.	0.05	n.s.	0.33
34M	n.s.	0.09	n.s.	0.02	n/a		n/a	
Decisions about focal child made jointly								
9M	+	0.42	n.s.	0.12	n.s.	-0.25	n.s.	-0.64
18M	n.s.	0.28	n.s.	-0.28	n.s.	-0.61	n.s.	0.21
34M	+	0.42	n.s.	0.30	n/a		n/a	
Sample sizes								
9M	470 (T=188, C=282)	470 (T=188, C=282)	455 (T=353, C=102)	455 (T=353, C=102)	151 (T=98, C=53)	151 (T=98, C=53)	100 (T=64, C=36)	100 (T=64, C=36)
18M	447 (T=183, C=264)	447 (T=183, C=264)	439 (T=330, C=109)	439 (T=330, C=109)	150 (T=97, C=53)	150 (T=97, C=53)	93 (T=62, C=31)	93 (T=62, C=31)
34M	422 (T=175, C=247)	422 (T=175, C=247)	440 (T=335, C=105)	440 (T=335, C=105)	n/a	n/a	n/a	n/a

n/a Not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/-/- Statistically significant negative impact at the .01/.05/.10 level.

<sup>40</sup> The exhibit illustrates whether each comparison is statistically significant. For significant findings, the degree of significance and the direction of the comparison are shown. Positive symbols indicate that the outcome was better for the treatment than the comparison group; negative symbols indicate that the outcome was worse for the treatment than the comparison group.

Indiana men who participated in the healthy relationship retreats had more positive outcomes related to parenting and coparenting than men in the comparison group. As shown in **Exhibit 6-1**, treatment fathers had significantly better relationships with their children than comparison fathers at the 18-month interview wave and were more likely to report that they and their survey partners made decisions about the focal child jointly at the 9- and 34-month interview waves. For example, at the 34-month interview wave, 30 percent of treatment fathers and 23 percent of comparison fathers reported joint decisionmaking about the focal child. Other findings (see **Appendix D, Exhibits D-2 through D-4** for summary results and **Exhibit D-40** for detailed findings for Indiana men) were that, among fathers who were released from incarceration, those in the treatment group were more likely to financially support their focal children, do frequent activities with their focal children, and report that the couple and focal child did family-oriented activities and enjoyed time together. In addition, treatment men were more likely than comparison men to perceive their survey partners as fulfilling parenting responsibilities at the 34-month wave. Among fathers who remained incarcerated, men in the treatment group were more likely than comparison men to report receiving any personal visits from the focal child at the 18-month interview wave. The effect sizes observed for parenting and coparenting outcomes were generally in the moderate range (with an average effect size of .51). Only one negative treatment effect was found in the parenting and coparenting domain for fathers in Indiana: those who participated in the retreats were less likely to live with any of their children at the 9-month interview wave than comparison fathers.

In Ohio, there were few sustained significant difference in outcomes between fathers who enrolled in the couple communication course and fathers who were on a waiting list for the program in the parenting and coparenting quality domain (see **Appendix D, Exhibits D-2 through D-4** for summary results and **Exhibit D-41** for detailed findings for Ohio men). However, fathers in the treatment group did report more parental warmth/affection toward their children at the 9-month interview wave than comparison fathers, and, among those who remained incarcerated, were more likely to receive mail from their focal children at the 34-month interview wave (57% of treatment men and 41% of comparison men reported receiving any mail from their focal child at the 34-month interview, which resulted in a large treatment effect for this comparison). One negative effect was found for men: fathers in the treatment group were less likely than comparison fathers to send mail to the focal child (among fathers who remained incarcerated) at the 9-month follow-up wave.

In New Jersey, the only significant differences between fathers who enrolled in the program and the matched comparison group of fathers in this domain were negative. At the 9-month follow-up interview, treatment fathers were less likely than comparison fathers to live with any of their children after their release (49% of treatment fathers compared to 73% of comparison fathers) and were less likely to perceive their partners as fulfilling parenting responsibilities. (See **Appendix D, Exhibits D-2 through D-4** for summary results and **Exhibit D-42** for detailed findings for New Jersey men.)

Similarly, in New York, the only significant treatment effects for the total male sample were negative: among fathers who remained incarcerated, treatment fathers were less likely to send

mail to (at the 18-month follow-up period) or receive mail from (at the 9-month follow-up period) the focal child than comparison fathers. (See **Appendix D, Exhibits D-2 through D-4** for summary results and **Exhibit D-43** for detailed findings for New York men.)

#### Perspectives from RIDGE Program Participants

A few Ohio RIDGE program participants interviewed for the MFS-IP qualitative sub-study credited the program with supporting their parenting relationships. In particular, participants cited the program's support for in-person contact with their children, such as sponsorship of special parent-child activity days and help arranging in-person visits from children during the incarceration.

*Those are memories we can make in here [prison]...I am proud of that memory, you know what I mean, because they acknowledged me as their dad. And I had fun with them...some of the questions they were asking were like, gosh, I don't know because I haven't been out there with them. You know, they had to tell me, and the more they told me, I think the closer that brought us together.*

One participant expressed how these occasional special visitation opportunities, outside the context of regular prison visitation, were particularly precious for him and his children:

*It was just a day when they would come in, like I said, and do arts and crafts, play games, just had a fun day where everybody could be loose and not so, you know, they are watching us. The girls could run around and not worry about some [correctional officer] saying something to them. They could be themselves.*

#### Total Female Sample

Overall, the predominant pattern across sites is that the couples-based program components being evaluated did not generally affect parenting or coparenting outcomes for women, although several positive treatment effects were evident in Indiana. The few significant effects in the other sites tended to be negative. **Exhibit 6-2** shows the findings for the selected outcomes among the total female sample.

In Indiana, women who participated in the retreats were more likely to report that the couple made decisions about the focal child jointly at the 18-month interviews than comparison women (22% of treatment women and 15% of comparison women), as shown in **Exhibit 6-2**. Other findings (see **Appendix D, Exhibits D-5 through D-7**, with detailed data for Indiana women shown in **Appendix D, Exhibit D-44**) were that treatment women were more likely than comparison women to report (at both the 18- and 34-month follow-up waves) that the father provided financial support for the focal child after his release. In addition, positive findings evident at individual follow-up waves were that mothers in the treatment group were more likely to report that the father lived with the focal child at the 34-month interview wave (among those whose partners got released), and that, at the 9-month interview wave, the father sent mail to and received mail from the focal child (among those whose partners remained incarcerated). In general, the positive treatment effects for women in Indiana were in the moderate range, with an average effect size of .65. One negative finding was evident for

**Exhibit 6-2. Treatment-Comparison Differences in Selected Parenting and Coparenting Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Parent-child relationship quality								
9M	n.s.	0.16	n.s.	0.06	n.s.	-0.19	n.s.	-0.12
18M	n.s.	-0.05	n.s.	0.01	n.s.	-0.04	n.s.	-0.34
34M	n.s.	0.03	n.s.	0.05	n/a		n/a	
Self-rating as a parent								
9M	n.s.	0.05	n.s.	-0.05	n.s.	0.12	-	-0.47
18M	n.s.	0.03	n.s.	0.05	n.s.	-0.69	n.s.	-0.61
34M	n.s.	0.01	n.s.	-0.14	n/a		n/a	
Decisions about focal child made jointly								
9M	n.s.	0.23	n.s.	-0.45	-	-0.89	+	1.19
18M	+	0.56	n.s.	-0.21	n.s.	-0.78	n.s.	0.94
34M	n.s.	0.41	n.s.	-0.06	n/a		n/a	
Sample sizes								
9M	381 (T=165, C=216)	381 (T=165, C=216)	383 (T=291, C=92)	383 (T=291, C=92)	123 (T=82, C=41)	123 (T=82, C=41)	69 (T=44, C=25)	69 (T=44, C=25)
18M	382 (T=161, C=221)	382 (T=161, C=221)	400 (T=305, C=95)	400 (T=305, C=95)	137 (T=87, C=50)	137 (T=87, C=50)	71 (T=45, C=26)	71 (T=45, C=26)
34M	369 (T=159, C=210)	369 (T=159, C=210)	402 (T=308, C=94)	402 (T=308, C=94)	n/a	n/a	n/a	n/a

n/a Not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/-/- Statistically significant negative impact at the .01/.05/.10 level.

parenting and coparenting outcomes among mothers in Indiana: those in the treatment group expressed less warmth/affection toward their focal children than those in the comparison group at the 34-month interview wave.

For women in the Ohio site, only one significant difference between treatment and comparison women in parenting and coparenting outcomes was found, and it was a negative treatment effect (see **Appendix D, Exhibits D-5 through D-7**, with detailed data for Ohio women shown in **Appendix D, Exhibit D-45**). Relative to mothers in the comparison group, mothers in the treatment group were less likely to perceive their partners as fulfilling their parenting responsibilities at the 34-month follow-up period.

In New Jersey, mothers in the treatment group were less likely than comparison mothers to report joint decisionmaking about the focal child at the 9-month interview wave (see **Exhibit 6-2**). Other significant findings were also negative (see **Appendix D, Exhibits D-5 through D-7**, with detailed data for New Jersey women shown in **Appendix D, Exhibit D-46**). At the 9-month interview wave, treatment women reported less parental warmth and were less likely to perceive their partners as fulfilling parenting responsibilities than comparison women, and were less likely than comparison women to report that the father was living with and providing financial support to the focal child after his release. At both the 9- and 18-month interview waves, treatment group mothers also reported less frequent family-oriented activities with the child, and less time enjoyed together as a family than comparison mothers.

For women in New York, one positive treatment effect was found in this domain. At the 9-month follow-up wave, mothers who received the treatment were more likely to report that the couple made decisions about the focal child jointly than mothers in the comparison group (41% compared to 17%, a difference associated with a large effect size). However, they also provided a more negative rating of themselves as parents (at the 9-month follow-up wave) than comparison mothers—a negative treatment effect. (See **Appendix D, Exhibit D-5 through D-7**, with detailed data for New York women shown in **Appendix D, Exhibit D-47**.)

## Differences in Treatment-Comparison Couple Trajectories over Time

The couples-based trajectory modeling demonstrated a similar pattern to the comparison of weighted means approach: positive treatment effects in Indiana and very few impacts on parenting and coparenting outcomes in the other sites. **Exhibit 6-3**<sup>41</sup> summarizes findings from the latent growth curve models for the selected variables within the parenting and coparenting domain. **Exhibits 6-4 through 6-6** show the nature of the trajectories over time for these outcomes for treatment and comparison men and women in each site, along with the couples' averages. Parent self-ratings and parent-child relationship quality were fairly stable over time, while trajectories for joint decisionmaking tended to show deterioration over time. Summary results and trajectory charts for all parenting and coparenting outcomes are shown in **Appendix D**.

For Indiana couples, the latent growth curve models found that treatment couples did better on several outcomes in this domain. As shown in **Exhibit 6-3**, they had significantly more positive trajectories over time than comparison couples with regard to joint decisionmaking about the focal child. In addition (see **Appendix D, Exhibits D-8, D-14, and D-22** for summary findings from the latent growth curve models and trajectory graphics and **Exhibit D-48** for detailed findings for Indiana couples), they had more positive trajectories for perceiving one another as fulfilling parenting responsibilities and several dimensions of post-release family life

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<sup>41</sup> The summary indicators illustrate whether the intercepts (i.e., baseline values) were significantly different between treatment and comparison couples in each site. The exhibit also shows whether the slopes (i.e., rates of change over time) differed significantly (in either a positive or negative manner) for treatment and comparison couples in each site.

including the father's living with the focal child, the father's financial support for the focal child, the father's frequency of activities with the focal child, the frequency of family-oriented activities among the couple and focal child, and the frequency of time together as a family. However, the effect sizes for the couples-based models tended to be small,<sup>42</sup> and two negative effects were found in this domain: treatment couples had more negative trajectories than comparison couples for warmth/affection expressed toward the focal child and the father's sending mail to the focal child (during incarceration).

In Ohio, couples-based analyses found only one significant difference between treatment and comparison couples with regard to parenting and coparenting outcomes (a negative effect): treatment couples had more negative trajectories than comparison couples over time for perceiving one another as fulfilling their parenting responsibilities (see **Appendix D, Exhibits D-8, D-14, and D-22** for summary findings from the latent growth curve models and trajectory graphics and **Exhibit D-49** for detailed findings for Ohio couples).

For New Jersey couples, the latent growth curve models found mixed results for parenting and coparenting outcomes. Although treatment couples had more positive trajectories over time than comparison couples for their self-ratings as parents (see **Exhibit 6-3**), they had more negative trajectories for the father's likelihood of having any personal visits with the focal child (among couples in which the father remained incarcerated). This finding is shown in **Appendix D, Exhibit D-22**, with detailed findings for New Jersey couples shown in **Exhibit D-50**).

In New York, the couples-based analysis found one positive treatment effect: couples who participated in the seminars had more positive trajectories over time than comparison couples with regard to the father's likelihood of living with the focal child after release. This finding is shown in **Appendix D, Exhibit D-14**, with detailed findings for New Jersey couples shown in **Exhibit D-51**).

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<sup>42</sup> As noted in **Chapter 5**, smaller effect sizes are expected for the latent growth curve models than the comparison of weighted means because the effect sizes based on the former approach convey the magnitude of the treatment effect on **changes** in the outcome over the entire follow-up period, whereas effect sizes based on the latter convey the magnitude of the treatment effect on the outcome itself at a given time point.

**Exhibit 6-3. Treatment-Comparison (T-C) Differences in Parenting and Coparenting Outcomes at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Parent self-rating	n.s.	0.068	n.s.	-0.025	n.s.	-0.031	n.s.	0.046	-	-0.1	+	0.099	n.s.	-0.075	n.s.	0.042
Parent child relationship	n.s.	-0.006	n.s.	0.029	n.s.	-0.02	n.s.	0	n.s.	-0.076	n.s.	-0.016	n.s.	-0.022	n.s.	-0.011
Joint decisionmaking	n.s.	-0.007	++	0.086	n.s.	-0.037	n.s.	0.012	--	-0.135	n.s.	-0.084	n.s.	-0.007	n.s.	0.069
Sample sizes	621	621	621	621	553	553	553	553	276	276	276	276	140	140	140	140

Note: Analyses were limited to couples for which at least one member of the couple completed one follow-up interview.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

--/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit 6-4. Trajectories for Parent Self-rating Based on Latent Growth Curve Model, by Site and Group

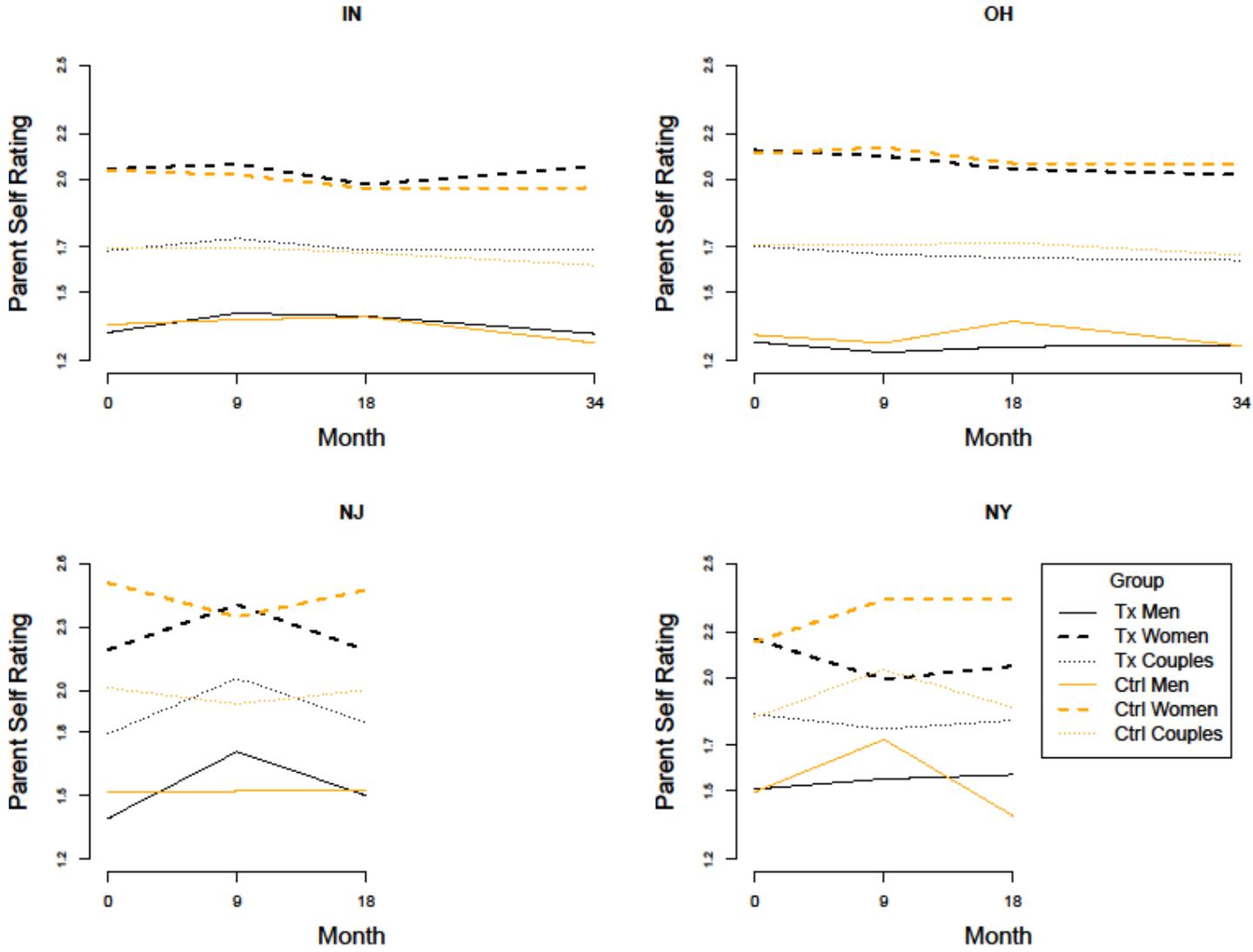


Exhibit 6-5. Trajectories for Parent-Child Relationship Based on Latent Growth Curve Model, by Site and Group

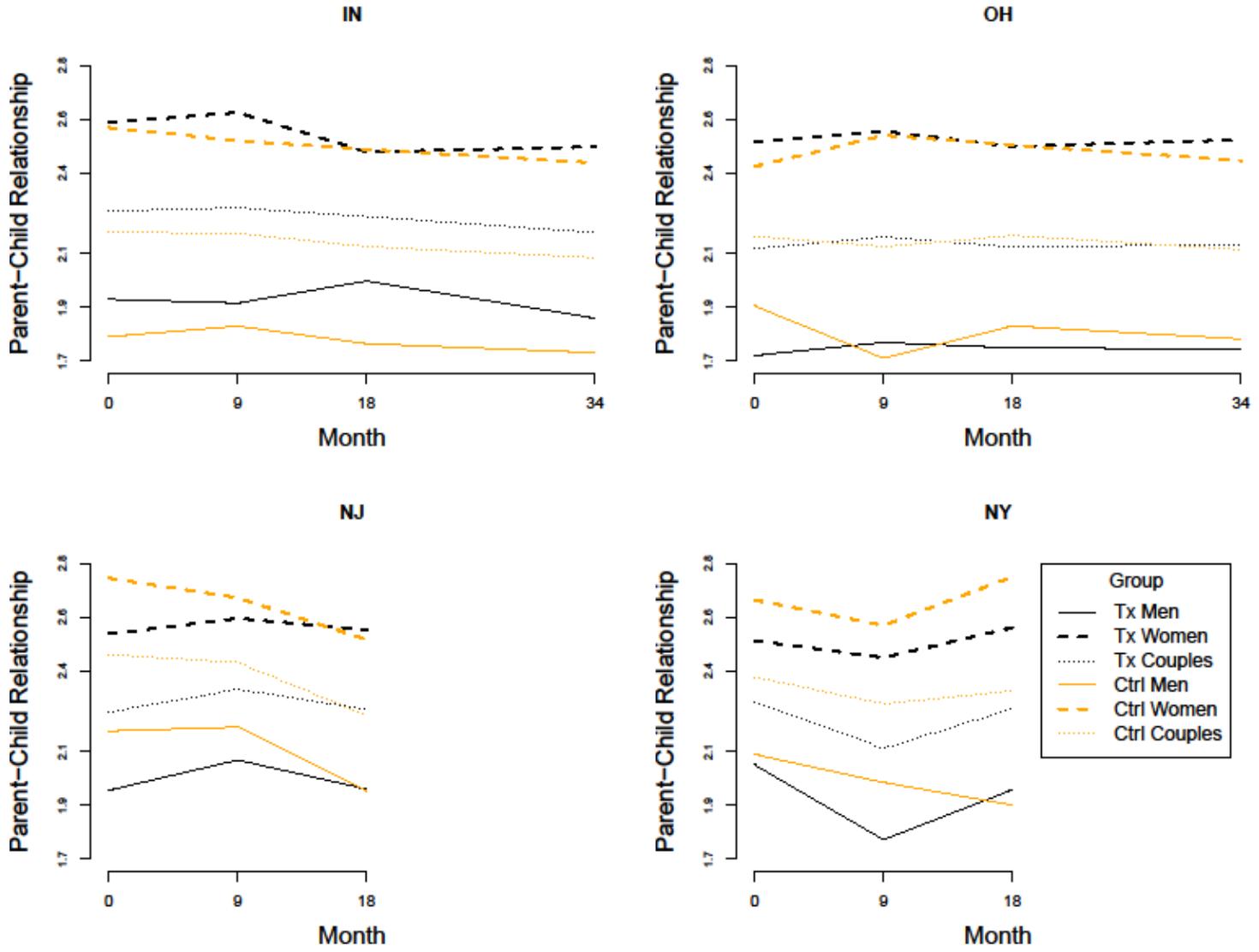
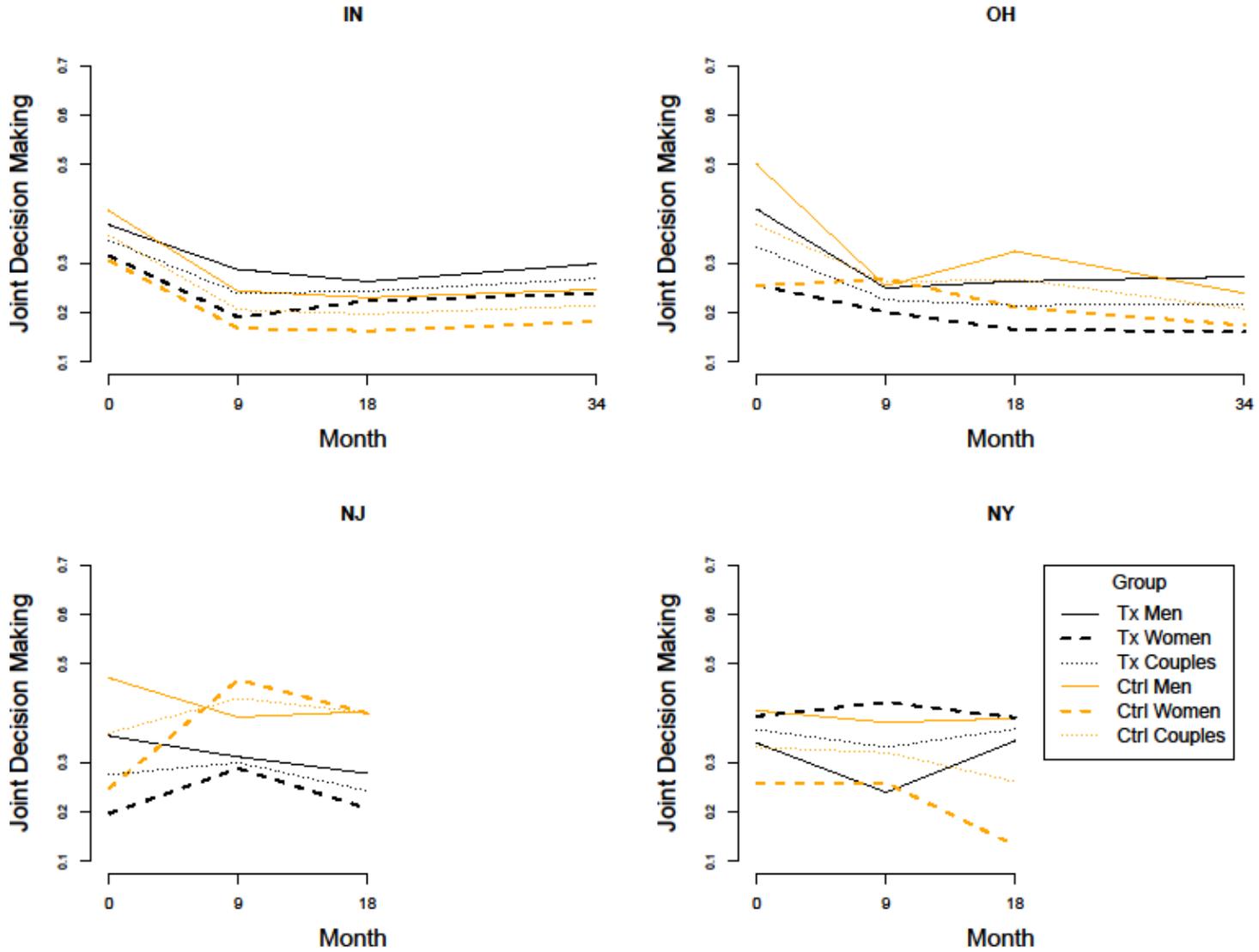


Exhibit 6-6. Trajectories for Joint Decisionmaking Based on Latent Growth Curve Model, by Site and Group



## Synthesis

The findings summarized in this chapter indicate that participation in the couples-based demonstration programming funded by OFA did not generally improve parenting and coparenting outcomes. Because the impact study was designed to evaluate the couples-based program components in each site and not the parenting component of the OFA-funded program, it was expected that the study was unlikely to detect substantial differences between treatment and comparison couples on parenting and coparenting outcomes. However, because parenting and coparenting outcomes can be affected by improved relationships between the parents (see Cowan and Cowan, 2009), we considered this a plausible pathway worthy of exploration.

Indeed, the Indiana couples' healthy relationship retreats did appear to be associated with positive, moderate treatment effects for several coparenting outcomes (joint decisionmaking, partner fulfillment of parenting responsibilities, frequency of family activities, and time enjoyed as a family). Further, among couples who participated in the retreats, the fathers' involvement with the focal child after his release from incarceration (including coresidence, financial support, and frequency of activities with the child) appears to be more extensive—relative to pre-incarceration involvement—than that of fathers in couples who did not participate in the seminars. The findings observed for parenting and coparenting outcomes in Indiana suggest that the retreat's influence on the couple's relationship may have been broad enough to improve both the coparenting and intimate relationship dynamics within the couples.

In the remaining sites, the predominant pattern is that participation in couples-based program components did not influence parenting or coparenting outcomes.

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# Chapter 7. Impacts on Employment, Drug Use, and Recidivism Outcomes

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## Chapter Overview

### *Summary of Approach*

This chapter presents findings on the effects of the couples-based healthy relationship intervention on an additional set of outcomes related to employment, drug use, and among the male sample, recidivism. In addition to the self-reported outcomes, an additional outcome was explored for the total male sample only: any reincarceration in a state prison. All of these outcomes are limited to couples in which the male partner had some community exposure, i.e., was released from prison prior to at least one of the follow-up interviews.<sup>43</sup> A description of the measurement of all outcomes, as well as all detailed findings for each, are included in **Appendix E**.

As with the previous two chapters, findings are based on the two analytic techniques used to assess program impact. The first set of findings are **comparisons of weighted means** between **treatment and comparison men and women** at **each follow-up time point**. Next, we present the results of the latent growth curve models, which **compare the trajectories of treatment and comparison couples** over the **entire study follow-up period**. These findings show whether men, women, and couples who received the intervention had better outcomes at the 9-, 18-, and, in Indiana and Ohio, 34-month follow-up waves than men, women, and couples who received “treatment as usual.” These comparisons also control for sample members’ baseline values of each outcome and adjust for selection and attrition bias. Detailed tables showing the actual weighted means, p values, and other statistics for all comparisons summarized in this chapter are included in **Appendix E**.

#### **Connecting Employment, Drug Use, and Recidivism Impacts to the Programming Evaluated**

The impact of the couples-based healthy relationship intervention on employment, drug use, and recidivism was explored due to the importance of these outcomes to policymakers. With the exception of reducing drug use in the New Jersey site, the healthy relationship programming in the impact evaluation sites did not focus on helping couples abstain from future criminal activity, getting jobs, or addressing chemical dependency. Although research provides a theoretical basis for these outcomes being indirectly impacted through improvements in proximal outcomes such as relationship quality, substantial treatment effects were not anticipated for employment, drug use, or recidivism outcomes.

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<sup>43</sup> Because of the smaller sample size available for these analyses, statistical power for detecting treatment effects in this domain was lower than in the other domains.

## *Summary of Findings*

### **Indiana**

The healthy relationship retreats delivered within the character- and faith-based housing prison units were associated with improvements in employment status for men and women. Men who participated in the retreats were more likely to be employed at the 34-month interview wave than those in the comparison group, and women in the treatment group were more likely to be employed than comparison women at all follow-up waves. Participation in the retreats was not associated with impacts on drug use or recidivism outcomes.

### **Ohio**

Enrollment in the couples' communication course was not associated with improvements in employment, substance use, or recidivism. The analyses of these outcomes for men, women, and couples revealed only two significant treatment effects (both negative findings): at the 18 month follow-up wave, men in the treatment group were more likely to self-report having been reincarcerated in a jail or prison than men in the comparison group. In addition, men in the treatment group were more likely to have been reincarcerated in state prison (based on administrative data) within 24 months of release than men in the comparison group.

### **New Jersey**

Men and women who received the couples' healthy relationship education and intensive case management services did not have better employment or substance use outcomes than the comparison group over the 18-month follow-up period. However, positive effects were found for recidivism outcomes. Men who enrolled in the program were less likely to self-report having experienced a rearrest at the 18 month follow-up interview than men in the comparison group. In addition, they were less likely than comparison men to have been reincarcerated in a state prison (based on administrative data) within 12 months of release.

### **New York**

Effects of the healthy relationship seminars evaluated in New York were nonsignificant for employment, substance use, and, for men, recidivism outcomes.

## **Treatment-Comparison Differences by Wave**

### *Total Male Sample*

Few significant treatment effects were observed for men for employment, substance use, and recidivism outcomes (see **Exhibit 7-1**). However, in Indiana, men in the treatment group were more likely to report current employment at the 34-month follow-up wave; specifically, 70 percent of treatment men and 60 percent of comparison men were employed at the time of the 34-month interview, a moderate treatment effect. In New Jersey, men in the treatment

**Exhibit 7-1. Treatment-Comparison Differences in Substance Abuse, Employment, and Recidivism Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Currently employed								
9M	n.s.	0.42	n.s.	0.17	n.s.	-0.61	*	*
18M	n.s.	0.07	n.s.	-0.19	n.s.	-0.31	n.s.	-0.51
34M	+	0.47	n.s.	-0.26	n/a	*	n/a	*
No illicit drug use (excluding marijuana)								
9M	n.s.	-0.08	n.s.	-0.64	n.s.	0.04	*	*
18M	n.s.	0.29	n.s.	-0.15	n.s.	0.57	n.s.	-0.68
34M	n.s.	-0.54	n.s.	-0.40	n/a	*	n/a	*
No rearrest <sup>a</sup>								
9M	n.s.	0.77	n.s.	-0.72	n.s.	0.63	*	*
18M	n.s.	0.59	n.s.	-0.64	+	0.82	n.s.	-10.16
34M	n.s.	0.17	n.s.	-0.28	n/a	*	n/a	*
No self-reported reincarceration <sup>a</sup>								
9M	n.s.	0.31	n.s.	-0.13	n.s.	0.62	*	*
18M	n.s.	0.52	---	-1.64	n.s.	0.63	n.s.	-0.18
34M	n.s.	-0.17	n.s.	0.09	n/a	*	n/a	*
No reincarceration in state prison (administrative data) <sup>a</sup>								
Within 12 months of release	n.s.	-0.05	n.s.	-0.37	+	0.89	n.s.	0.66
Within 24 months of release	n.s.	-0.07	-	-0.64	n.s.	0.02	n.s.	0.84
Sample Sizes								
9M	138 (T=67, C=71)	138 (T=67, C=71)	121 (T=102, C=19)	121 (T=102, C=19)	146 (T=85, C=61)	146 (T=85, C=61)	16 (T=8, C=8)	16 (T=8, C=8)
18M	257 (T=112, C=145)	257 (T=112, C=145)	208 (T=156, C=52)	208 (T=156, C=52)	164 (T=101, C=63)	164 (T=101, C=63)	32 (T=15, C=17)	32 (T=15, C=17)
34M	377 (T=164, C=213)	377 (T=164, C=213)	285 (T=220, C=65)	285 (T=220, C=65)	n/a	n/a	n/a	n/a

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

\*Indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

group were less likely than the comparison group to self-report having had any rearrests at the 18-month follow-up interview (89% of treatment men reported no rearrests at the 18-month follow-up period compared to 77% of comparison men). In addition, treatment men in New Jersey were less likely than comparison men to have been reincarcerated in a state prison within 12 months of release based on administrative data. But in Ohio, men in the treatment group were *more* likely than the comparison group to self-report having been incarcerated at 18 months (71% of treatment men and 93% of comparison men reported having no incarceration at this time point). A similar pattern was found with administrative data; men in the treatment group were more likely than those in the comparison group to have been reincarcerated in state prison within 24 months of release (78% of treatment men and 88% had no reincarceration in state prison based on administrative data). No differences in men's illicit drug use were evident in any site. Site-specific, detailed findings for these outcomes are shown in **Appendix E, Exhibits E-1 through E-4**.

**Interpreting Differences in Findings Based on Self-Reported vs. Official Reincarceration Data**

The findings generated from self-reported data and administrative corrections data on reincarceration were generally consistent with one another despite important differences in the measures. First, the official reincarceration measure only reflected new incarcerations in a state prison whereas the self-reported measure included new incarcerations in a county jail as well as state prisons. Second, there were slight differences in the time periods examined and in the specific sample members included in the analyses as not all sample members were positively identified in DOC databases. These differences suggest caution in directly comparing the two sets of findings.

*Total Female Sample*

For women, employment and illicit drug use outcomes were explored. The only significant treatment effect in this domain was found in Indiana. In this site, women who participated in the retreats were more likely than comparison women to be employed at the 9-, 18-, and 34-month follow-up waves (**Exhibit 7-2**). At the 34-month interview, 70 percent of treatment women were employed compared to 59 percent of comparison women--a moderate treatment effect. Site-specific, detailed findings for these outcomes are shown in **Appendix E, Exhibits E-5 through E-8**.

**Exhibit 7-2. Treatment-Comparison Differences in Employment and Substance Abuse Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Currently employed								
9M	++	0.52	n.s.	0.04	n.s.	-0.58	n.s.	-0.32
18M	++	0.54	n.s.	-0.11	n.s.	-0.12	n.s.	0.69
34M	++	0.53	n.s.	-0.04	n/a		n/a	
No illicit drug use (excluding marijuana)								
9M	n.s.	0.28	n.s.	-0.08	n.s.	0.55	n.s.	0.68
18M	n.s.	-0.01	n.s.	0.12	n.s.	0.54	n.s.	1.98
34M	n.s.	0.13	n.s.	0.22	n/a		n/a	
Sample sizes								
9M	532 (T=247, C=285)	532 (T=247, C=285)	462 (T=342, C=120)	462 (T=342, C=120)	163 (T=102, C=61)	163 (T=102, C=61)	105 (T=73, C=32)	105 (T=73, C=32)
18M	540 (T=243, C=297)	540 (T=243, C=297)	485 (T=361, C=124)	485 (T=361, C=124)	180 (T=108, C=72)	180 (T=108, C=72)	109 (T=75, C=34)	109 (T=75, C=34)
34M	525 (T=238, C=287)	525 (T=238, C=287)	486 (T=363, C=123)	486 (T=363, C=123)	n/a	n/a	n/a	n/a

n/a Not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

--/-/- Statistically significant negative impact at the .01/.05/.10 level.

## Differences in Treatment-Comparison Trajectories over Time

The trajectories of treatment and comparison couples' drug use (beginning with pre-incarceration drug use measured at the baseline interview) were compared using latent growth curve modeling. **Exhibit 7-3** shows the results of the couples-based latent growth curve models.<sup>44</sup> The results suggest no impact of the couples-based programming on illicit drug use. However, the trajectories for each group generally show higher abstinence over time relative to pre-incarceration use (see **Exhibit 7-4**). Site-specific, detailed findings for this outcome are shown in **Appendix E, Exhibits E-9 through E-12**.

<sup>44</sup> The summary indicators in the exhibit illustrate whether the intercepts (i.e., pre-incarceration values) were significantly different between treatment and comparison couples in each site at baseline. The exhibit also shows whether the slopes (i.e., rates of change over time) differed significantly for treatment and comparison couples in each site.

**Exhibit 7-3. Treatment-Comparison (T-C) Differences in Illicit Drug Use at Baseline (Intercept) and Change over time (Slope) for Couples and Men, Based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
No illicit drug use (excluding marijuana)	n.s.	0.11	n.s.	-0.023	n.s.	-0.010	n.s.	0.006	n.s.	-0.067	n.s.	0.083	NoC	NoC	NoC	NoC
Samples sizes	686	686	686	686	687	687	687	687	309	309	309	309	NoC	NoC	NoC	NoC

Note: Analyses were limited to couples for which at least one member of the couple completed one follow-up interview.

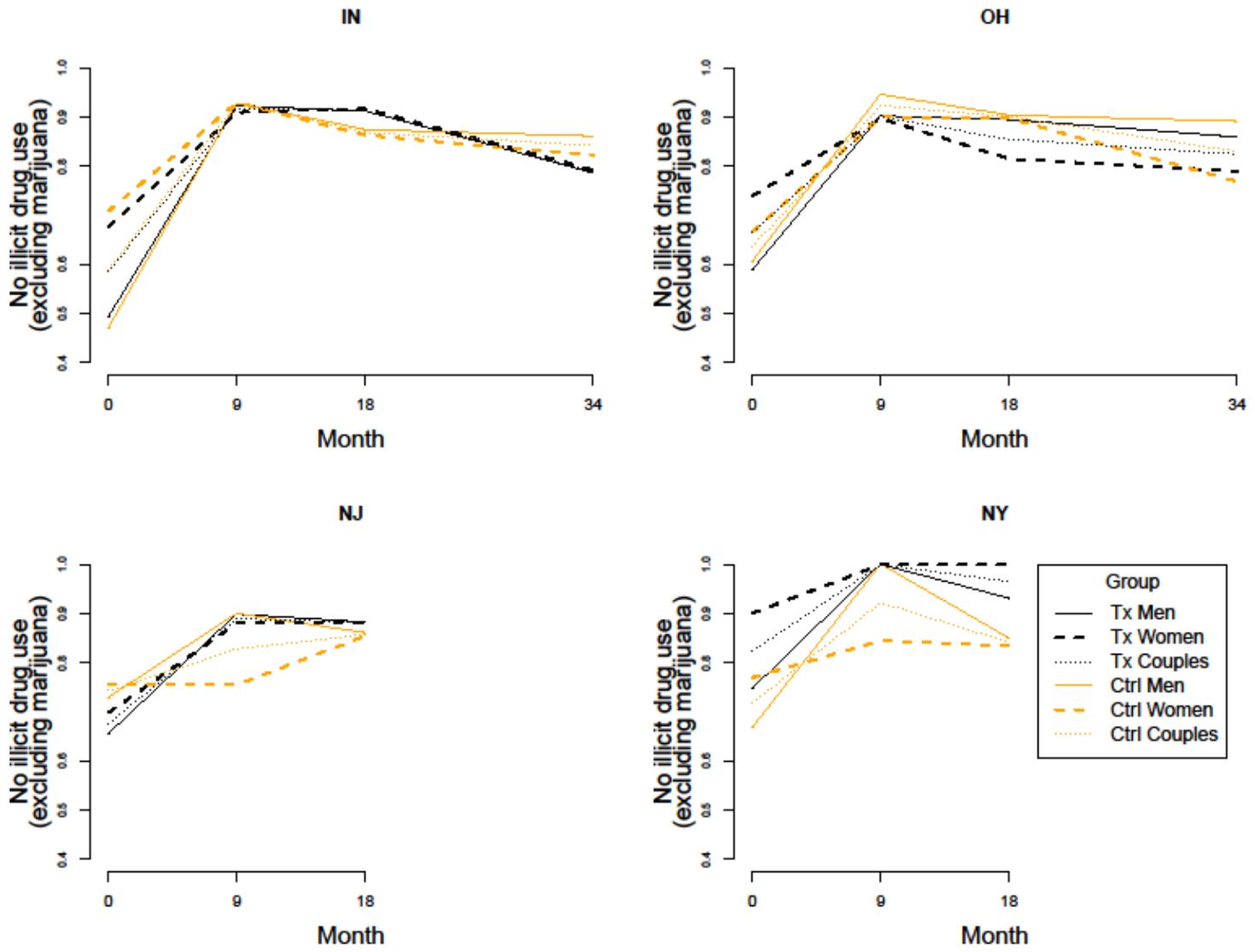
NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

--/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit 7-4. Trajectories for Illicit Drug Use Based on Latent Growth Curve Model, by Site and Group



## Synthesis

Although employment was not a focus of the couples-based program components that were evaluated, this outcome was explored for couples in which the male partner was released because of HHS interest in the outcome. Economic stability was an allowable activity under the OFA demonstration funding stream and continues to be a policy priority for the Healthy Marriage/Responsible Fatherhood demonstrations. The results indicated that among Indiana couples (particularly the female members), those who participated in the healthy relationship retreats were more likely to be employed at follow-up than comparison couples. No treatment effects for employment were found in the other sites.

Illicit drug use was not affected by the couples-based programming in any site. This finding was not surprising because drug use was not a focus of the couples-based program components that were evaluated, although it was included as a component of the New Jersey program.

Given the importance of recidivism as a potential outcome of any corrections-based program, several recidivism outcomes were explored for men who were released from incarceration, including self-reported rearrest, self-reported reincarceration, and reincarceration in a state prison (based on administrative data). Across the sites, mixed results were found. Positive treatment effects were found for New Jersey in both the self-reported and administrative data based outcomes, although not across all time periods. Desistance from recidivism was not an explicit goal of the couples-based program components being evaluated; however, in New Jersey, the more holistic programming was intended as a support system for individuals being released from prison without supervision. In the other programs, where only the effect of the couples-based healthy relationship intervention was evaluated, some negative treatment effects were found in Ohio and no treatment effects were observed in Indiana or New York.

# Chapter 8. Discussion

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## Key Findings from MFS-IP Impact Evaluation

The goal of the MFS-IP impact evaluation component was to assess whether delivering couples-based family strengthening programming within the context of particular correctional settings was successful in fostering healthy relationships, strengthening families, and easing community reentry. While the evaluated programs were diverse and generally provided a wide range of family strengthening and parenting services, the impact evaluation focused on effectiveness of the couples-based interventions. Potential outcomes were identified through a review of existing research on related programs, including impact studies of healthy marriage programming and reentry programming, and included those that prior work suggested might be directly or indirectly impacted. For the evaluation, which used matched comparison and wait list designs specific to each site, program participants and comparable couples were recruited in Indiana, Ohio, New York, and New Jersey.<sup>45</sup> Respondents participated in detailed interviews about family structure, experiences with incarceration, service receipt, intimate relationships, parenting and coparenting, financial well-being, substance use, employment, and recidivism, among other reentry-related experiences at baseline and at the 9-, 18-, and (in Indiana and Ohio) 34- month follow-up waves.

### *Dual Approach to Impact Analysis Showed Impacts in Indiana, but Limited Effects Elsewhere*

Using the rich longitudinal, couples-based dataset that resulted from this data collection, the impact analysis used two approaches to assessing program impacts on a number of outcomes in the domains of intimate relationships; parenting and coparenting; and employment, drug use, and recidivism. The first approach involved comparisons of weighted mean values on these outcomes for treatment and comparison group members, controlling for baseline values of each outcome. Such comparisons were made for men and women, in each site, and at each interview wave. The second approach involved latent growth curve modeling, to compare the trajectories of treatment couples in each site to those of comparison couples over time with regard to these outcomes.

Except for Indiana, both approaches revealed limited impacts on the outcomes that were explored. Individual sites varied in the effects they produced (or did not produce) on study outcomes; there were no consistent patterns across the site-specific impact findings regarding programs' effects on family relationships, substance use, employment, or recidivism based on comparisons of weighted mean values for treatment and comparison groups. Within sites, only Indiana showed consistent effects on a number of intimate relationship quality and parenting and coparenting outcomes, as well as employment status. Modeling of couple trajectories

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<sup>45</sup> As noted, study participants were also recruited and interviewed in a fifth site, Minnesota, which was not included in the impact evaluation due to small sample size.

generally showed that intimate relationships tended to deteriorate over time, suggesting that positive treatment effects indicate that the couples-based program components generally delayed or ameliorated deterioration, rather than facilitated improvement

### *The Effects in Indiana were Generally Sustained over Time and Stronger for Men than for Women*

Comparisons of weighted means between the treatment and comparison groups in Indiana showed a number of positive treatment effects on family relationships (including intimate relationship quality, parenting, and coparenting) and employment (for women) at all three follow-up waves. Effect sizes for positive treatment effects were generally in the moderate range and were larger for men than women, on average. Latent growth curve modeling revealed that over time, treatment group couples had better trajectories than comparison group couples for various relationship measures (including relationship status, exclusivity, coresidence after release) and some parenting and coparenting measures as well (including father-child coresidence, financial support, and activity frequency; joint coparent decisionmaking; partner's fulfillment of coparenting responsibilities; coparenting activity frequency; frequency of enjoying family time). The size of the treatment and comparison group samples in Indiana may have allowed us to detect smaller differences between treatment and comparison groups than was possible in other sites.

### *Effects in Ohio, New Jersey and New York Were Mixed, Weak, and Largely Insignificant*

Impact findings for **Ohio** were mixed, depending on the analytic approach, but generally pointed to a lack of positive treatment effects. Approaches that examined impacts for individuals (comparisons of weighted means) showed very few positive impacts on intimate relationship or parenting outcomes, and identified some negative effects. In addition, negative effects were found for men's recidivism. Latent growth curve models that looked at couple-level trajectories over time showed that treatment group couples, who started with poorer relationship quality at baseline, did fare better over time on communication skills, fidelity, and some partner violence indicators than comparison group couples. However, some negative effects were found in the couples-based models for intimate relationship and parenting and coparenting outcomes. Impact analyses in Ohio were conducted with a large sample, although the size imbalance between the treatment and comparison groups (with the treatment group about two and a half times the size of the comparison group) constrained statistical power somewhat.

Comparisons of weighted means for **New Jersey** showed scattered positive and negative treatment effects for intimate relationship quality outcomes and several negative effects for parenting and coparenting outcomes. However, positive effects were found for recidivism among men in New Jersey: men in the treatment group were less likely to self-report any rearrest at the 18-month follow-up interview and were less likely to be reincarcerated in state prison (based on administrative data). Further, the couples-based models were more promising with regard to intimate relationship quality outcomes, indicating that treatment

group couples started at a disadvantage relative to comparison couples and had better trajectories over time for conflict resolution skills, physical abuse victimization, and severe and frequent physical abuse perpetration. Analyses in New Jersey were completed with a small sample (309 men and 180 women at baseline)—less than half the size of the Indiana or Ohio samples.

#### Positive Indiana Results and Selection Bias

Comparisons of weighted means and couples-based trajectory analyses revealed a pattern of sustained, positive effects on couple relationships, parenting and coparenting quality, and employment among treatment group members in Indiana—a somewhat unexpected finding given that the evaluation assessed the impact of a one-time, weekend relationship education retreat. It is reasonable to ask whether these findings result from the distinctive characteristics of the Indiana intervention or whether selection bias may have exerted some influence on the positive treatment effects that were observed. Several design features and analytic strategies were employed to reduce the possibility of spurious findings:

- Comparison group members in Indiana were recruited from the same faith- and character-based housing units from which program participants were recruited, to ensure comparable levels of readiness for change among the male partner.
- Comparison group members were further limited to couples in which the male partner indicated during the study screening process (see screening form in **Appendix A**) that he and his partner were in a committed relationship and would be interested in participating in a couples' healthy relationship retreat. Release dates were also factored into the comparison group selection process, to prioritize the selection of comparison group couples who did not participate in the retreats because the male partner was released before the next retreat was offered (or because of other logistical challenges), rather than because they were not interested in participating.
- Site-specific propensity score models were developed for Indiana (and each of the other sites) using rich data on participant characteristics that were captured in the impact study baseline interviews. Based on these models, weights were developed to adjust for the differential probability of membership in the comparison versus treatment groups, to minimize the likelihood of selection bias. (See **Appendix A** for additional details).
- The couples-based trajectory models measured whether treatment couples in Indiana *changed* more or less positively relative to their baseline status than the changes observed for the comparison couples—not whether treatment couples ultimately did better or worse than comparison couples. This strategy obviated the issue of any baseline differences between treatment and comparison group members. Similarly, the comparison of weighted means approach controlled for the baseline value of each outcome to account for any pre-existing differences between the treatment and comparison groups.

In **New York**, treatment effects for men and women who participated in the healthy relationship seminars were largely nonsignificant over the 18-month follow-up period. A small number of positive and negative effects were found in the intimate relationship quality and parenting and coparenting domains. Impact analyses for New York involved the smallest sample of the four impact analysis sites (201 men and 115 women at baseline), and were further constrained by a size imbalance between the treatment and comparison groups (with the treatment group about twice the size of the comparison group). In addition, New York had

the smallest proportion of male participants who were released from prison during the study follow-up period, which made it particularly difficult to detect treatment effects for reentry-related outcomes.

### *Gender Similarities Evident in Program Outcomes*

A defining aspect of the programs selected for impact evaluation was their couples-based approach to service delivery. All four sites recruited incarcerated men who were in committed relationships, and then recruited the women these men identified as their committed partners. Both members of each couple were offered the couples-based programming being evaluated, which included healthy relationship education in Indiana, Ohio, and New York, and a broader range of individualized services (including case management) in New Jersey. Interview data revealed some gender asymmetries in service receipt: not all women in the treatment group indicated receiving any OFA-funded services, and the reported dosage of services was much lower for women than for men.

Based on within-site comparisons of weighted means for men and women, however, programming tended to produce similar patterns of impact—or lack of impact—by gender. In Indiana, consistent positive effects on intimate relationships and parenting were evident among men and women alike, although effect sizes for the positive treatment effects found for intimate relationship quality outcomes were larger for men than women. Across the Ohio, New Jersey, and New York sites, negative or null program effects on intimate relationships and parenting and coparenting were evident regardless of gender.

### *Factor Analysis Confirmed Main Findings*

A factor analysis was conducted to facilitate an understanding of the overall pattern of outcomes within the intimate relationship quality and parenting and coparenting quality domains in each site.<sup>46</sup> The results of this analysis are largely consistent with the patterns evident from examining individual outcomes. Positive treatment effects were found in Indiana for men, women, and couples for most factors within the intimate relationship and parenting and coparenting relationship quality domains. As with the other statistical approaches, the treatment effects were stronger and more consistently observed for men than women. In the other sites, effects were largely nonsignificant but a few positive and negative effects were found based on the factor analysis. For detailed factor analysis findings, see **Appendix C** (intimate relationship quality outcomes) and **D** (parenting and coparenting outcomes).

### *Sensitivity Analyses Did Not Clearly Indicate How Impacts Related to Men's Community Exposure*

The sensitivity analyses conducted to explore the relationship between the male partner's community exposure and the impact of the couples-based intervention were inconclusive. In general, treatment effects did not depend on whether the male partner had spent any time in

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<sup>46</sup> For additional details about the factor analysis methodology, see **Appendix A**. Outcomes within the employment, drug use, and recidivism domain did not form an underlying factor and were therefore not included in the factor analysis.

the community during the follow-up period (i.e., there was no interaction between incarceration status and treatment group membership), which suggests that the intervention was equally relevant to couples for whom the male partner remained incarcerated over the follow-up period and those for whom the male partner got released. However, some positive treatment effects were only observed for couples where the male partner remained incarcerated during the follow-up period; this was particularly common in the intimate relationship quality domain for women. In contrast, other positive treatment effects were only observed for couples where the male partner had at least some community exposure; this was particularly common in the parenting and coparenting domain for couples. For detailed sensitivity analysis findings, see **Appendix C** (intimate relationship quality outcomes) and **D** (parenting and coparenting outcomes).

## Study Limitations

When interpreting the findings presented in this report, several limitations of the evaluation should be considered. As in all impact evaluations that assess a large number of outcomes, it is important to take the multiple comparisons problem into account. After adjusting statistically for multiple comparisons, some of the specific effects observed for men, women, and couples were no longer significant, but the general pattern of effects remained. In addition to this general limitation, this section discusses a number of more specific limitations related to the MFS-IP evaluation approach.

### *Impact Evaluation Focused on Couples-Based Activities*

This study did not evaluate the impact of each grantee's overall OFA-funded programs but rather the couples-based intervention only. In three sites, this intervention was limited to healthy relationship education only and in two of these sites, the effect of a one-time couples' retreat (Indiana) or seminar (New York). Therefore, the positive program impacts in Indiana and the lack of program impacts found in Ohio, New Jersey, and New York should not be interpreted to mean that their overall programs were effective or ineffective. Importantly, the impact study grantees who received OFA funding under subsequent funding streams have made a number of modifications to their original programs and the results presented here do not reflect the second and third generation programmatic activities that they have put into place.

### *Statistical Power Was Limited by Lack of Cross-site Pooling and Low Program Enrollment*

The evaluation was a series of site-specific evaluations rather than a cross-site evaluation of a single program model. The demonstration nature of the grantees and absence of a unifying program model across the funded sites necessitated this approach. However, the inability to pool data across sites (due to disparate program models and differences in target populations) limited the statistical power of the evaluation, making it more difficult to detect treatment effects. The disparate program models, particularly the fact that eligibility and enrollment were

not tied to sentence admission or release date (with only the New Jersey program designed as a reentry program), also had another important implication for the evaluation: the evaluation could not implement a cohort design, such that sample members' follow-up interviews are tied to their release date (or sentence admission date) and interview data reflect experiences over standardized time periods. In the MFS-IP study, the fact that reentry-related outcomes (e.g., employment, recidivism, father-child coresidence) could only be assessed for the couples in which the male partner was released from incarceration over the follow-up period limited the statistical power and made it more difficult to detect treatment effects for reentry-related outcomes.

Additionally, the small sample sizes in New York and New Jersey, and, to a lesser extent, the imbalance between the treatment and comparison groups in Ohio, further limited our ability to detect treatment effects in these sites. Sample sizes for the evaluation were directly related to the number of couples served by the programs, and New York and New Jersey enrolled fewer couples than Indiana and Ohio. Program enrollment at the fifth site originally selected for the impact study, Minnesota, was so small during the impact study enrollment window, that it was dropped from the impact analyses.

### *Some Selection Bias May Have Remained*

Random assignment to the treatment or comparison conditions was not feasible in any of the four sites, resulting in the use of matched comparison group and wait list designs. Post-hoc statistical adjustments were implemented to minimize differences in treatment and control group characteristics (i.e., to adjust for factors that may have been associated with greater relationship commitment or motivation to improving one's relationship). Although such strategies reduced the possible role of selection bias, we cannot rule out the possibility that the couples in the treatment and comparison groups were different in additional, unmeasured ways. Therefore, some of the positive treatment effects in Indiana and the lack of significant effects in the remaining three sites may have been influenced by selection bias

### *Treatment Intensity Differed by Gender*

Consistent with program design, the treatment differential between intervention and comparison group members tended to be more pronounced for men than women. In New Jersey, both members of the couple were offered fairly intensive programming, but not all women necessarily received the full range of services (and some received their programming via distance learning). Treatment group women in Ohio did not necessarily receive any programming, while treatment women in Indiana and New York received a one- to two-day retreat or seminar. In all three of these sites, men received a larger dose of programming than their female partners, but the difference in reported participation was more pronounced in some sites than others: Over three-quarters (77%) of treatment women in Indiana reported having received relationship education at any point, compared to just 31 percent in Ohio, 43 percent in New York, and 44 percent in New Jersey. This suggests that program participation may have been more salient for Indiana women than for women in the other study sites. The study did not control for male or female treatment intensity in any of the sites.

### *Baseline Was Not Always a Pre-Intervention Measure*

Because the evaluation was designed to determine the impact of the couples' healthy relationship retreats/seminars in Indiana and New York, it was critical in these two sites that the baseline interview be conducted before this component began. However, in Ohio and New Jersey, where the intervention being evaluated was delivered over a period of several weeks, the baseline interview often took place after the treatment couples had received some programming and, as noted, is therefore not a pure pre-intervention baseline. This means that any early effects of the first few weeks of programming would not have been detected because the impact analyses controlled for sample members' baseline status on each outcome.

### **Implications for Future Research**

Results from the MFS-IP evaluation were discussed with a group of technical experts in the fields of incarceration, reentry, and family life to help identify key challenges and future research opportunities. Impact study findings suggest that future research on interventions to strengthen family relationships and support successful reentry should aim to address several persistent issues in the field.

### *Studies Must “Power Up” to Assess Effects of Programs*

Future research will require larger sample sizes to adequately assess the effects of multi-component family strengthening and reentry models that combine individualized services and group instruction, such as those implemented in the New Jersey and New York sites.<sup>47</sup> Recruiting and serving large numbers of participants proved challenging for holistic programs, particularly those requiring ongoing, active participation from female partners; this seriously limited the statistical power of our impact analyses in these sites. Although the diversity of program models implemented by the OFA-funded demonstration sites prevented a pooled analysis of program impacts, future evaluation efforts might consider constraining program design options to enable cross-site pooling and support a more robust assessment of holistic program approaches. In addition, future work might consider assessing the costs and benefits of both holistic and lower-dosage family strengthening approaches with this population.

### *Mechanisms of Change Need Further Investigation*

Results from the Indiana impact analyses indicate that the couples-based programming evaluated in that site had a clear pattern of impacts on intimate relationships, parenting, and coparenting. However, the impacts observed for relatively distal family relationship outcomes (such as cohabitation, parenting and coparenting behavior, and intimate relationship status) were not consistently accompanied by effects on more proximal constructs (such as communication skills or healthy relationship beliefs), which are often specified as mediators in intervention logic models. In addition, impacts on some of the more proximal constructs as

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<sup>47</sup> Although the New York site implemented a holistic, multi-component intervention, the MFS-IP evaluation design enabled assessment of only the one-day, couples-based relationship education seminar.

observed in the New York, New Jersey, and Ohio sites did not translate into impacts on behavior or relationship stability outcomes. More work is needed to examine a potential disconnect between intended program pathways and observed mechanisms of change in family strengthening interventions. In addition, future research is needed to understand the impacts and mechanisms of the current generation of family strengthening programs for justice-involved fathers and families, which place a heavy emphasis on services to support economic stability.

### *Research Should Take into Account the Complex Influences of Prison and Community Contexts on Family Experiences*

MFS-IP findings suggest the complexity of measuring family-related outcomes that have different relevance and meaning depending on whether the family member incarcerated at baseline is still incarcerated or in the community at a given follow-up point. The sensitivity analysis, which attempted to determine whether the effectiveness of the interventions differed based on whether the male partner was released from incarceration (and was able to interact with the female partner in the community) or remained incarcerated during a particular follow-up period, further illustrates challenges in assessing whether or how program effects might differ based on prison or community context. On the one hand, it could be that programming is more useful for couples in which the male partner gets released—due to more opportunities to practice or reinforce skills learned during the incarceration (while, for couples in which the male partner remains incarcerated, lack of in-person contact and dealing with the contextual constraints of incarceration poses a challenge to applying the same skills learned). On the other hand, it is equally possible that programming is more useful for couples whose male partner remains incarcerated due to the male partner being better able to focus on the couple's relationship without the competing demands of employment and compliance with post-release supervision requirements (and likely more limited opportunities for conflict within the intimate relationship). Neither possibility could be rigorously tested due to the impact study design, which was based on the (disparate) program models implemented in the four sites.

Further research on the contextual factors shaping relationship experiences during incarceration and after release is needed. Intervention studies with justice-involved persons and their families might continue to explore how differences in prison and community contexts may: (1) shape the shifting relevance of intervention content across incarceration and reentry periods, (2) affect participants' efforts to transfer skills and maintain personal and relational continuity across those contexts, and (3) influence evaluation efforts to measure change over time. Future impact evaluation efforts might also be better able to tailor data collection intervals and outcome measurement approaches for detection of program effects if they are focused on interventions that share a common program model with regard to incarceration and release timing (e.g., programs that recruit couples upon one partner's admission to prison, pre-release programs, programs for recently released persons and their partners).

### *Assessing the Impact of Family Strengthening Activities on Couples over Time Can Provide Insights on Program Impacts*

In addition to the point-in-time impact on men and women as individuals, the MFS-IP study approach enabled an assessment of impacts at the couple level and accounted for the variation in couples' baseline status with regard to the outcome. By routinely collecting information from both partners at baseline and over time, reports from men, women, and couples can be analyzed. Rather than only comparing outcomes for men as a group and women as a group at each follow-up time point, the analytic approach used in this study showed that couples can also be used as a unit of analysis. By measuring improvement or deterioration from their varied starting points, couples' analysis can provide additional information for the development and evaluations of family strengthening programs.

## **Implications for Policy and Practice**

### *Program Approaches Show Some Promise for Supporting Family Relationships*

This study is unique among family strengthening intervention evaluations in demonstrating that a low-dosage intervention (Indiana's one-time healthy relationship retreat) can have sustained effects on partnership and parenting relationships in a low-income, justice-involved population. The few positive treatment group trajectories observed in Ohio and New Jersey on various dimensions of intimate relationship quality (including conflict resolution and intimate partner violence) suggest that the kind of program models implemented in those sites might merit further investigation—particularly because (1) not all components of these programs were evaluated and (2) the MFS-IP impact study had several design limitations. However, the general pattern of non-significant findings in three of the four grantee sites also indicates that more robust or comprehensive interventions may be needed to address the complex needs of some justice-involved families.

This evaluation also demonstrated impacts on parenting and coparenting behaviors in the Indiana site solely from exposure to a healthy relationship retreat that did not directly target parenting. Although the impact of the explicitly parenting-focused program components included in the Indiana, New York, and Ohio sites was not measured in this evaluation, that a one-time healthy relationship retreat affected couples' parenting and coparenting trajectories in Indiana suggests that efforts to positively influence parent-child and parent-parent relationships in justice-involved couples by supporting healthy couple relationships are promising.

### *Implementation Context Was Important*

MFS-IP findings suggest that more attention to the context of program implementation is crucial. Although each site's program model was distinct, the one feature of the Indiana program that clearly distinguished it from all other approaches was implementation context: the program was delivered exclusively to participants in special, program-oriented housing

units. Residents in these “PLUS” units, who had to apply to be placed there (and meet criteria related to lack of administrative violations, etc.) were committed to intensive participation in a variety of faith- and character-based programs, and lived in dormitories surrounded by other men doing the same.<sup>48</sup> Further, according to program administrators, there was a good fit between the message of the healthy relationship retreat and other program components available to the character- and faith-based housing residents, with the curriculum thought to reinforce and be reinforced by other programming. Because both treatment and comparison group members were recruited from PLUS units, the observed impacts appeared to be due to a synergistic effect of the couples retreats and PLUS programming. In addition, MFS-IP qualitative study findings indicate that very specific contextual aspects of the healthy relationship retreat (e.g., female partners staying in a hotel, couples eating a special meal together) were highly salient for participants. Findings of remarkably consistent healthy relationship program effects in these contexts suggest that a supportive implementation environment could play a crucial role for couples working to maintain and improve their family relationships. As part of any replication strategy, additional research should test the relative importance of context and content.

### *Different Programming May Be Needed to Address Family Circumstances During Incarceration and After Release*

Though they showed some promising effects, the specific family strengthening models tested in the MFS-IP study, including Indiana, did not produce impacts on family relationship skills during incarceration and after release. Across follow-up waves, the couples-based activities studied in each of the four sites did not produce a consistent pattern of improvement in communication skills, healthy marriage beliefs, or conflict resolution skills—three key components of most healthy relationship education programs. MFS-IP qualitative study data also suggest that many couples found it difficult to translate the skills they learned during the male partner’s incarceration into improved relationships in the community upon his release. These data help to contextualize the overall pattern of limited program effects and complex results from the sensitivity analysis of community exposure time.

Taken together, such findings suggest that policymakers and practitioners might give further consideration to understanding the distinct skills and resources required to support family relationships during incarceration and during community reentry. Programming for justice-involved couples may need to include both, or be tailored based on incarceration and release timing (e.g., one program for couples preparing to weather an extended incarceration and another for those preparing for a partner’s imminent reentry). It also suggests that programs delivered during an incarceration might offer a post-release booster session to help couples apply their relationship skills in the community and domestic contexts.

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<sup>48</sup> The MFS-IP evaluation design deliberately recruited other PLUS unit participants to the study comparison group in order to avoid comparing these men to others who were ineligible to, or had opted not to, reside in a program-focused housing unit. Therefore, we can say with confidence that the impact evaluation isolated the effect of healthy relationship retreat participation, distinct from the effect of residence in a program-focused housing unit. However, a consistent pattern of program effects in the treatment group emerges specifically (and exclusively) in the context of such housing units.

### Challenges of Translating Skills from Incarceration to Release

Analysis of interview data from the MFS-IP qualitative sub-study helped illuminate some of the challenges faced by men returning from prison when moving from correctional to community settings. These challenges may have made it difficult for men or for couples to practice skills they learned in programs because they were coping with more pressing or immediate issues.

One major theme was the lack of support provided for reentering men once they returned to the community. As one man described it:

*When you get released, they are throwing you out there. You have nothing. Your family already took care of you the whole time you were incarcerated. And now you are getting released to society. Society already has a mark against you. And your family has to help you with more. And as man, you don't want to keep depending on your family. So there are really no programs, like I said earlier, there are really no programs out there to actually, to really help a man who is not on any BS to get ahead in life or at least guide him in the right direction.*

Second, the profound impact of incarceration, particularly for men who had served long sentences, was identified as being difficult to overcome. One woman talked at length about how her partner's 10-year sentence, the final four years of which he spent in solitary confinement, provoked mental health issues for him: *"Mentally, it messed him up."* After his release, they both noticed that he talks to himself, is quick to anger, and has trouble adjusting to the daily tasks of the outside world. She wants him to receive professional help: *"Ten years is a long time for you just to come home and be able to adjust."* In his words: *"When you come home to another environment," it's hard to "switch off... the way I've been for ten years."*

Third, although substance use was not discussed much in interviews, indications arose that this was a factor that affected relationships when men were not incarcerated. One man specifically noted that it was helpful to participate in a demonstration program when he was not using drugs:

*[During the in-prison program] you're sober, you're clear, you ain't got no drugs in you. You're free minded and you can really feel. When you're out here and you're living life and if you're doing drugs, your body is numb to all that, you really don't realize what you got.*

### *Relationship Improvement Is (Also) Possible for Higher-Risk Couples*

Finally, the impact findings shed new light on a longstanding question of interest to program funders and designers alike—whether more stable or committed couples are more amenable to family strengthening intervention. Results in Ohio and New Jersey, although weak, suggest that interventions with couples in relatively more precarious relationships should not be ruled out. In both sites, treatment couples had more barriers or identified risks than the comparison couples. But over time, treatment couples improved more on some outcomes relative to their baseline status than did the comparison couples. Family strengthening programs should not discount serving diverse groups of justice-involved couples and rigorously evaluating the results.

The MFS-IP impact evaluation suggests it is possible that couples-based activities delivered in a prison setting can support family relationships. This study is unique among family strengthening intervention evaluations in demonstrating that a low-dosage activity (Indiana's

one-time healthy relationship retreat) can have sustained positive effects on partnership and parenting relationships in a low-income, justice-involved population. Further, while the results in Ohio, New Jersey, and New York were largely non-significant and weak, positive findings for couples on some dimensions of intimate relationship quality suggest that these other program models might also facilitate improved couple relationships, but their designs would need to be strengthened and additional rigorous research would be needed to validate improvements in outcomes.

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# Appendix A. Additional Methodological Details

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This appendix contains supplemental methodological information—including detailed descriptions of the rationale for the four site-specific study designs and how these were implemented (pp. A1–A11), the domains and constructs covered in each interview wave (pp. A12–A36), site-specific response rates (pp. A37–A40), the selection bias propensity model description and diagnostics (pp. A40–A58), the attrition bias propensity model description and diagnostics (pp. A59–A73), a technical explanation of the latent growth curve modeling (pp. A74–A77), a description of the factor analysis (pp. A77–A85), and an overview of the multiple comparison adjustment (A86).

## Detailed Site-Specific Design Descriptions

### *Indiana*

As described in **Chapter 2**, the OFA-funded program delivered by IDOC targeted men living in faith- and character-based housing units in nearly every IDOC facility. All men in these units participated in a parenting course and a healthy relationship course (in addition to many other classes delivered in the PLUS units). Men who had intimate partners were invited to attend healthy relationship retreats, which were offered around twice a year at each facility, but they could only participate if their partners agreed and actually showed up for the retreat.<sup>49</sup>

Because the men residing in the PLUS units do not represent the general prison population (given their strong interest in self-improvement through extensive coursework and the selection process, which excluded men who had incurred behavioral infractions), the evaluation team ruled out the possibility of selecting a comparison group from outside the PLUS units. Further, because nearly every IDOC men’s facility had a PLUS unit, it was not possible to select a comparison group from different facilities.

These considerations made it impossible to identify a comparable group of untreated men to serve as a methodologically rigorous comparison group *for the overall Indiana demonstration program*. However, because the couples’ healthy relationship retreat component was only offered about twice a year at each facility—and therefore the timing of the retreats rather than

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<sup>49</sup> Each facility’s PLUS coordinator was responsible for enrolling couples in the retreats. Selection generally took place on a first-come, first-serve basis. However, if a substantial amount of time had passed since the last retreat was held in a given facility and the PLUS coordinator perceived that demand for the retreat exceed the number of available slots, men who either had upcoming release dates (and therefore would not get another opportunity to participate) or who had completed the classroom PREP component were prioritized. Occasionally, if not enough PLUS men enrolled, the retreats were opened up, under the same conditions, to men in a substance abuse therapeutic community or men from the general prison population who participated in a parenting class. These groups were approached until the 20-25 available retreat slots were filled. Interested men submitted their partners’ contact information to PLUS program staff for recruitment/enrollment.

differential motivation determined which men did and did not get to attend—the team took this as an opportunity to evaluate the couples’ retreat component (rather than the program as a whole) using a strong matched comparison group design that entailed selecting otherwise comparable men from within the PLUS units. Random assignment of couples who had committed to the retreats was excluded as a possibility because of (1) the extensive program staff labor involved in successfully recruiting partners for the retreats and (2) staff reluctance to jeopardize the relationships of couples who wanted to participate in the retreats but would have been ultimately selected for the control group.

The following study design was implemented in Indiana:

- All men who participated in the retreats from December 2008 through November 2010 were identified as treatment group members and recruited for baseline interviews (with the partner of each man who completed baseline also recruited for an interview);<sup>50</sup> contact information for these men was provided to the evaluation team by PLUS administrators in advance of each retreat and all baseline interviews were conducted prior to the retreat. Some men who were interviewed as treatment group members ended up not actually attending the retreat because their partners did not show up due to last minute conflicts; these men and their partners were reassigned to the comparison group.
- Approximately twice a year in each facility (not necessarily in conjunction with an upcoming retreat), a team of RTI field interviewers handed out brief screening forms (developed by RTI) that were self-completed by all men in the PLUS unit. The form, shown in **Exhibit A-1**, captured information on the man’s expected release date, whether he had ever applied to do the couples’ retreat, whether he had ever participated in the retreat, whether he had a spouse or romantic partner—and if so, whether the couple had children together, the distance the partner lived from the facility, whether the respondent felt the partner would be interested in participating in the couple’s retreat if her work schedule permitted (childcare responsibilities and transportation were not an issue), and whether the respondent intended to remain in a committed relationship with the partner.

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<sup>50</sup> The study protocols specified that the man be interviewed first. During his interview, he was asked to identify his spouse or primary romantic partner, or, if neither of these existed, his primary coparenting partner. This partner was then considered to be the “survey partner.” For men in the treatment group, the survey partner may not necessarily have been the same partner who actually attended the retreat; timing and record-keeping limitations prevented the evaluation team from getting accurate contact information from program staff for the official partner of record. However, treatment men were asked in the baseline interview if the survey partner was the same woman with whom he was participating in relationship classes. Nearly all men in the treatment group (98%) said she was.

## Exhibit A-1. Comparison Group Screening Form Used in Indiana

Indiana Facility Code:   Today's Date:  /  /  20

1. Please fill in your IDOC Number:

2. Please fill in your initials: First Initial:  Middle Initial:  Last Initial:

3. What is the month, day, and year you will be released (estimate date of release)?

Month:   Day:   Year:

*example: if estimated date of release is June 7, 2009, you would enter:*

Month:  0  6 Day:  0  7 Year:  2  0  0  9

4. Have you ever applied for the PREP couples' retreat? *Note: The PREP retreat is taught during a weekend to men and their partners to learn healthy relationship skills.*  
 Yes  No

5. Have you already done the PREP couples' retreat?  
 Yes  No

6. Do you have a spouse or romantic partner?  
 Yes  No

If you answered "NO" to number 6 that you do not have a spouse or romantic partner, please answer questions 11-14 on the back of the form.

If you answered "YES" to number 6 that you do have a spouse or romantic partner, please answer questions 7-10 below about your spouse or romantic partner.

Please answer these questions if you answered "YES" to number 6.

7. Do you have any children (either biological or children you are parenting in some way) with your current spouse or romantic partner?  
 Yes  No

8. How far does your spouse or romantic partner live from this facility?

Hours:   Minutes:

*example: if you live 4 hours and 5 minutes away from this facility, you would enter:*

Hours:  0  4 Minutes:  0  5

9. Do you think that you and your spouse or romantic partner would be interested in participating in the PREP couples' retreat if her work schedule, child care responsibilities, and travel time and costs were not an issue?  
 Yes  No  Already Done It

10. Do you want to remain in a committed romantic relationship with your spouse or romantic partner?  
 Definitely Yes  Maybe  Definitely No

*That was the last question. Thank you for taking the time to do our survey. The field interviewer will be by to pick up your survey once everyone finishes answering the questions.*



- The forms were scanned and data maintained in a master file of potential comparison group men. The evaluation team used the screening data, as well as available administrative data from the IDOC, to identify eligible men for the comparison group. Basic eligibility criteria were that the man must have reported (on the screening form) being in a committed intimate relationship, that he and his partner would like to participate in the couples' retreat, and that the two of them had not already done the retreat. Among those who met these basic eligibility criteria, men who were projected to get released before the next scheduled retreat were prioritized for comparison group selection. The remaining data elements gathered from the screening forms were generally not used for selection; however, the evaluation team periodically used IDOC administrative data to compare treatment and comparison group members on variables such as race/ethnicity and duration of incarceration. Based on these comparisons, IDOC data were used to refine the comparison group selection process to achieve better matching.
- Throughout the baseline enrollment period, rosters of retreat participants were provided by the program staff to RTI and reviewed against our master lists. If we discovered that men who had already been interviewed as comparison group members ended up participating in the retreats during their follow-up period (which was the case for a small number of men), these men and their partners were reassigned to the treatment group.

## *Ohio*

The OFA-funded program delivered by the RIDGE Project targeted fathers in committed relationships who were incarcerated in one of the numerous ODRC facilities served by the program (see **Chapter 2**). Men were recruited for the program through informational sessions held by the program founders at the facilities served, with men completing applications if interested in the program. The applications were reviewed and the men's partners were contacted by RIDGE staff to verify the couple's relationship status. Once screened, the men (and their partners) were invited to participate in a relationship education course called Couples Communication I (CC1). Partners were not required to participate for the men to be eligible. Men (and their partners) could continue with Couples Communication II (CC2) if interested; the men could also go on to participate in two fatherhood courses (typically offered after CC1 and CC2).

As with the Indiana program, random assignment of men (and their partners) to the program was not acceptable to program staff, who were strongly committed to serving as many families as possible (and in a manner that did not jeopardize already tenuous relationships). However, the following two factors provided a natural opportunity for a wait list design: (1) the program founders regularly engaged in extensive recruitment efforts<sup>51</sup> at numerous facilities (and were willing to increase these efforts to ensure that a surplus of eligible cases would be available for comparison group purposes) and (2) the roll out of the course series at a given facility often

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<sup>51</sup> The program founders are a very charismatic couple to whom many prisoners and their families related because the founding partners had personally experienced separation due to incarceration. This rapport enabled the recruitment efforts to yield a very large number of submitted applications.

lagged substantially behind the recruitment efforts. In Ohio, therefore, the comparison group selection strategy consisted of identifying men who were (1) incarcerated in facilities served by the RIDGE Project's demonstration program and attended a RIDGE recruitment presentation at their facility; (2) completed an application to participate in the program; and (3) were screened as eligible by program staff but never started the course series because they were transferred, released, or remained on the wait list (if a new class was not rolled out at their facility during their MFS-IP study participation period).

Specific study design protocols in Ohio included the following:

- All men who enrolled in the CC1 course in 2009 and 2010 were identified as treatment group members and recruited for baseline interviews (with the partner of each man who completed baseline also recruited for an interview); contact information for cohorts of men enrolled in an upcoming CC1 course was provided by RIDGE program staff as soon as the class rosters were finalized. Often, however, the class rosters were not finalized until after the first few days of class. Although the baseline interviews were fielded as quickly as possible after receiving the needed information, some of the men (and partners) in Ohio had already participated in a few CC1 classes before their baseline interview. Because the intervention was administered over 12 weeks, the consequences of the baseline interview not being a pre-intervention measure were not as severe as in sites like Indiana and New York, where the intervention took place over one to two days (in these sites, we only enrolled individuals into the impact study if their baseline interview could be conducted before the retreat/seminar). It is also important to note that the dosage of the treatment received by the treatment couples in Ohio varied. Some of the men (and partners) who began CC1 did not complete the course; some partners never even began the course. At the same time, other men (and partners) in the treatment group may have not only completed CC1 but gone on to receive CC2, and men could have subsequently participated in the fatherhood courses as well.
- To identify the comparison group, the evaluation team worked with RIDGE staff to determine which facilities were unlikely to see a roll out of CC1 for several months. Program staff delivered informational sessions to interested men in these facilities and engaged in their standard procedures of determining the man's paper eligibility based on the application he submitted (i.e., that he self-reported being a father and in a committed relationship). Staff then contacted the partner listed on the application to confirm that the couple was in such a relationship. These couples were essentially placed on a wait list for the program in that they were confirmed to be eligible and would be recontacted by RIDGE when the next CC1 course was rolled out. Contact information for the wait list couples was provided to the evaluation team, and the couples were recruited for impact study baseline interviews. Baseline interviews for the comparison group were fielded from January 2009 until August 2011. If, during the course of the study, a CC1 course was rolled out at that facility, the class roster was reviewed and any individuals who had previously been interviewed for the impact study as comparison group members were reassigned to the treatment group. Because the RIDGE Project received supplemental funding from OFA and

an additional fatherhood grant, not as many individuals remained on the wait list as originally anticipated. This resulted in the treatment group being larger than the comparison group in Ohio.

The comparison group selection procedures implemented in Ohio should have yielded treatment and comparison couples that were similarly motivated to maintain their relationships, given that the male partners in both groups took the initiative to sign up for RIDGE's program and had their relationship status confirmed by program staff. However, other characteristics associated with remaining on the wait list for an extended period of time, including both facility- and individual-level characteristics, could have introduced other types of bias. Therefore, post-hoc statistical adjustments (i.e., propensity score modeling) were necessary to ensure the comparability of treatment and comparison couples (as described in **Chapter 3**).

### *New Jersey*

As described in **Chapter 2**, the OFA-funded program implemented by the NJ DOC targeted a highly specialized, high needs population: substance using, max-out offenders who were fathers and in committed or coparenting relationships and within six to nine months of release at one of the four prisons served by the program. Men who met these criteria were invited by NJ DOC staff to attend an informational meeting. Those who were interested in participating in the program provided contact information for their partners, who were contacted by NJ DOC staff to confirm willingness to participate. Partners had to participate in the program for men to be eligible. Program staff worked with the couples for six to nine months prior to the man's release and followed up with them for up to six months post-release. Couples received case management, a relationship education course, a parenting course, and financial planning. The men also received substance abuse programming.

Because the eligibility criteria were so narrow, there was no surplus of eligible men at the four treatment facilities available for comparison group purposes. Therefore, two comparison prisons of comparable size and security level were selected. Within these facilities, a matched comparison group design was implemented to identify men who met program eligibility criteria and indicated that they and their partners would be likely to participate in a relationship strengthening program if available at their facility.

Specific procedures included the following:

- All men enrolled in the OFA-funded program from January 2009 to April 2011 were classified as treatment group members. Contact information for newly enrolled couples was provided to the evaluation team by program staff, and these couples were recruited for impact study baseline interviews. As with the Ohio program, because enrollment did not take place very far in advance of the first class in the series (and couples were dropped if the partner failed to attend the first three classes), the baseline interviews for New Jersey participants often took place after couples had already participated in a few classes.

- The NJ DOC used its administrative data system to screen all men at the comparison facilities to identify those who met eligibility criteria for release date, addiction issues (as indicated during the initial intake assessment or in case notes), and plans to serve out a full sentence without parole. Men who met these criteria were invited to an informational meeting similar to the one used to recruit the treatment men for the program. Those who attended were administered a screening form developed by the evaluation team. The screening form, shown in **Exhibit A-2**, captured additional data to mimic the selection process in the treatment facilities: whether the respondent was a father, whether he was in a committed relationship with a spouse or partner, and whether he and his partner would be interested in participating in a relationship strengthening program if available at the facility. Information on in-person visits received during the incarceration and how far away the partner lived was also captured, although not used in comparison group selection.
- Data from the forms were analyzed to select men suitable for the comparison group. Men who indicated that they were fathers, in committed relationships, and that they and their partners would be interested in participating in a relationship strengthening course if available at their facility were selected.

As with the other sites, post-hoc statistical techniques (i.e., propensity score modeling) were used to examine the degree of balance between the treatment and comparison couples, and weight the data to correct for imbalance.

Exhibit A-2. Comparison Group Screening Form Used in New Jersey

New Jersey Facility Code:   Today's Date:   /   / 20

1. Please fill in your SBI Number:

2. Please fill in your initials: First Initial:  Middle Initial:  Last Initial:

3. Do you have a biological or non-biological child that you parent in some way?

Yes  No

4. Are you in a committed relationship with someone such as a wife or significant other?

Yes  No

5. If it were offered at your facility, would you and your significant other be interested in participating in a relationship strengthening program?

Yes  No  No significant other

6. Since you have been incarcerated, which of the following people have visited you in person? Please select all that apply.

- Your child/children
- Your mother or father
- Other family members
- Friends
- Clergy or community volunteers

7. Think about the home you lived in before you were incarcerated. How far is it from this facility?

Hours:   Minutes:

*example: if your house was 4 hours and 5 minutes away from this facility, you would enter:*

Hours:  0  4 Minutes:  0  5

*Thank you for taking the time to do our survey. The field interviewer will be by to pick up your survey once everyone finishes answering the questions.*



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## New York

The OFA-funded program delivered by the Osborne Association targeted fathers (or future fathers) in committed relationships who were incarcerated in one of five facilities. Program offerings included child-friendly visitation (with structured visitation assistance), a parenting class, a healthy relationships class, and a couples' healthy relationship seminar.

The impact study was designed to evaluate only the healthy relationship seminar. In New York, this was because the seminar was the only component available to couples and the evaluation priority was to evaluate couple-based programming. Recruitment for the seminars was typically done toward the end of the men's relationship education course (or other courses such as parenting or cognitive behavioral training); men in these courses who were in intimate relationships were asked if they were interested in participating in healthy relationship seminars with their partners, and partners were contacted by program staff to confirm availability.

To avoid the selection bias associated with recruiting men who "declined" the seminars (i.e., the fact that men who were incarcerated in the facilities served by the Osborne Association, learned about the seminars, but decided not to participate were likely not as motivated to maintain their relationships—in ways likely to effect the outcomes explored—as men who did participate), the most methodologically rigorous study design was to identify the comparison group from comparable, non-treatment facilities; and to screen men for potential interest in healthy relationship seminars.<sup>52</sup>

The specific study design procedures entailed the following:

- All men who participated in the Osborne Association's healthy relationship seminars from approximately December 2008 to August 2011 were included in the treatment group. Contact information for couples was provided to the evaluation team by program staff in advance of the seminars, and all men and their partners completed their impact study baseline interviews before the seminar. Most of the men had already received other OFA-funded programming (e.g., child-friendly visitation, parenting classes, men's healthy relationship classes) or other programming (e.g., cognitive behavioral training) prior to participating in the seminar. In contrast, for the partners, the only intervention was the seminar.
- At the comparison facilities, men who were participating in a parenting class—one that was not delivered by the Osborne Association—were administered a screening form almost identical to the one used in New Jersey. Restricting the potential comparison pool to men who were already taking a parenting class was intended to improve comparability with the recruitment process in the treatment facilities, since many men were recruited for the

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<sup>52</sup> This source of selection bias was not an issue in Indiana (the only site in which treatment men and comparison men were in the same correctional facilities) because the design that was implemented in Indiana prioritized the selection of men who could not participate in the intervention due to logistical factors (including their release date) rather than motivational factors.

seminars from classes such as parenting and cognitive behavioral training. The screening form, shown in **Exhibit A-3**, was administered during the parenting class and collected information on whether the man was a father, whether he was in a committed relationship with a spouse or partner, and whether he and his partner would be interested in participating in a relationship strengthening program if available at the facility.

- Data from the forms were analyzed to identify men suitable for the comparison group. Those who indicated that they were fathers, were in committed relationships, and that they and their partners would be interested in participating in a relationship strengthening course if available were selected.

As with the other sites, propensity score modeling was used to examine the degree of balance between the treatment and comparison couples, and to weight the data to correct for imbalance. However, very low enrollment in the couples' healthy relationship seminars in New York and difficulty recruiting many of the partners for impact study interviews severely limited the number of variables that could be used in the propensity score models. The small sample sizes also limited the statistical power of all analyses with the New York sample, rendering the data from this site less useful for the impact evaluation than data from the other impact sites.

## Exhibit A-3. Comparison Group Screening Form Used in New York

New York Facility Code:   Today's Date:  /  /  20

1. Please fill in your Department ID#:   -  -

2. Please fill in your initials: First Initial:  Middle Initial:  Last Initial:

3. Do you have a biological or non-biological child that you parent in some way?

Yes  No

4. Are you in a committed relationship with someone such as a wife or significant other?

Yes  No

5. If it were offered at your facility, would you and your significant other be interested in participating in a relationship strengthening program?

Yes  No  No significant other

6. Since you have been incarcerated, which of the following people have visited you in person? Please select all that apply.

Your child/children  
 Your mother or father  
 Other family members  
 Friends  
 Clergy or community volunteers

7. Think about the home you lived in before you were incarcerated. How far is it from this facility?

Hours:   Minutes:

*example: if your house was 4 hours and 5 minutes away from this facility, you would enter:*

Hours:  0  4 Minutes:  0  5

*Thank you for taking the time to do our survey. The field interviewer will be by to pick up your survey once everyone finishes answering the questions.*



## **Detailed Interview Topics**

**Exhibit A-4** shows the domains and constructs covered in the male and female baseline interviews and the 9-, 18-, and 34-month follow-ups.

**Exhibit A-4. Interview Domains and Constructs, by Wave and Sex**

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
<b>Demographics</b>								
Age	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
Race/Ethnicity	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
Educational attainment	✓	✓	✓	✓	✓	✓	✓	✓
Country of birth	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
Language spoken	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
U.S. Citizenship	✓	✓	✓	✓	✓	✓	✓	✓
<b>Criminal History</b>								
Age at first arrest	✓							
Number of arrests	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
Number of convictions	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
Juvenile incarceration (any juvenile incarceration, number)	✓							
Adult incarcerations (any adult incarcerations, number)	✓	✓		✓ (if first interview)		✓ (if first interview)		✓ (if first interview)
<b>Incarceration Characteristics</b>								
Currently incarcerated?	✓	✓	✓	✓	✓	✓	✓	✓
Date of incarceration	✓	✓ (if R is incarcerated)						
Expected release/date of release	✓	✓ (if R is incarcerated)						
Actual date of release from previous incarceration			✓ (if R was released)					
Instant offense (technical violation, new crime, type of crime)	✓	✓ (if R is incarcerated)	✓ (if R is incarcerated)		✓ (if R is incarcerated)		✓ (if R is incarcerated)	

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Number of disciplinary infractions	✓		✓ (if R is incarcerated)		✓ (if R is incarcerated)		✓ (if R is incarcerated)	
Days in administrative segregation	✓		✓ (if R is incarcerated)		✓ (if R is incarcerated)		✓ (if R is incarcerated)	
Number of transfers	✓	✓ (if R is incarcerated)	✓ (if R is incarcerated)		✓ (if R is incarcerated)		✓ (if R is incarcerated)	
Whether partner incarcerated	✓		✓	✓	✓	✓	✓	✓
<b>Family History</b>								
Geneogram (mapping of biological mother, other mother figures, biological father, other father figures, current primary romantic partner, any children with primary romantic partner, other children that primary romantic partner has, other current romantic partners, children with other current romantic partners, children with former romantic partners, other biological children, other children)	✓	✓	✓ (updates and new children)					
Roster of all minor children R parents (name, age, sex, biological/legally adopted or other, relationship to child's mother/father, survey partner involved in raising child, whether child lives with mother, whether child lived with male/female six months prior to incarceration, distance from nonresidential children, father's financial support for child prior to incarceration, frequency of interaction between father and child prior to incarceration)	✓	✓	✓ (updates: age, whether being coparented by survey partner)	✓ (updates: age, whether being coparented by survey partner)	✓ (updates: age, whether being coparented by survey partner)	✓ (updates: age, whether being coparented by survey partner)	✓ (updates: age, whether being coparented by survey partner)	✓ (updates: age, whether being coparented by survey partner)

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Roster of any new children parented since previous wave (name, age, sex, biological/legally adopted or other, relationship to child's mother/father, survey partner involved in raising child)			✓	✓	✓	✓	✓	✓
Number of coparenting partners	✓	✓	✓	✓	✓	✓	✓	✓
Marital history (# of times married, divorced)	✓	✓						
Current marital status (duration of marriage)	✓	✓	✓	✓	✓	✓	✓	✓
Grew up in a one-/two-parent home	✓	✓						
Stability of childhood parenting arrangement (perceived stability, # of changes)	✓	✓						
Relationship with biological father (ever lived with, closeness to, involvement in raising R)	✓	✓						
Relationship with other father figure (ever lived with, closeness to, involvement in raising R)	✓	✓						
Relationship with biological mother (ever lived with, closeness to, involvement in raising R)	✓	✓						
Relationship with other mother figure (ever lived with, closeness to, involvement in raising R)	✓	✓						
Extended family arrest history	✓	✓						
Extended family drug/alcohol problems	✓	✓						
<b>Relationship Characteristics (relationship with survey partner)</b>								
Current relationship status with survey partner (married, intimate, coparenting)	✓	✓	✓	✓	✓	✓	✓	✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Reason for breakup (if couple was romantic at baseline but broke up at follow-up)			✓	✓	✓	✓	✓	✓
Duration of relationship (years, whether relationship predated incarceration)	✓	✓						
Cohabitation	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Any/number of current secondary intimate partners	✓	✓	✓	✓	✓	✓	✓	✓
<b>Quality of Intimate Relationship with Survey Partner (constructs covered if either partner ever reported that the couple had ever been romantic)</b>								
Dyadic Adjustment Scale	✓	✓	✓	✓	✓	✓	✓	✓
Self-rated relationship happiness (scale of 1-10)	✓	✓	✓	✓	✓	✓	✓	✓
Communication skills (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Healthy relationship beliefs (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Conflict resolution (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Ever cheated on partner	✓	✓	✓	✓	✓	✓	✓	✓
Temptation to cheat on partner	✓	✓	✓	✓	✓	✓	✓	✓
Confidence in partner remaining faithful	✓	✓	✓	✓	✓	✓	✓	✓
Confidence in ability to avoid cheating	✓	✓	✓	✓	✓	✓	✓	✓
Importance of own fidelity	✓	✓	✓	✓	✓	✓	✓	✓
Importance of partner's fidelity	✓	✓	✓	✓	✓	✓	✓	✓
Forgiveness	✓	✓	✓	✓	✓	✓	✓	✓
Bonding (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Support (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Attitudes toward marriage – desire to get married (if unmarried)	✓	✓	✓	✓	✓	✓	✓	✓
Attitudes toward marriage – desire to stay married (if married)	✓	✓	✓	✓	✓	✓	✓	✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Likelihood of marriage with partner (if unmarried)	✓	✓	✓	✓	✓	✓	✓	✓
Future of relationship (want to still be with partner in a few years)	✓	✓	✓	✓	✓	✓	✓	✓
Perceived life changes (R's/partner's financial situation, happiness, and children's happiness) if couple ended relationship	✓	✓	✓	✓	✓	✓	✓	✓
Intimate partner violence (perceived safety, partner jealousy, partner makes R feel inadequate, frequency of perpetration and victimization of specific forms of emotional abuse, physical abuse, sexual abuse)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Quality of relationship reintegration – ease of having a good relationship since release			✓ (if male released)					
Challenges to relationship since release			✓ (if male released)					
Quality of relationship reintegration – support provided to partner			✓ (if male released)					
Quality of relationship reintegration – support received from partner			✓ (if male released)					
Prison contact between couple: frequency and duration of in-person visits	✓	✓	✓(if male incarcerated)					
Prison contact between couple: frequency and duration of telephone calls	✓	✓	✓(if male incarcerated)					
Prison contact between couple: frequency of letters to partner	✓	✓	✓(if male incarcerated)					

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Prison contact between couple: frequency of letters from partner	✓	✓	✓(if male incarcerated)					
Importance of partner (prison) contact	✓	✓	✓(if male incarcerated)					
Barriers to partner (prison) contact (facility location, visitor admission rules, cost, schedule issues, etc.)	✓	✓	✓(if male incarcerated)					
Intend to remain in relationship with partner after release from prison	✓	✓	✓(if male incarcerated)					
Concerns about relationship with partner during incarceration	✓	✓	✓(if male incarcerated)					
Perceived impact of incarceration on relationship with partner	✓	✓	✓(if male incarcerated)					
<b>Parenting Characteristics</b>								
Father's child support payments (number of children father is required to pay child support, how many payments made, child support order changed, whether father owes back support)	✓		✓		✓		✓	
Father's financial support for focal child (any support, type of financial support)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Frequency with which father sees nonresidential focal children	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Frequency of R's activities with focal child	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Parental warmth (with focal child)	✓	✓	✓	✓	✓	✓	✓	✓
Self-rated parental quality (with focal child)	✓	✓	✓	✓	✓	✓	✓	✓
Self-rated relationship between R and focal child	✓	✓	✓	✓	✓	✓	✓	✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Quality of father-child relationship reintegration– how easy/hard to have a good relationship since release			✓ (if male released)					
Challenges to father-child relationship since release			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Perceived impact of release on father-child relationship			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Prison contact between father and focal child: any personal visits, frequency of personal visits	✓	✓	✓(if male incarcerated)					
Prison contact between father and focal child: any telephone contact, frequency of telephone contact, average duration of calls	✓	✓	✓(if male incarcerated)					
Prison contact between father and focal child: father has sent any mail to child, frequency of mail	✓	✓	✓(if male incarcerated)					
Prison contact between father and focal child: father has sent any audiotapes to child	✓	✓	✓(if male incarcerated)					
Prison contact between father and focal child: father has received any mail from child, frequency of mail	✓	✓	✓(if male incarcerated)					
Prison contact between father and child: father has received any photographs/audiotapes of child	✓	✓	✓(if male incarcerated)					
Importance of father’s (prison) contact with children	✓	✓	✓(if male incarcerated)					
Barriers to father-child (prison) contact (facility location, visitor admission rules, cost, schedule issues, etc.)	✓	✓	✓(if male incarcerated)					
Concerns about focal child during father’s incarceration	✓	✓	✓(if male incarcerated)					

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Perceived impact of incarceration on father-child relationship	✓	✓	✓(if male incarcerated)					
Attitudes toward fatherhood/incarcerated fatherhood	✓	✓	✓	✓	✓	✓	✓	✓
Attitudes about father's parenting of children since his release (e.g., good for the children to have a male role model, father disciplines children harshly, female felt comfortable leaving him alone with children, concerns about him being a bad influence, raising children has gotten easier)				✓ (if male released)		✓ (if male released)		✓ (if male released)
Incarcerated mothers' contact with focal child during incarceration (importance of contact, satisfaction with help staying in touch, phone contact, send mail, send audiotapes, receive mail, receive photographs, personal visits, barriers to contact)		✓(if incarcerated)		✓(if incarcerated)		✓(if incarcerated)		✓(if incarcerated)
<b>Quality of Coparenting Relationship with Survey Partner (constructs covered if survey partners are coparents)</b>								
Frequency of arguments over focal child	✓ (pre-incarceration, current)	✓ (pre-incarceration, current)	✓	✓	✓	✓	✓	✓
Ability to count on one another for parenting responsibilities	✓	✓	✓	✓	✓	✓	✓	✓
Decision-making about focal child	✓ (pre-incarceration, current)	✓ (pre-incarceration, current)	✓	✓	✓	✓	✓	✓
Frequency of standing by a parenting decision	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Frequency of family activities	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Time enjoyed as a family	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)
<b>Extended family support</b>								
Number of close family members	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Emotional support from extended family	✓	✓	✓	✓	✓	✓	✓	✓
Instrumental support from extended family			✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)	✓ (if male released)
Assessment of how helpful family has been			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Frequency of in-person (prison) visits between male and extended family	✓		✓ (if male incarcerated)		✓ (if male incarcerated)		✓ (if male incarcerated)	
Parental support (R's, partner's) for couple's relationship	✓	✓	✓	✓	✓	✓	✓	✓
<b>Recidivism</b>								
Any incarceration			✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Number of incarcerations			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Number of days incarcerated			✓	✓	✓	✓	✓	✓
Noncompliance with any supervision conditions			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Criminal behavior (violent crimes, other crimes against people, weapon, drug use, drug sales, other drug crimes, DUI, property crimes, other crimes)			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Any new arrests			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Number of new arrests			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Post-release supervision (any, currently, time remaining)			✓ (if male released)		✓ (if male released)		✓ (if male released)	

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Perceptions about what has kept R out of trouble (if no new crimes or arrests)			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Perceptions about what caused R to get in trouble (if new crimes or arrests)			✓ (if male released)		✓ (if male released)		✓ (if male released)	
<b>Substance Use</b>								
Male's use of marijuana, powder cocaine, crack cocaine, heroin, methamphetamine, other amphetamine, hallucinogen, prescription drug misuse, methadone	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Male's binge drinking	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Male's problematic drinking and drug use (R feels he/she should cut down, people complain about use, feel guilty, use first thing in the morning, experience problems with anger, physically hurt family)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Female's use of marijuana, powder cocaine, crack cocaine, heroin, methamphetamine, other amphetamine, hallucinogen, prescription drug misuse, methadone		✓ (pre-incarceration)		✓		✓		✓
Female's binge drinking		✓		✓		✓		✓
Female's problematic drinking and drug use (R feels she should cut down, people complain about use, feel guilty, use first thing in the morning, experience problems with anger, physically hurt family)		✓		✓		✓		✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Whether female's substance use has changed since male was released				✓ (if male released)		✓ (if male released)		✓ (if male released)
<b>Employment/Income</b>								
Any employment	✓ (pre-incarceration)		✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Currently employed		✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Employment duration (months)			✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Job full/part time	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Type of pay (formal, self-employment, under the table)	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Job provides health insurance	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Job provides paid leave	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Monthly income from job	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
How easy/hard to get a job			✓ (if male released)		✓ (if male released)		✓ (if male released)	
How easy/hard to keep a job			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Barriers to employment			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Number of employers contacted			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Number of job interviews			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Received any unemployment insurance			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Any shared expenses with survey partner	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)		✓ (if male released)		✓ (if male released)	✓ (if male released)
Both partners contribute to shared assets				✓ (if male released)		✓ (if male released)		✓ (if male released)

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Specific sources of income received by R and partner, if shared expenses (cash welfare, other public assistance, child support payments, money from friends or relatives, formal employment, under the table/casual, illegal activities)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)		✓ (if male released)		✓ (if male released)	✓ (if male released)
Money management (reliance on budget, difficulty making monthly payments, surplus at end of month)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Male's perception of how easy/hard to support himself since release			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Female's perception of whether money situation better/worse/the same as before man's release				✓ (if male released)		✓ (if male released)		✓ (if male released)
<b>Housing</b>								
Living in own house/apartment	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Housing is public or section 8	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Number of places lived			✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Survey partners living together (any point, currently)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Male living with focal child (any point, currently)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Male's distance (travel time) from nonresidential focal children			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Male living with other children (asked for each child in roster)			✓ (if male released)		✓ (if male released)		✓ (if male released)	

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Male's distance (travel time) from other nonresidential children			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Female living with focal child (any point, currently)	✓	✓	✓	✓	✓	✓	✓	✓
Female living with other children (asked for each child in roster)				✓		✓		✓
Other people R lives/lived with	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Housing barriers encountered			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Female's housing situation better/worse since male's release				✓ (if male released)		✓ (if male released)		✓ (if male released)
Neighborhood quality (scale)	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
R lives with people with a history of incarceration		✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
R lives with people who use illegal drugs		✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
<b>Attitudes</b>								
Locus of control	✓	✓	✓	✓	✓	✓	✓	✓
Self efficacy	✓	✓	✓	✓	✓	✓	✓	✓
Goal orientation	✓	✓	✓	✓	✓	✓	✓	✓
<b>Personal Characteristics</b>								
Anger/anger management (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Reactive responding (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Spirituality (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Attachment (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Cooperation (scale)	✓	✓	✓	✓	✓	✓	✓	✓
Learning problems (scale)	✓	✓						
<b>Peer relationships</b>								
Number of close friends	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Proportion of friends with a history of prison/employment/using illegal drugs	✓ (pre-incarceration)		✓ (if male released)		✓ (if male released)		✓ (if male released)	
Male's negative peer influence (frequency with which his friends convince him to do things he shouldn't do)	✓ (pre-incarceration)	✓ (pre-incarceration)	✓ (if male released)					
Instrumental support from friends (loan money, provide a place to live, help with transportation)			✓ (if male released)					
Perception of how helpful friends have been			✓ (if male released)		✓ (if male released)		✓ (if male released)	
<b>Focal Child Well-Being</b>								
People child lives with	✓	✓	✓	✓	✓	✓	✓	✓
Child knows father is incarcerated	✓	✓	✓		✓		✓	
Perceived quality of child's relationship with survey partner	✓	✓	✓	✓	✓	✓	✓	✓
School attendance (whether attends, grade)	✓	✓	✓	✓	✓	✓	✓	✓
Ever been suspended or expelled	✓	✓	✓	✓	✓	✓	✓	✓
Ever repeated a grade	✓	✓	✓	✓	✓	✓	✓	✓
Academic performance	✓	✓	✓	✓	✓	✓	✓	✓
Participation in extracurricular activities	✓	✓	✓	✓	✓	✓	✓	✓
Behavioral problems (scale from National Survey of Children's Health: bullying, shows respect to adults, gets along with other children, disobedience, stubbornness, feels worthless, is unhappy, withdrawn)	✓	✓	✓	✓	✓	✓	✓	✓
Ever been placed in foster care	✓	✓	✓	✓	✓	✓	✓	✓
Ever run away	✓	✓	✓	✓	✓	✓	✓	✓

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Ever gotten into trouble for alcohol/drug use	✓	✓	✓	✓	✓	✓	✓	✓
Ever gotten into trouble with police	✓	✓	✓	✓	✓	✓	✓	✓
<b>Health</b>								
Days spent hospitalized	✓ (pre-incarceration)		✓ (if male released)		✓ (if male released)		✓ (if male released)	
Health insurance coverage (government program, private insurance)	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Unmet need for medical care because of cost	✓ (pre-incarceration)	✓	✓ (if male released)	✓	✓ (if male released)	✓	✓ (if male released)	✓
Overall health	✓	✓	✓	✓	✓	✓	✓	✓
Physical health limitations	✓	✓	✓	✓	✓	✓	✓	✓
Overall emotional health	✓	✓	✓	✓	✓	✓	✓	✓
ADHD	✓	✓	✓	✓	✓	✓	✓	✓
PTSD	✓	✓	✓	✓	✓	✓	✓	✓
Depression	✓	✓	✓	✓	✓	✓	✓	✓
Female's overall quality of life since male's release				✓ (if male released)		✓ (if male released)		✓ (if male released)
<b>Experiences the first 24 Hours of Release</b>								
Who met R at gate (survey partner, children, other family, friends, parole/probation officer, case manager, mentor, other)			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Reported to parole/probation immediately			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Talked to service agency			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Sleeping arrangements (where, whether survey partner was there)			✓ (if male released)		✓ (if male released)		✓ (if male released)	
Had a photo id			✓ (if male released)		✓ (if male released)		✓ (if male released)	

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
How prepared R felt			✓ (if male released)		✓ (if male released)		✓ (if male released)	
<b>Community Involvement</b>								
Civic engagement (attended church, community volunteer work, voted, taken part in local organizations)			✓ (if male released)					
Membership in religious organization			✓ (if male released)					
Female's participation in community activities has increased/decreased/stayed the same since his release				✓ (if male released)		✓ (if male released)		✓ (if male released)
<b>Service Need and Receipt</b>								
Satisfaction with help received staying in touch with partner during incarceration	✓	✓	✓ (if male incarcerated)					
Satisfaction with help received staying in touch with children during incarceration	✓	✓	✓ (if male incarcerated)					
Group classes on healthy marriage/romantic relationships (attended any, wanted/needed any, how many times attended, duration of each class, number attended with survey partner, how interesting the classes were, whether attended all/most/some, why stopped attending)	✓	✓	✓	✓	✓	✓		
Individual or couples' relationship counseling (received any, wanted/needed any, how many times attended, duration of each session, number attended with survey partner)	✓	✓	✓	✓	✓	✓		

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
How R found out about relationship strengthening activities	✓	✓	✓	✓	✓	✓		
Knowledge/skills learned from relationship strengthening activities, most important skill learned	✓	✓	✓	✓	✓	✓		
Perceived improvement in relationship with survey partner because of relationship strengthening activities	✓	✓	✓	✓	✓	✓		
Parenting classes (received any, wanted/needed any, how many times attended, duration of each class)	✓	✓	✓	✓	✓	✓		
Case management (received any, wanted/needed any, how many received, how helpful, services referred to by case manager, whether case manager followed up on referrals)	✓	✓	✓	✓	✓	✓		
Mental health counseling (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Substance abuse counseling/groups (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Anger management (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Batterer intervention classes (received any, wanted/needed any)	✓		✓		✓			
Educational services (GED, adult basic, college courses) (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Employment readiness/vocational (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Money management/financial planning (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Life skills education (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Housing assistance (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Parental rights/child custody assistance (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Family group counseling/mediation (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Support groups (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Spiritual/religious assistance (received any, wanted/needed any)	✓	✓	✓	✓	✓	✓		
Days in residential treatment	✓ (pre-incarceration)		✓ (if male released)		✓ (if male released)		✓ (if male released)	
<b>Expectations for release</b>								
Likelihood of male using illegal drugs	✓	✓	✓ (if male incarcerated)					
Likelihood of male going back to prison	✓	✓	✓ (if male incarcerated)					
Expect to be on post-release supervision	✓		✓ (if male incarcerated)		✓ (if male incarcerated)			
Expectations for family instrumental support (loaning money, providing a place to live, helping with transportation)	✓	✓	✓ (if male incarcerated)					
Expectations for peer instrumental support (loaning money, providing a place to live, helping with transportation)	✓	✓	✓ (if male incarcerated)					
Expected sources of financial support	✓	✓	✓ (if male incarcerated)					

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Expectation that male will provide any financial support to female			✓ (if male incarcerated)					
Expected ease of male supporting himself	✓	✓	✓ (if male incarcerated)					
Expected ease of male getting a job	✓	✓	✓ (if male incarcerated)					
Expected ease of male keeping a job	✓	✓	✓ (if male incarcerated)					
Expect to live with survey partner	✓	✓	✓ (if male incarcerated)					
Male's expectations to live with each child	✓		✓ (if male incarcerated)		✓ (if male incarcerated)		✓ (if male incarcerated)	
Expectations that father will live with focal child	✓	✓	✓ (if male incarcerated)					
Expect to live with anyone else	✓	✓	✓ (if male incarcerated)					
Expect to remain in relationship with survey partner (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Believes that partner wants to remain in relationship with R (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Expected ease of having a good relationship with survey partner (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Expected challenges to relationship with survey partner (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Expected emotional support R will give to partner (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Expected emotional support R will receive from partner (if relationship is intimate)	✓	✓	✓ (if male incarcerated)					
Expected frequency of father-focal child interaction	✓	✓	✓ (if male incarcerated)					

	Interview							
	Baseline		9M		18M		34M	
	Male	Female	Male	Female	Male	Female	Male	Female
Expected financial support father will provide focal child (any support, type of financial support)	✓	✓	✓ (if male incarcerated)					
Expected decision-making about focal child	✓	✓	✓ (if male incarcerated)					
Expected ease of father having good relationship with focal child	✓	✓	✓ (if male incarcerated)					
Expected challenges to father-child relationship	✓	✓	✓ (if male incarcerated)					

## Site-Specific Response Rates

Site-specific response rates for each interview wave, by sex and group are shown in **Exhibits A-5** through **A-8**. As noted in **Chapter 3**, response rates reflect the number of completed interviews divided by the number of eligible cases fielded. (Eligibility criteria are discussed in **Chapter 3**.) Non-interviews are eligible cases that were not successfully interviewed, typically because the respondent could not be located but also including refusals and interviewer difficulty accessing respondents in a treatment or (new) correctional facility.

**Exhibit A-5. Response Rates for Indiana Impact Sample, by Wave**

	Baseline	9M	18M	34M
<b>Males</b>				
Treatment group				
Interviews completed	281	249	242	229
Ineligible cases	27	1	4	10
Non-interviews	18	31	35	42
Response rate	94.0%	88.9%	87.4%	84.5%
Comparison group				
Interviews completed	405	343	322	310
Ineligible cases	176	1	10	10
Non-interviews	78	61	73	85
Response rate	83.9%	84.9%	81.5%	78.5%
Total				
Interviews completed	686	592	564	539
Ineligible cases	203	2	14	20
Non-interviews	96	92	108	127
Response rate	87.7%	86.6%	83.9%	80.9%
<b>Females</b>				
Treatment group				
Interviews completed	264	247	243	239
Ineligible cases	1	8	10	14
Non-interviews	16	26	28	28
Response rate	94.3%	90.5%	89.7%	89.5%
Comparison group				
Interviews completed	313	290	302	291
Ineligible cases	12	41	48	59
Non-interviews	80	74	55	55
Response rate	79.6%	79.7%	84.6%	84.1%
Total				
Interviews completed	577	537	545	530
Ineligible cases	13	49	58	73
Non-interviews	96	100	83	83
Response rate	85.7%	84.3%	86.8%	86.5%

**Exhibit A-6. Response Rates for Ohio Impact Sample, by Wave**

	<b>Baseline</b>	<b>9M</b>	<b>18M</b>	<b>34M</b>
<b>Males</b>				
Treatment group				
Interviews completed	506	387	361	360
Ineligible cases	125	2	6	13
Non-interviews	132	117	139	133
Response rate	79.3%	76.8%	72.2%	73.0%
Comparison group				
Interviews completed	182	129	141	135
Ineligible cases	57	1	3	3
Non-interviews	43	52	38	44
Response rate	80.9%	71.3%	78.8%	75.4%
Total				
Interviews completed	688	516	502	495
Ineligible cases	182	3	9	16
Non-interviews	175	169	177	177
Response rate	79.9%	75.3%	73.9%	73.7%
<b>Females</b>				
Treatment group				
Interviews completed	394	348	362	364
Ineligible cases	6	38	42	55
Non-interviews	106	120	102	87
Response rate	78.8%	74.5%	78.0%	80.7%
Comparison group				
Interviews completed	133	122	126	124
Ineligible cases	1	10	16	22
Non-interviews	48	50	41	36
Response rate	73.5%	70.9%	75.3%	77.5%
Total				
Interviews completed	527	470	487	488
Ineligible cases	7	48	58	77
Non-interviews	154	170	143	123
Response rate	77.4%	73.4%	77.3%	79.9%

**Exhibit A-7. Response Rates for New Jersey Impact Sample, by Wave**

	<b>Baseline</b>	<b>9M</b>	<b>18M</b>
<b>Males</b>			
Treatment group			
Interviews completed	183	108	108
Ineligible cases	37	9	9
Non-interviews	44	66	66
Response rate	80.6%	62.1%	62.1%
Comparison group			
Interviews completed	126	67	65
Ineligible cases	35	1	5
Non-interviews	46	58	56
Response rate	73.3%	53.6%	53.7%
Total			
Interviews completed	309	175	173
Ineligible cases	72	10	14
Non-interviews	90	124	122
Response rate	77.4%	58.5%	58.6%
<b>Females</b>			
Treatment group			
Interviews completed	113	102	108
Ineligible cases	3	26	30
Non-interviews	67	55	45
Response rate	62.8%	65.0%	70.6%
Comparison group			
Interviews completed	67	61	72
Ineligible cases	2	23	25
Non-interviews	57	42	29
Response rate	54.0%	59.2%	71.3%
Total			
Interviews completed	180	163	180
Ineligible cases	5	49	55
Non-interviews	124	97	74
Response rate	59.2%	63.0%	70.9%

**Exhibit A-8. Response Rates for New York Impact Sample, by Wave**

	Baseline	9M	18M
<b>Males</b>			
Treatment group			
Interviews completed	138	102	98
Ineligible cases	68	0	1
Non-interviews	67	36	39
Response rate	67.3%	73.9%	71.5%
Comparison group			
Interviews completed	87	58	52
Ineligible cases	21	1	7
Non-interviews	15	28	28
Response rate	85.3%	67.4%	65.0%
Total			
Interviews completed	225	160	150
Ineligible cases	89	1	8
Non-interviews	82	64	67
Response rate	73.3%	71.4%	69.1%
<b>Females</b>			
Treatment group			
Interviews completed	78	73	75
Ineligible cases	3	13	16
Non-interviews	57	52	47
Response rate	57.8%	58.4%	61.5%
Comparison group			
Interviews completed	48	45	47
Ineligible cases	5	11	11
Non-interviews	34	31	29
Response rate	58.5%	59.2%	61.8%
Total			
Interviews completed	126	118	122
Ineligible cases	8	24	27
Non-interviews	91	83	76
Response rate	58.1%	58.7%	61.6%

### Selection Bias Propensity Model Diagnostics

As described in **Chapter 3**, propensity models were run separately for males and females in each site to estimate the probability of assignment to the treatment group. The site-specific modeling approach required limiting the number of independent variables in each model, particularly in the two smallest sites, New Jersey and New York. We identified a core set of variables that preceded the intervention and that we thought were most likely to have affected

assignment to the intervention (and outcomes)—including demographics; relationship and family characteristics; criminal history and characteristics of the baseline incarceration; and pre-incarceration substance use, housing, and employment. We also examined additional baseline characteristics (that we thought could be related to both treatment assignment and outcomes) on which the treatment and comparison groups were unbalanced at baseline and included these variables in the model. The core and additional variables included in the propensity models are listed in **Exhibit A-9**.

#### **Exhibit A-9. Variables Used in Selection Propensity Models for Men**

<b>Variable Name</b>	<b>Variable Description</b>
<b>Core Variables</b>	
Age	Male's age at baseline interview
Race: Black*	Male is black
Race: White	Male is white
Race: Other/multi-racial	Male is of other race or is multi-racial
Hispanic	Male is of Hispanic ethnicity
English not primary/not citizen	Male does not speak English as primary language, was not born in US, or is not a US citizen
Survey partner: Married*	Male's relationship to female partner at baseline: Married
Survey partner: Intimate	Male's relationship to female partner at baseline: Nonmarried intimate partner
Survey partner: Parenting	Male's relationship to female partner at baseline: Parenting partner only
Other romantic partners	Male had other romantic partners at baseline
Relationship length	Male's report of length of relationship with female partner as of baseline, in years
Coresidence prior to incarceration	Male reported having lived with female partner prior to incarceration
Coparenting with partner	Male reported that he and female partner parented at least one child together at baseline
Number of children	Male's total number of children
Number of incarcerations	Male's total number of adult incarcerations
Years incarcerated	Male's report of the duration of the focal incarceration (in years) at baseline interview
Incarcerated for probation violation	Male's baseline incarceration was for a probation or parole violation
Conviction crime: Person	Male's conviction crime was for a person crime
Conviction crime: Property	Male's conviction crime was for a property crime
Conviction crime: Drug	Male's conviction crime was for a drug crime
Problem alcohol/drug use	Male's report of problem alcohol or drug use prior to incarceration
HS Diploma/GED	Male has at least a high school diploma or GED

Variable Name	Variable Description
Unemployed	Male was unemployed in the 6 months prior to incarceration
<b>Additional Variables</b>	
Ever married	Male reported ever having been married
Homeless	Male reported being homeless during the 6 months prior to incarceration
Illegal income	Male reported money from illegal activity during the 6 months prior to incarceration
Changes in childhood parenting situation	Male's report of the number of changes in the people who raised him during childhood
Relationship predated incarceration	Male reported that his relationship with his survey partner predated his incarceration
Any children	Male reported having any children (used instead of "Number of children")
Number of juvenile incarcerations	Male's report of the number of juvenile incarcerations (used instead of "Number of incarcerations")
Disciplinary infractions	Male's report of the number of disciplinary infractions received during the baseline incarceration
Days in segregation	Male's report of the number of days he has spent in administrative segregation during the baseline incarceration
Never worked	Male reported that he had never had a job (used instead of "Unemployed")

\*Reference category

For each model, we tried to include as many of the core variables as possible. Because the small sample sizes in New Jersey and New York required the models to be more parsimonious, we selected the variables we thought most relevant and for which the treatment and comparison groups differed significantly at baseline. **Exhibit A-10** shows the variables included in the final male propensity model for each site.

**Exhibit A-10. Final Variables Included Male Selection Propensity Models, by Site**

	Indiana	Ohio	New Jersey	New York
Age	✓	✓	✓	✓
Race: Black*	✓	✓	✓	✓
Race: White	✓	✓	✓	✓
Race: Other/multiracial	✓	✓	✓	✓
Hispanic	✓	✓		✓
English not primary/not citizen	✓		✓	✓
Survey partner: Married*	✓	✓	✓	✓
Survey partner: Intimate	✓	✓	✓	✓
Survey partner: Parenting	✓	✓	✓	✓
Other romantic partners	✓	✓	✓	

	Indiana	Ohio	New Jersey	New York
Relationship length	✓	✓	✓	
Coresidence prior to incarceration	✓	✓	✓	✓
Coparenting with partner	✓	✓	✓	✓
Number of children	✓	✓		✓
Number of incarcerations	✓	✓		✓
Years incarcerated	✓	✓	✓	✓
Incarcerated for probation violation	✓	✓	✓	
Conviction crime: Person	✓	✓		✓
Conviction crime: Property	✓	✓		✓
Conviction crime: Drug	✓	✓		✓
Problem alcohol/drug use	✓	✓		
HS Diploma/GED	✓	✓		
Unemployed	✓	✓		✓
Ever married	✓			
Homeless	✓			
Illegal income	✓			
Changes in childhood parenting situation	✓			
Relationship predated incarceration			✓	✓
Any children			✓	
Number of juvenile incarcerations			✓	
Disciplinary infractions			✓	
Days in segregation			✓	
Never worked			✓	

\*Reference category

For the female propensity models, the analysis team and expert panel agreed that it was appropriate to include variables from the male dataset that reflected each woman's *partner's* characteristics. This is because the main factors that influenced a woman's likelihood of receiving the intervention were actually characteristics of her partner, not herself. The male was the primary intervention target in all OFA-funded sites in that he was recruited first and provided contact information for his partner, who was then invited to participate. Furthermore, identification of appropriate comparison subjects in each site was based on the characteristics of the males in the treatment group, not the female partners. In addition, the first interview for several women in our study (who did not complete a baseline interview) was a follow-up interview. For these women, we included a small number of "baseline" questions in the woman's first interview. Thus, there are only a few variables collected at baseline for which we have data for all women in the study sample. Inclusion of male partner data in the female propensity models allowed us to include a richer set of independent variables. **Exhibit A-11** shows the variables included in the final female propensity model for each site. As is evident, the only variables from the female interview data are the female respondent's age, race, and ethnicity. The remaining variables are from the male partner's baseline interview.

**Exhibit A-11. Final Variables Included in Female Selection Propensity Models, by Site**

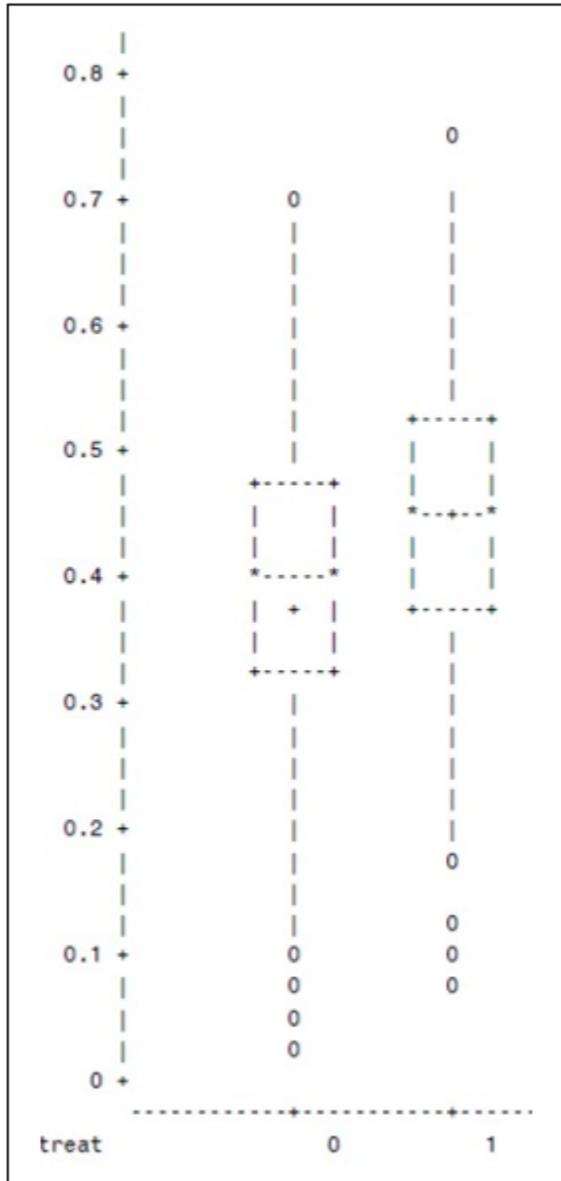
	Indiana	Ohio	New Jersey	New York
<b>Variables Used from Female Interview</b>				
(Female) Age	✓	✓	✓	✓
(Female) Race: Black*	✓	✓	✓	✓
(Female) Race: White	✓	✓	✓	✓
(Female) Race: Other/multiracial	✓	✓	✓	✓
(Female) Hispanic	✓	✓		
<b>Variables Used from Male Interview</b>				
Age	✓	✓		
Race: Black*	✓			✓
Race: White	✓			✓
Race: Other/multi-racial	✓			✓
Hispanic	✓			✓
Survey partner: Married*	✓	✓	✓	✓
Survey partner: Intimate	✓	✓		✓
Survey partner: Parenting	✓	✓		✓
Other romantic partners	✓	✓		
Relationship length	✓	✓	✓	
Coresidence prior to incarceration	✓		✓	✓
Coparenting with partner	✓	✓	✓	✓
Number of children	✓	✓	✓	✓
Number of incarcerations	✓		✓	✓
Years incarcerated	✓	✓	✓	✓
Incarcerated for probation violation	✓	✓		
Conviction crime: Person	✓	✓	✓	✓
Conviction crime: Property	✓	✓	✓	
Conviction crime: Drug	✓	✓	✓	
Problem alcohol/drug use	✓			
HS Diploma/GED	✓	✓		✓
Unemployed	✓	✓		✓
Ever married	✓			
Homeless	✓			
Illegal income	✓			
Changes in childhood parenting situation	✓			
Relationship predated incarceration				✓

\*Reference category

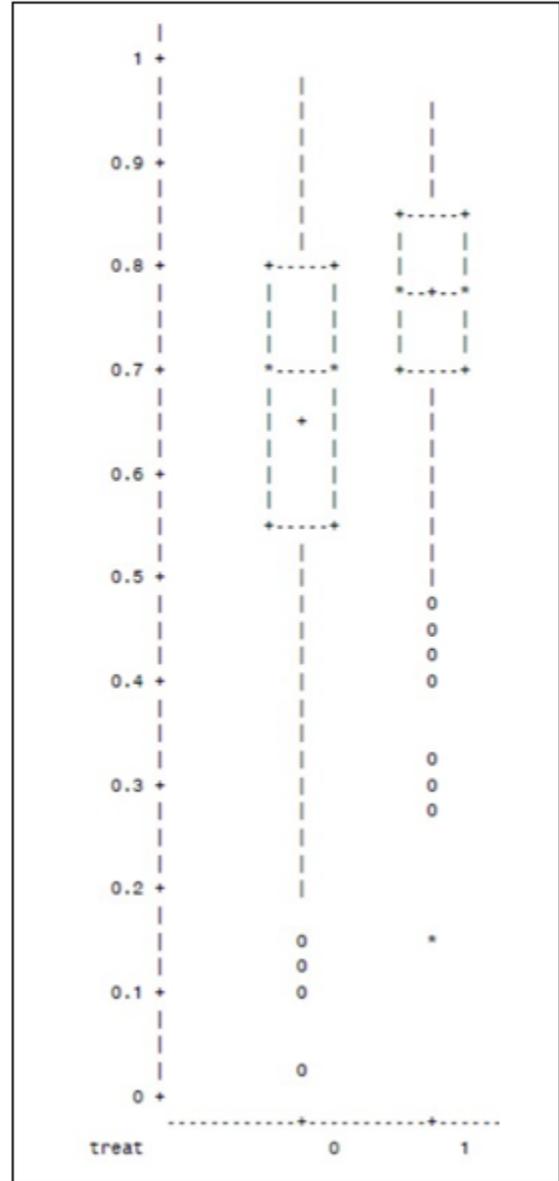
Although missing data were relatively rare, imputation procedures were used to avoid dropping any observations from the propensity models. The propensity models were run in SAS 9.3 in the framework of the MI and MIANALYZE procedures. PROC MI was used to impute missing values with a two-step imputation process: first, a Monte Carlo procedure (MCMC) was used to

impute missing values until the data reached a pattern of monotone missingness; then regression was used to impute the remaining missing values. Five imputed values were estimated for each missing value, so the result of the imputation procedure was a site-level data set with five observations for each respondent. The propensity model was estimated on each of the five sets of data in the imputed dataset with PROC LOGISTIC, and the resulting parameter estimates were applied to the data to generate probabilities of assignment to the intervention. Use of the imputed dataset generated five predicted probabilities ( $\hat{p}$ 's), or p-hat values, for each individual. The five p-hats were averaged to produce a final p-hat for each individual. The following box plots (**Exhibits A-12 through A-19**) show the distributions of the p-hats for the treatment and comparison groups in each site. There is good overlap of predicted probabilities of assignment to treatment between the treatment and comparison groups in each site, suggesting the treatment and comparison cases in each site are comparable in terms of baseline characteristics included in the propensity model.

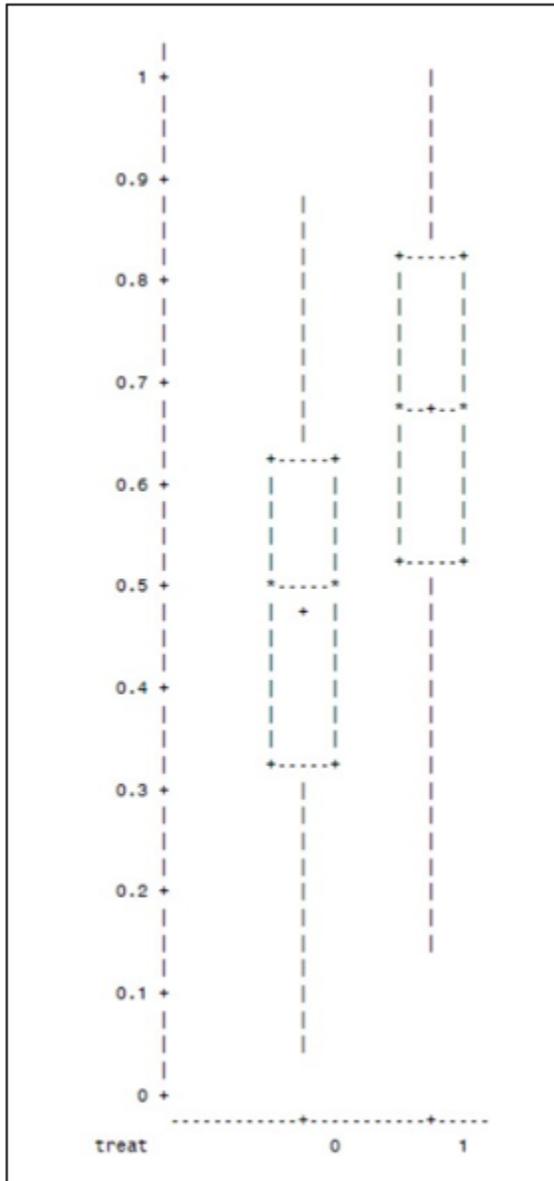
**Exhibit A-12. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Men in Indiana**



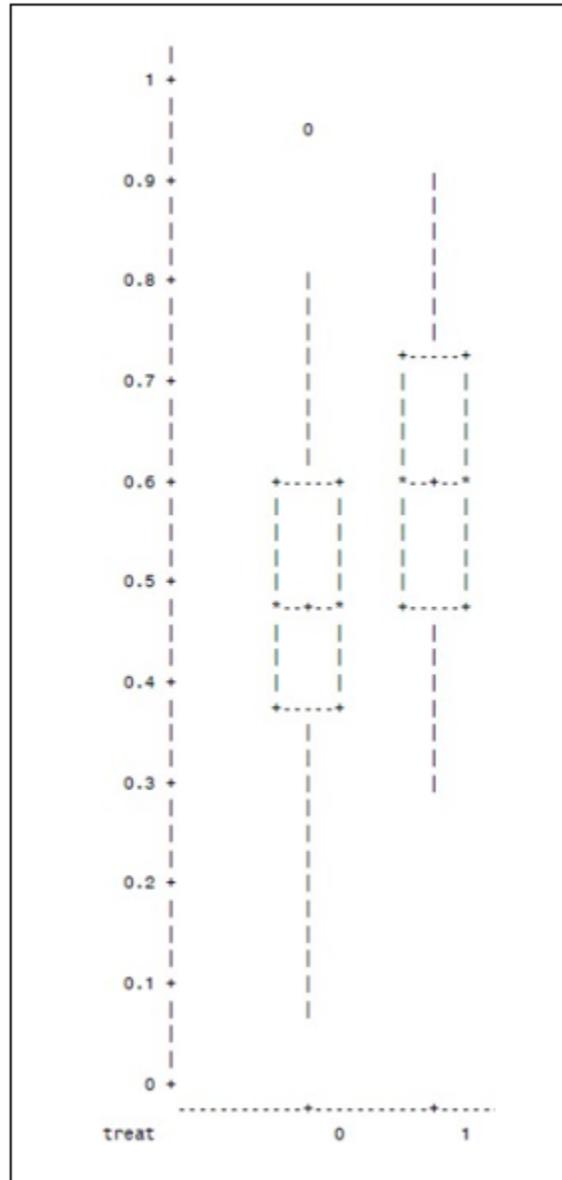
**Exhibit A-13. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Men in Ohio**



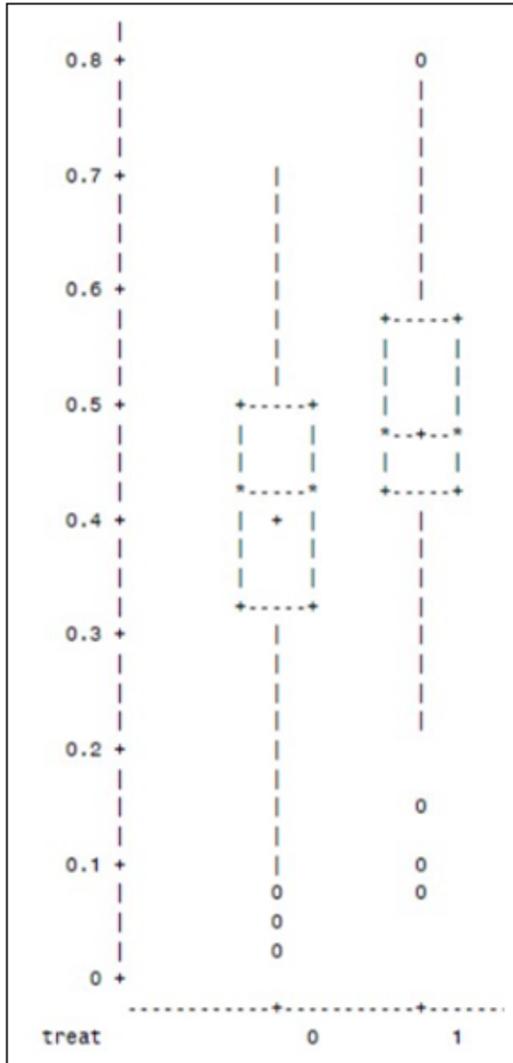
**Exhibit A-14. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Men in New Jersey**



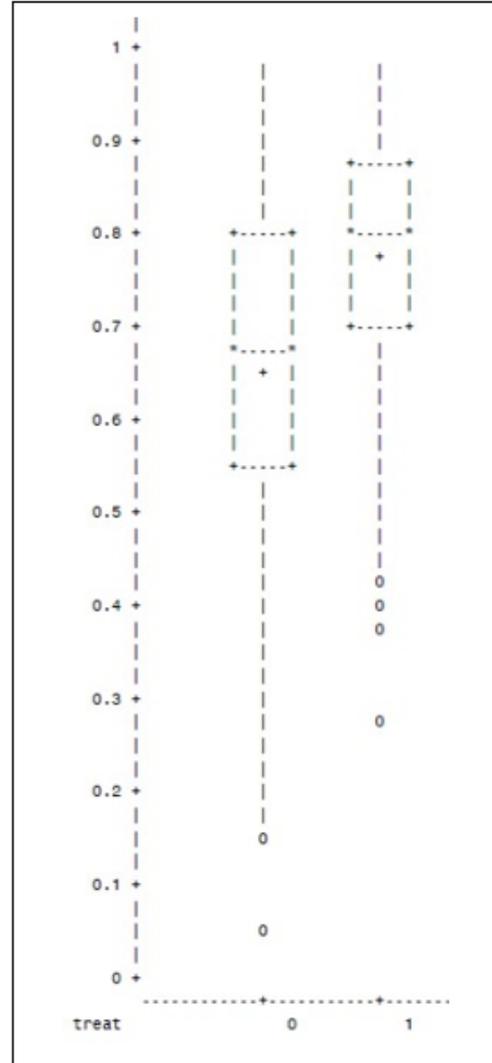
**Exhibit A-15. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Men in New York**



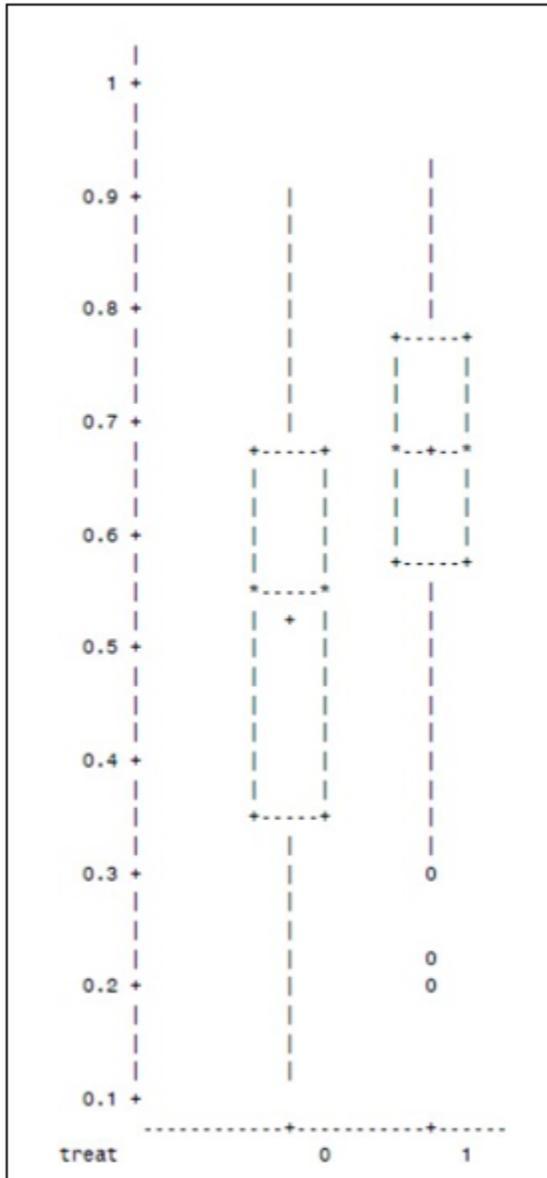
**Exhibit A-16. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Women in Indiana**



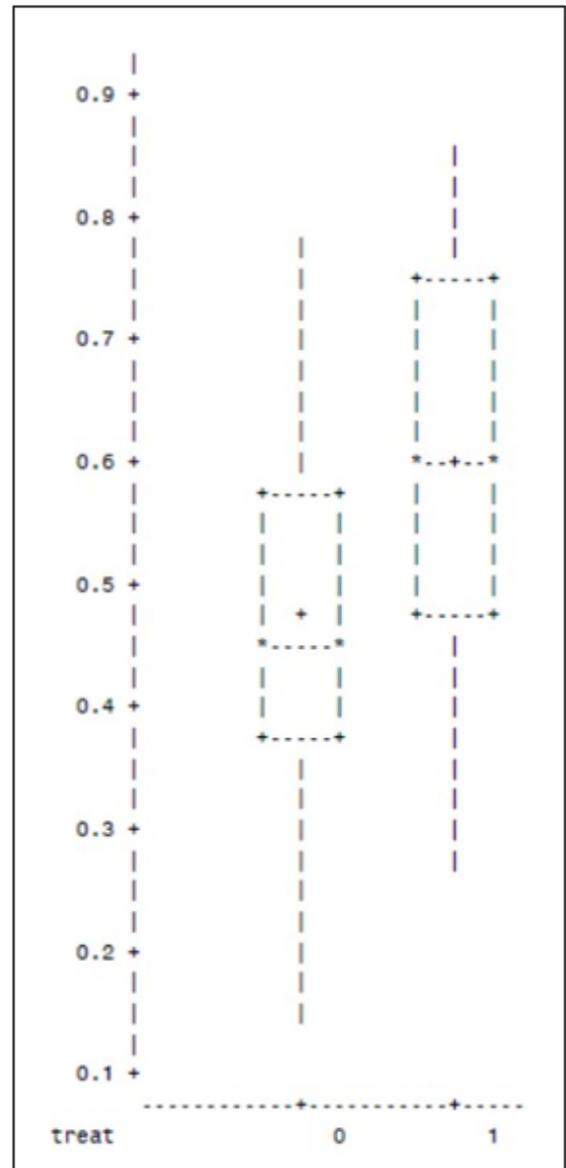
**Exhibit A-17. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Women in Ohio**



**Exhibit A-18. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Women in New Jersey**



**Exhibit A-19. Boxplot of p-hat Distributions for Treatment (treat=1) and Comparison (treat=0) Women in New York**



The estimated probabilities ( $\hat{p}$ 's) were used to produce weights to estimate the population average treatment effects. Specifically, the following weights,  $w_i$  for each subject  $i$ , were generated:

For treatment subjects,  $w_i = 1 / \hat{p}_i$

For comparison subjects,  $w_i = 1 / \hat{p}_i$

Next, the weights were normalized to a mean of 1, and extreme weights were capped at 5. The weights were then used to check the balance between the treatment and comparison groups on the core variables and any additional variables included in the propensity models. The weights generated with the  $\hat{p}$ 's from the selection propensity models were very effective in balancing the treatment and comparison groups on a variety of baseline characteristics except for New York. In this site, the treatment and comparison groups were radically different. The groups differed significantly on many baseline characteristics, and balance on those characteristics could not be achieved with the propensity model. After trying numerous combinations of independent variables and additional strategies, the decision was made to drop some of the comparison cases to create a subset of cases that were more similar on observed characteristics. The p-values from the best propensity model that had been estimated were used to identify cases to exclude from the sample: comparison cases with p-values below 0.2 were excluded from the analysis sample. The propensity model was then re-estimated on the reduced sample of retained cases to generate p-values and weights.

**Exhibits A-20** through **A-27** show the original, unadjusted differences between the groups in each site, as well as the differences after weighting (weighted means and results of significance tests) for all core variables, as well as any additional variables included in the site's model. (The data for New York are based on the reduced sample.) Also included are unadjusted and adjusted standardized differences and columns indicating standardized differences greater than 0.2. As **Exhibits A-20** through **A-27** show, the weights generated with the  $\hat{p}$ 's from the selection propensity models were very effective in balancing the treatment and comparison groups on a variety of baseline characteristics. After weighting, there were no significant differences between the male treatment and comparison groups in any of the sites, and only one variable had a standardized mean difference greater than 0.2 (parenting partner in New Jersey). Among women, there was only one significant difference in one site (parenting partner in New Jersey), but there were three variables on which New York female treatment and comparison groups had a standardized mean difference greater than 0.2.

**Exhibit A-20. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Men in Indiana**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	686	281	405	35.11	33.63	*	0.16	0	34.17	34.20		0.00	0
Race: Black	686	281	405	0.50	0.45		0.09	0	0.48	0.47		0.02	0
Race: White	686	281	405	0.42	0.44		-0.05	0	0.44	0.43		0.01	0
Race: Other/multiracial	686	281	405	0.09	0.11		-0.07	0	0.08	0.09		-0.04	0
Hispanic	686	281	405	0.05	0.07		-0.06	0	0.05	0.06		-0.03	0
English not primary/not citizen	686	281	405	0.01	0.03	*	-0.15	0	0.01	0.02		-0.04	0
Survey partner: Married	686	281	405	0.29	0.21	*	0.19	0	0.24	0.24		0.00	0
Survey partner: Intimate	686	281	405	0.70	0.72		-0.05	0	0.71	0.71		0.01	0
Survey partner: Parenting	686	281	405	0.01	0.07	***	-0.30	1	0.04	0.05		-0.02	0
Other romantic partners	685	281	404	0.08	0.08		0.01	0	0.08	0.08		0.02	0
Relationship length	685	280	405	7.75	6.66	*	0.16	0	7.16	7.13		0.00	0
Coresidence prior to incarceration	686	281	405	0.64	0.63		0.04	0	0.63	0.64		-0.02	0
Coparenting with partner	686	281	405	0.70	0.73		-0.07	0	0.72	0.72		0.00	0
Number of children	686	281	405	2.47	2.59		-0.05	0	2.50	2.54		-0.02	0
Number of incarcerations	678	278	400	5.40	5.34		0.01	0	5.28	5.35		-0.01	0
Years incarcerated	686	281	405	3.22	3.06		0.04	0	3.10	3.11		0.00	0
Incarcerated for probation violation	686	281	405	0.27	0.21		0.13	0	0.24	0.23		0.03	0
Conviction crime: Person	686	281	405	0.33	0.35		-0.05	0	0.34	0.35		-0.01	0
Conviction crime: Property	686	281	405	0.17	0.14		0.07	0	0.15	0.15		-0.01	0
Conviction crime: Drug	686	281	405	0.33	0.42	*	-0.19	0	0.39	0.38		0.01	0
Problem alcohol/drug use	685	280	405	3.76	4.18		-0.15	0	3.99	3.99		0.00	0
HS Diploma/GED	686	281	405	0.74	0.73		0.02	0	0.72	0.73		-0.02	0
Unemployed	684	280	404	0.36	0.39		-0.06	0	0.39	0.38		0.01	0
Ever married	686	281	405	0.55	0.46	*	0.18	0	0.49	0.49		-0.01	0
Homeless	686	281	405	0.02	0.06	*	-0.17	0	0.04	0.04		0.00	0
Illegal income	682	279	403	0.51	0.59	*	-0.17	0	0.56	0.56		0.01	0
Changes in childhood parenting situation	683	280	403	1.49	2.49	**	-0.20	1	1.73	2.07		-0.07	0

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-21. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Men in Ohio**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	688	506	182	31.30	34.10	***	-0.35	1	32.03	32.07		0.00	0
Race: Black	688	506	182	0.59	0.62		-0.06	0	0.61	0.62		-0.03	0
Race: White	688	506	182	0.26	0.26		-0.01	0	0.26	0.24		0.02	0
Race: Other/multiracial	688	506	182	0.15	0.12		0.09	0	0.14	0.13		0.01	0
Hispanic	688	506	182	0.10	0.07		0.11	0	0.09	0.08		0.04	0
English not primary/not citizen	688	506	182	0.02	0.02		0.02	0	0.02	0.01		0.05	0
Survey partner: Married	688	506	182	0.20	0.30	**	-0.25	1	0.22	0.19		0.07	0
Survey partner: Intimate	688	506	182	0.71	0.60	*	0.22	1	0.69	0.72		-0.06	0
Survey partner: Parenting	688	506	182	0.10	0.09		0.01	0	0.10	0.09		0.00	0
Other romantic partners	687	505	182	0.21	0.23		-0.06	0	0.21	0.20		0.01	0
Relationship length	687	505	182	6.45	8.63	***	-0.34	1	7.14	7.16		0.00	0
Coresidence prior to incarceration	688	506	182	0.65	0.65		0.00	0	0.65	0.65		0.01	0
Coparenting with partner	688	506	182	0.87	0.75	***	0.31	1	0.84	0.84		0.01	0
Number of children	688	506	182	3.06	2.54	**	0.23	1	2.93	2.85		0.03	0
Number of incarcerations	672	494	178	6.09	6.23		-0.02	0	6.24	6.22		0.00	0
Years incarcerated	688	506	182	2.81	4.61	***	-0.41	1	3.19	3.36		-0.04	0
Incarcerated for probation violation	687	505	182	0.18	0.10	**	0.25	1	0.16	0.18		-0.04	0
Conviction crime: Person	688	506	182	0.47	0.63	***	-0.32	1	0.51	0.49		0.03	0
Conviction crime: Property	688	506	182	0.21	0.19		0.04	0	0.21	0.19		0.04	0
Conviction crime: Drug	688	506	182	0.31	0.20	**	0.26	1	0.28	0.28		0.00	0
Problem alcohol/drug use	686	505	181	3.70	3.94		-0.08	0	3.77	3.70		0.02	0
HS Diploma/GED	688	506	182	0.59	0.68	*	-0.18	0	0.61	0.58		0.06	0
Unemployed	687	505	182	0.50	0.41	*	0.19	0	0.48	0.49		-0.03	0

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-22. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Men in New Jersey**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	309	183	126	33.01	35.32	*	-0.26	1	33.71	34.03		-0.04	0
Race: Black	309	183	126	0.77	0.71		0.13	0	0.75	0.73		0.06	0
Race: White	309	183	126	0.08	0.11		-0.10	0	0.10	0.10		0.00	0
Race: Other/multiracial	309	183	126	0.15	0.18		-0.08	0	0.15	0.18		-0.06	0
Hispanic	309	183	126	0.16	0.18		-0.06	0	0.17	0.18		-0.04	0
English not primary/not citizen	309	183	126	0.04	0.12	*	-0.28	1	0.07	0.09		-0.07	0
Survey partner: Married	309	183	126	0.14	0.23	*	-0.24	1	0.17	0.18		-0.05	0
Survey partner: Intimate	309	183	126	0.72	0.76		-0.09	0	0.75	0.79		-0.09	0
Survey partner: Parenting	309	183	126	0.14	0.01	***	0.53	1	0.09	0.03		0.23	1
Other romantic partners	308	182	126	0.07	0.11		-0.14	0	0.08	0.08		0.00	0
Relationship length	309	183	126	6.32	8.92	**	-0.38	1	6.95	7.84		-0.13	0
Coresidence prior to incarceration	309	183	126	0.56	0.70	*	-0.28	1	0.64	0.68		-0.09	0
Coparenting with partner	309	183	126	0.81	0.66	**	0.34	1	0.77	0.77		0.01	0
Number of children	309	183	126	2.48	2.10		0.22	1	2.37	2.34		0.02	0
Number of incarcerations	305	181	124	4.64	5.81		-0.17	0	5.01	5.62		-0.09	0
Years incarcerated	309	183	126	3.32	2.33	***	0.43	1	2.90	2.89		0.00	0
Incarcerated for probation violation	308	183	125	0.34	0.43		-0.19	0	0.39	0.36		0.07	0
Conviction crime: Person	309	183	126	0.36	0.28		0.18	0	0.31	0.34		-0.06	0
Conviction crime: Property	309	183	126	0.16	0.21		-0.12	0	0.15	0.22		-0.17	0
Conviction crime: Drug	309	183	126	0.32	0.33		-0.01	0	0.30	0.34		-0.08	0
Problem alcohol/drug use	309	183	126	3.10	2.90		0.07	0	3.17	2.77		0.15	0
HS Diploma/GED	309	183	126	0.57	0.64		-0.15	0	0.58	0.62		-0.08	0
Unemployed	309	183	126	0.39	0.39		0.00	0	0.35	0.41		-0.13	0
Relationship prior to incarceration	309	183	126	0.81	0.90	*	-0.25	1	0.84	0.87		-0.08	0
Any children	309	183	126	0.94	0.85	*	0.30	1	0.91	0.90		0.01	0
# juvenile incarcerations	308	182	126	1.88	1.25	*	0.25	1	1.68	1.80		-0.05	0
Disciplinary infractions	309	183	126	2.12	1.11	*	0.25	1	1.73	1.71		0.00	0
Days in segregation	309	183	126	102.50	50.67	*	0.27	1	80.43	73.30		0.04	0
Never worked	308	182	126	0.12	0.04	*	0.29	1	0.08	0.07		0.05	0

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-23. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Men in New York**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	201	138	63	37.50	34.24	*	0.37	1	36.72	35.73		0.11	0
Race: Black	201	138	63	0.70	0.68		0.04	0	0.69	0.64		0.11	0
Race: White	201	138	63	0.07	0.11		-0.16	0	0.08	0.07		0.03	0
Race: Other/multiracial	201	138	63	0.23	0.21		0.06	0	0.23	0.29		-0.15	0
Hispanic	201	138	63	0.23	0.27		-0.09	0	0.23	0.32		-0.19	0
English not primary/not citizen	201	138	63	0.14	0.17		-0.10	0	0.13	0.20		-0.19	0
Survey partner: Married	201	138	63	0.61	0.44	*	0.33	1	0.55	0.45		0.20	1
Survey partner: Intimate	201	138	63	0.36	0.49		-0.26	1	0.42	0.52		-0.19	0
Survey partner: Parenting	201	138	63	0.03	0.06		-0.16	0	0.03	0.03		-0.02	0
Other romantic partners	200	138	62	0.03	0.06		-0.17	0	0.03	0.06		-0.15	0
Relationship length	201	138	63	8.71	8.42		0.04	0	8.43	8.09		0.05	0
Coresidence prior to incarceration	201	138	63	0.35	0.62	***	-0.56	1	0.42	0.45		-0.06	0
Coparenting with partner	201	138	63	0.52	0.78	***	-0.55	1	0.58	0.56		0.05	0
Number of children	201	138	63	1.40	2.13	**	-0.43	1	1.62	1.64		-0.01	0
Number of incarcerations	199	136	63	2.79	4.37		-0.29	1	3.21	4.10		-0.17	0
Years incarcerated	201	138	63	10.77	3.77	***	1.09	1	8.83	7.97		0.13	0
Incarceration for probation violation	201	138	63	0.04	0.05		-0.02	0	0.06	0.07		-0.05	0
Conviction crime: Person	200	137	63	0.79	0.48	***	0.68	1	0.70	0.63		0.14	0
Conviction crime: Property	200	137	63	0.09	0.19		-0.30	1	0.12	0.14		-0.05	0
Conviction crime: Drug	200	137	63	0.13	0.22		-0.24	1	0.16	0.22		-0.16	0
Problem alcohol/drug use	201	138	63	2.29	2.05		0.10	0	2.30	1.89		0.17	0
HS Diploma/GED	201	138	63	0.80	0.71		0.19	0	0.77	0.73		0.10	0
Unemployed	201	138	63	0.33	0.37		-0.08	0	0.35	0.49		-0.30	1
Relationship prior to incarceration	201	138	63	0.52	0.84	***	-0.73	1	0.60	0.65		-0.11	0

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-24. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Women in Indiana**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>													
(Female) Age	609	269	340	33.56	31.64	*	0.19	0	32.50	32.51		0.00	0
(Female) Race: Black	609	269	340	0.37	0.37		0.01	0	0.37	0.37		0.00	0
(Female) Race: White	609	269	340	0.56	0.57		-0.02	0	0.57	0.57		-0.01	0
(Female) Race: Other	609	269	340	0.07	0.06		0.02	0	0.07	0.06		0.01	0
(Female) Hispanic	609	269	340	0.04	0.02		0.12	0	0.03	0.03		0.00	0
<b>Male Variables</b>													
Age	609	269	340	35.11	33.44	*	0.18	0	34.08	34.10		0.00	0
Race: Black	609	269	340	0.50	0.46		0.07	0	0.48	0.48		0.02	0
Race: White	609	269	340	0.43	0.45		-0.04	0	0.44	0.45		-0.01	0
Race: Other/multiracial	609	269	340	0.07	0.09		-0.05	0	0.07	0.08		-0.02	0
Hispanic	609	269	340	0.04	0.06		-0.08	0	0.05	0.05		-0.02	0
Survey partner: Married	609	269	340	0.29	0.21	*	0.17	0	0.25	0.25		0.00	0
Survey partner: Intimate	609	269	340	0.70	0.72		-0.03	0	0.71	0.71		0.00	0
Survey partner: Parenting	609	269	340	0.01	0.07	***	-0.29	1	0.04	0.04		0.00	0
Other romantic partners	608	269	339	0.07	0.07		0.01	0	0.07	0.07		0.01	0
Relationship length	608	268	340	7.77	6.66	*	0.16	0	7.21	7.17		0.01	0
Coresidence prior to incarceration	609	269	340	0.65	0.64		0.01	0	0.63	0.65		-0.04	0
Coparenting with partner	609	269	340	0.70	0.74		-0.11	0	0.73	0.73		0.00	0
Number of children	609	269	340	2.49	2.73		-0.10	0	2.57	2.62		-0.02	0
Number of incarcerations	602	266	336	5.48	5.36		0.02	0	5.25	5.34		-0.01	0
Years incarcerated	609	269	340	3.27	3.00		0.07	0	3.11	3.09		0.01	0
Incarcerated for parole violation	609	269	340	0.27	0.21		0.13	0	0.24	0.23		0.02	0
Conviction crime: Person	609	269	340	0.33	0.35		-0.03	0	0.34	0.34		-0.01	0
Conviction crime: Property	609	269	340	0.17	0.15		0.07	0	0.15	0.16		-0.01	0
Conviction crime: Drug	609	269	340	0.33	0.42	*	-0.18	0	0.39	0.38		0.01	0
Problem alcohol/drug use	608	268	340	3.78	4.19		-0.15	0	3.96	3.97		0.00	0
HS Diploma/GED	609	269	340	0.74	0.73		0.02	0	0.72	0.73		-0.02	0
Unemployed	607	268	339	0.37	0.40		-0.06	0	0.40	0.39		0.01	0
Ever married	609	269	340	0.55	0.47	*	0.17	0	0.49	0.50		-0.01	0
Homeless	609	269	340	0.03	0.06		-0.15	0	0.04	0.04		-0.01	0
Illegal income	605	267	338	0.51	0.60	*	-0.19	0	0.56	0.56		0.01	0
Changes in childhood parenting situation	606	268	338	1.47	2.64	**	-0.23	1	1.74	2.10		-0.07	0

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-25. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Women in Ohio**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>													
(Female) Age	582	434	148	29.53	33.77	***	-0.49	1	30.41	30.87		-0.05	0
(Female) Race: Black	582	434	148	0.53	0.55		-0.04	0	0.54	0.55		-0.01	0
(Female) Race: White	582	434	148	0.35	0.39		-0.08	0	0.35	0.35		-0.01	0
(Female) Race: Other/multi-racial	582	434	148	0.13	0.07	*	0.20	1	0.11	0.10		0.04	0
(Female) Hispanic	582	434	148	0.08	0.07		0.06	0	0.08	0.07		0.03	0
<b>Male Variables</b>													
Age	582	434	148	31.12	33.98	***	-0.36	1	31.68	32.04		-0.04	0
Race: Black	582	434	148	0.62	0.60		0.04	0	0.62	0.63		-0.01	0
Race: White	582	434	148	0.24	0.28		-0.10	0	0.23	0.25		-0.05	0
Race: Other/multiracial	582	434	148	0.14	0.12		0.06	0	0.15	0.12		0.08	0
Hispanic	582	434	148	0.11	0.07		0.12	0	0.10	0.08		0.09	0
Survey partner: Married	582	434	148	0.20	0.31	*	-0.25	1	0.22	0.20		0.05	0
Survey partner: Intimate	582	434	148	0.71	0.60	*	0.24	1	0.70	0.72		-0.03	0
Survey partner: Parenting	582	434	148	0.08	0.09		-0.02	0	0.08	0.09		-0.02	0
Other romantic partners	581	433	148	0.20	0.25		-0.12	0	0.21	0.21		-0.01	0
Relationship length	581	433	148	6.46	8.46	**	-0.32	1	6.96	7.26		-0.05	0
Coresidence prior to incarceration	582	434	148	0.66	0.65		0.02	0	0.65	0.68		-0.06	0
Coparenting with partner	582	434	148	0.87	0.77	*	0.26	1	0.86	0.86		-0.01	0
Number of children	582	434	148	3.09	2.55	*	0.24	1	2.99	2.93		0.03	0
Number of incarcerations	567	423	144	6.10	6.19		-0.01	0	6.07	6.51		-0.06	0
Years incarcerated	582	434	148	2.80	4.40	***	-0.39	1	3.10	3.24		-0.03	0
Incarcerated for probation violation	581	433	148	0.18	0.08	**	0.28	1	0.15	0.15		0.00	0
Conviction crime: Person	582	434	148	0.47	0.64	***	-0.35	1	0.51	0.50		0.01	0
Conviction crime: Property	582	434	148	0.21	0.20		0.05	0	0.21	0.19		0.04	0
Conviction crime: Drug	582	434	148	0.32	0.18	***	0.32	1	0.29	0.28		0.02	0
Problem alcohol/drug use	581	433	148	3.73	4.08		-0.12	0	3.71	4.00		-0.10	0
HS Diploma/GED	582	434	148	0.58	0.68	*	-0.21	1	0.60	0.60		0.01	0
Unemployed	581	433	148	0.52	0.41	*	0.23	1	0.50	0.50		0.01	0

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-26. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Women in New Jersey**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>													
(Female) Age	216	132	84	33.67	34.50		-0.09	0	33.79	33.68		0.01	0
(Female) Race: Black	216	132	84	0.72	0.63		0.19	0	0.71	0.71		0.00	0
(Female) Race: White	216	132	84	0.15	0.20		-0.13	0	0.17	0.16		0.01	0
(Female) Race: Other/multi-racial	216	132	84	0.13	0.17		-0.11	0	0.13	0.13		-0.01	0
(Female) Hispanic	216	132	84	0.14	0.13		0.04	0	0.16	0.10		0.17	0
<b>Male Variables</b>													
Age	216	132	84	33.87	35.40		-0.18	0	34.35	34.68		-0.04	0
Race: Black	216	132	84	0.77	0.76		0.01	0	0.75	0.84		-0.22	1
Race: White	216	132	84	0.08	0.11		-0.08	0	0.08	0.07		0.05	0
Race: Other/multiracial	216	132	84	0.15	0.13		0.06	0	0.17	0.09		0.23	1
Hispanic	216	132	84	0.14	0.14		0.00	0	0.16	0.11		0.16	0
Survey partner: Married	216	132	84	0.17	0.30	*	-0.31	1	0.20	0.21		-0.02	0
Survey partner: Intimate	216	132	84	0.72	0.70		0.04	0	0.70	0.79		-0.19	0
Survey partner: Parenting	216	132	84	0.11	0.00	***	0.50	1	0.09	0.00	***	0.41	1
Other romantic partners	215	131	84	0.08	0.08		-0.03	0	0.06	0.08		-0.05	0
Relationship length	216	132	84	7.04	9.66	**	-0.37	1	8.22	8.17		0.01	0
Coresidence prior to incarceration	216	132	84	0.59	0.71		-0.26	1	0.64	0.64		0.01	0
Coparenting with partner	216	132	84	0.84	0.73		0.28	1	0.81	0.82		-0.02	0
Number of children	216	132	84	2.61	2.12	*	0.28	1	2.47	2.63		-0.09	0
Number of incarcerations	212	130	82	4.74	6.70		-0.27	1	5.34	5.08		0.04	0
Years incarcerated	216	132	84	3.17	2.53		0.25	1	2.97	2.93		0.02	0
Incarcerated for probation violation	216	132	84	0.39	0.44		-0.11	0	0.38	0.45		-0.14	0
Conviction crime: Person	216	132	84	0.36	0.31		0.11	0	0.34	0.32		0.05	0
Conviction crime: Property	216	132	84	0.11	0.23	*	-0.30	1	0.13	0.14		-0.01	0
Conviction crime: Drug	216	132	84	0.33	0.31		0.05	0	0.34	0.34		-0.01	0
Problem alcohol/drug use	216	132	84	3.11	2.88		0.08	0	3.25	2.77		0.17	0
HS Diploma/GED	216	132	84	0.58	0.65		-0.16	0	0.59	0.66		-0.15	0
Unemployed	216	132	84	0.35	0.37		-0.04	0	0.34	0.40		-0.12	0

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-27. Unweighted and Weighted Balance on Baseline Characteristics for Treatment and Comparison Women in New York**

Variable	Total_N	T_N	C_N	Unweighted Balance					Weighted Balance				
				T_Mean	C_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>													
(Female) Age	134	93	41	37.95	34.80		0.31	1	37.36	37.42		-0.01	0
(Female) Race: Black	134	93	41	0.61	0.59		0.06	0	0.61	0.53		0.17	0
(Female) Race: White	134	93	41	0.20	0.24		-0.09	0	0.22	0.33		-0.26	1
(Female) Race: Other/multiracial	134	93	41	0.18	0.17		0.03	0	0.17	0.15		0.06	0
(Female) Hispanic	134	93	41	0.22	0.20		0.05	0	0.23	0.13		0.23	1
<b>Male Variables</b>													
Age	134	93	41	37.54	34.73		0.32	1	36.96	36.02		0.11	0
Race: Black	134	93	41	0.71	0.71		0.01	0	0.70	0.61		0.21	1
Race: White	134	93	41	0.08	0.05		0.11	0	0.07	0.04		0.10	0
Race: Other/multi-racial	134	93	41	0.22	0.24		-0.07	0	0.23	0.35		-0.28	1
Hispanic	134	93	41	0.25	0.32		-0.15	0	0.26	0.38		-0.27	1
English not primary/not citizen	134	93	41	0.12	0.20		-0.21	1	0.12	0.19		-0.19	0
Survey partner: Married	134	93	41	0.66	0.46	*	0.39	1	0.61	0.55		0.13	0
Survey partner: Intimate	134	93	41	0.31	0.46		-0.31	1	0.35	0.41		-0.12	0
Survey partner: Parenting	134	93	41	0.03	0.07		-0.18	0	0.03	0.04		-0.02	0
Other romantic partners	133	93	40	0.03	0.08		-0.19	0	0.05	0.07		-0.08	0
Relationship length	134	93	41	8.78	8.77		0.00	0	8.93	8.91		0.00	0
Coresidence prior to incarceration	134	93	41	0.33	0.59	**	-0.52	1	0.40	0.49		-0.18	0
Rel. prior to incarceration	134	93	41	0.51	0.80	***	-0.66	1	0.57	0.63		-0.15	0
Coparenting with partner	134	93	41	0.57	0.78	*	-0.46	1	0.63	0.63		-0.01	0
Number of children	134	93	41	1.58	2.07		-0.28	1	1.76	1.80		-0.02	0
Number of incarcerations	132	91	41	2.63	5.02		-0.39	1	2.98	4.52		-0.25	1
Years incarcerated	134	93	41	10.69	3.77	***	1.08	1	8.90	7.84		0.17	0
Incarcerated for probation violation	134	93	41	0.04	0.05		-0.03	0	0.05	0.04		0.02	0
Conviction crime: Person	134	93	41	0.76	0.54	**	0.49	1	0.68	0.60		0.16	0
Conviction crime: Property	134	93	41	0.10	0.17		-0.22	1	0.10	0.19		-0.26	1
Conviction crime: Drug	134	93	41	0.15	0.22		-0.18	0	0.20	0.18		0.04	0
Problem alcohol/drug use	134	93	41	2.14	2.00		0.06	0	2.19	1.67		0.22	1
HS Diploma/GED	134	93	41	0.84	0.68	*	0.37	1	0.78	0.72		0.14	0
Unemployed	134	93	41	0.30	0.37		-0.14	0	0.33	0.44		-0.24	1

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

## Attrition Bias Propensity Model Diagnostics

We were also concerned about confounding differences between people who completed a particular follow-up interview and those who did not. To control for possible attrition bias, we estimated response (i.e., “follow-up completion”) propensity models for the 9-month (in all sites), the 18-month (in all sites), and the 34-month (in Indiana and Ohio) follow-up interviews. Again, models were estimated separately for males and females in each site. For the 9-month follow-up models, the dependent variable was coded ‘1’ if the individual completed the 9-month follow-up interview and ‘0’ if the individual did not complete it. For the 18-month follow-up models, the dependent variable was coded ‘1’ for 18-month interview completers and ‘0’ for non-completers. Similarly, for the 34-month follow-up models, the dependent variable was coded ‘1’ or ‘0’ for interview completers and non-completers, respectively. Bivariate relationships of follow-up interview completion status with several variables were examined to determine which variables to include in each site’s model. The variables considered for inclusion are shown in **Exhibit A-28**. The final variables included in each model in each site are shown in **Exhibits A-29** (male models) and **A-30** (female models).

The approach to estimating the response models was the same as the approach for estimating the selection models. Logistic regression models were estimated separately for males and females in each site using the imputed datasets. Individual probabilities of completing the 9-, 18-, and 34-month follow-up interviews were estimated by applying the parameter estimates from the response models to the data; these probabilities were then used to create weights that were equal to  $1/(\text{probability of completing the follow-up interview})$ . Specifically, weights  $W9_i$ ,  $W18_i$ , and  $W34_i$  were generated for each subject  $i$ :

$$W9_i = 1 / \hat{p}9_i$$

$$W18_i = 1 / \hat{p}18_i$$

$$W34_i = 1 / \hat{p}34_i$$

where  $\hat{p}9$  is the probability of completing the 9-month follow-up interview,  $\hat{p}9$  the probability of completing the 18-month follow-up interview, and  $\hat{p}34$  the probability of completing the 34-month follow-up interview.

The weights were then multiplied by the selection weight to create two “super” weights for each individual in New Jersey and New York and three “super” weights for each individual in Indiana and Ohio to be used in outcome analyses: a 9-month super weight ( $w_i * w9_i$ ) to be used in analysis of 9-month outcomes, an 18-month super weight ( $w_i * w18_i$ ) to be used in analysis of 18-month outcomes, and a 34-month super weight ( $w_i * w34_i$ ) to be used in

analysis of 34-month outcomes. The super weights were normalized to a mean of 1, and extreme weights capped at 5.

**Exhibit A-28. Variables Used in Attrition Propensity Models for Men and Women**

Variable Name	Variable Description
<b>Variables Used from Female Interview</b>	
(Female) Age	Female’s age at first interview
(Female) Race: Black*	Female is black
(Female) Race: White	Female is white
(Female) Race: Other/Multiracial	Female is of other race or is multi-racial
(Female) Hispanic	Female is Hispanic
<b>Variables Used from Male Interview</b>	
Age	Male’s age at baseline interview
Race: Black*	Male is black
Race: White	Male is white
Race: Other/Multiracial	Male is of other race or is multi-racial
Hispanic	Male is of Hispanic ethnicity
Survey partner: Married*	Male’s relationship to female partner at baseline: Married
Survey partner: Intimate	Male’s relationship to female partner at baseline: Nonmarried intimate partner
Survey partner: Parenting	Male’s relationship to female partner at baseline: Parenting partner only
Coparenting with partner	Male reported that he and female partner parented at least one child together at baseline
Length of relationship	Male’s report of length of relationship with female partner as of baseline, in years
Happiness with relationship	Male’s baseline report of his relationship with his relationship with his survey partner, on a scale of 1-10
Contact with partner during incarceration	Male’s report of the frequency of phone, in-person, and letter contact with partner during baseline incarceration, summed to form a scale ranging from 0-20
Want to stay in relationship	Male reported at baseline that he wanted to remain in a committed relationship with survey partner after his release
Think partner wants to stay in relationship	Male reported at baseline that he thinks the survey partner wants to remain in a committed relationship with him after his release
Anticipated coresidence after release	Male reported at baseline that he expects the couple to live together after his release
Expect to use drugs after release	Male reported at baseline that he expects he will use drugs after his release
Expect to be on supervision	Male reported at baseline that he expects he will be on supervision after his release
Age of first arrest	Male’s reported age of first arrest
Number of arrests	Male’s total number of arrest
Number of convictions	Male’s total number of convictions

<b>Variable Name</b>	<b>Variable Description</b>
Number of incarcerations	Male's total number of adult incarcerations
Years incarcerated	Male's report of the duration of the focal incarceration (in years) at baseline interview
Expect to be released by 9M	Male expects to be released by 9-month interview (based on expected release date reported at baseline interview)
Expect to be released by 18M	Male expects to be released by 18-month interview (based on expected release date reported at baseline interview)
Expect to be released by 34M	Male expects to be released by 34-month interview (based on expected release date reported at baseline interview)
<b>Interview-Assigned Variables</b>	
Treatment group	Couple was assigned to the treatment group
Female partner did baseline	Female partner completed a baseline interview
Male did 9M	Male completed 9-month interview
Female partner did 9M	Female partner completed 9-month interview
Male did 18M	Male completed 18-month interview
Female did 18M	Female partner completed 18-month interview

\*Reference category

**Exhibit A-29. Final Variables Included in Male Attrition Propensity Models, by Site and Interview Wave**

Variable Name	Indiana			Ohio			New Jersey		New York	
	9M	18M	34M	9M	18M	34M	9M	18M	9M	18M
Age	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Race: Black*	✓	✓	✓	✓	✓	✓	✓	✓		
Race: White	✓	✓	✓	✓	✓	✓	✓	✓		
Race: Other/Multiracial	✓	✓	✓	✓	✓	✓	✓	✓		
Hispanic	✓	✓	✓	✓	✓	✓	✓	✓		
Survey partner: Married*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Survey partner: Intimate	✓	✓	✓	✓	✓	✓	✓	✓		✓
Survey partner: Parenting	✓	✓	✓	✓	✓	✓	✓	✓		✓
Coparenting with partner	✓	✓	✓	✓	✓	✓	✓	✓		
Length of relationship	✓	✓	✓	✓	✓	✓			✓	
Happiness with relationship	✓	✓	✓	✓	✓	✓	✓			
Contact with partner during incarceration			✓	✓	✓				✓	
Want to stay in relationship	✓	✓	✓	✓	✓	✓	✓			
Anticipated coresidence after release	✓			✓	✓	✓	✓	✓		
Expect to use drugs after release	✓	✓	✓	✓	✓	✓			✓	✓
Expect to be on supervision				✓			✓	✓		
Age of first arrest	✓	✓		✓	✓	✓				
Number of arrests		✓	✓	✓	✓	✓				
Number of convictions							✓	✓		
Number of incarcerations									✓	✓
Years incarcerated									✓	✓
Expect to be released by 9M	✓			✓			✓			
Expect to be released by 18M		✓			✓					✓
Expect to be released by 34M						✓				
Treatment group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Female partner did baseline	✓			✓	✓	✓	✓	✓		
Male did 9M		✓	✓		✓	✓		✓		✓
Female partner did 9M		✓			✓			✓		✓
Male did 18M			✓			✓				
Female did 18M			✓			✓				

\*Reference category

**Exhibit A-30. Final Variables Included in Female Attrition Propensity Models, by Site and Wave**

Variable Name	Indiana			Ohio			New Jersey		New York	
	9M	18M	34M	9M	18M	34M	9M	18M	9M	18M
<b>Female Variables</b>										
(Female) Age	✓		✓	✓	✓	✓	✓	✓	✓	✓
(Female) Race: Black*	✓	✓	✓	✓	✓	✓	✓			✓
(Female) Race: White	✓	✓	✓	✓	✓	✓	✓			✓
(Female) Race: Other/Multiracial	✓	✓	✓	✓	✓	✓	✓			✓
(Female) Hispanic			✓			✓		✓		
<b>Male Variables</b>										
Hispanic										✓
Survey partner: Married*			✓	✓		✓	✓	✓	✓	✓
Survey partner: Intimate			✓	✓		✓	✓	✓	✓	
Survey partner: Parenting			✓	✓		✓	✓	✓	✓	
Coparenting with partner	✓	✓	✓		✓	✓	✓		✓	✓
Length of relationship	✓	✓	✓	✓	✓	✓				
Happiness with relationship	✓						✓			
Contact with partner during incarceration						✓				
Want to stay in relationship			✓	✓	✓					
Think partner wants to stay in relationship							✓			
Anticipated coresidence after release			✓		✓	✓				
Expect to use drugs after release				✓						
Expect to be on supervision					✓		✓			
Number of arrests								✓		
Number of convictions							✓			
Expect to be released by 9M				✓			✓			
Expect to be released by 34M			✓							
<b>Assigned Variables</b>										
Treatment group	✓		✓			✓	✓		✓	
Female partner did baseline	✓			✓			✓		✓	
Male did 9M					✓			✓		
Female partner did 9M		✓	✓		✓	✓		✓		✓
Male did 18M			✓			✓				
Female did 18M			✓			✓				

Next, the 9-month, the 18-month, and the 34-month super weights were used to check balance of treatment and comparison subjects in the 9-month, 18-month, and 34-month samples, respectively. **Exhibits A-31** through **A-38** show the weighted balance between the treatment and comparison groups in the 9- and 18-month follow-up samples in each site and the 34-month samples in Indiana and Ohio. The super weights produced excellent balance at nine, 18, and 34 months in Indiana and Ohio—with no significant differences and no standardized mean differences greater than 0.2 at any follow-up wave for males in these sites. For females in Indiana and Ohio, there are no significant differences and only one standardized mean difference greater than 0.2. Balance for males and females in New Jersey and New York, the two smallest sites, is not as good. Although there are very few significant differences between the treatment and comparison groups in these sites (one for New Jersey females at nine months and 18 months; two for New Jersey males at 18 months; one for New York males at nine months and 18 months), there are several characteristics on which the treatment and comparison groups have standardized mean differences greater than 0.2.

**Exhibit A-31. Weighted Balance Checks (Treatment vs. Comparison) for Men in Indiana at 9-, 18-, and 34-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance					34M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdz Diff	Stndrdz diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdz Diff	Stndrdz diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdz Diff	Stndrdz diff  > 0.2
Age	34.39	34.16		0.03	0	34.50	34.08		0.05	0	34.28	34.08		0.02	0
Race: Black	0.47	0.47		-0.01	0	0.45	0.49		-0.07	0	0.48	0.47		0.02	0
Race: White	0.46	0.43		0.06	0	0.47	0.40		0.14	0	0.44	0.44		0.00	0
Race: Other/multi-racial	0.07	0.10		-0.10	0	0.07	0.11		-0.11	0	0.08	0.09		-0.04	0
Hispanic	0.05	0.07		-0.08	0	0.04	0.07		-0.09	0	0.05	0.06		-0.05	0
English not primary/not citizen	0.01	0.02		-0.04	0	0.01	0.02		-0.02	0	0.01	0.02		-0.04	0
Survey partner: Married	0.24	0.25		-0.01	0	0.24	0.24		0.01	0	0.26	0.21		0.12	0
Survey partner: Intimate	0.73	0.71		0.05	0	0.72	0.71		0.02	0	0.71	0.75		-0.09	0
Survey partner: Parenting	0.03	0.05		-0.08	0	0.03	0.05		-0.07	0	0.04	0.05		-0.05	0
Other romantic partners	0.09	0.09		-0.01	0	0.08	0.08		0.01	0	0.09	0.09		0.01	0
Relationship length	7.17	7.22		-0.01	0	7.11	7.08		0.00	0	7.29	7.02		0.04	0
Coresidence prior to incarceration	0.64	0.65		-0.02	0	0.62	0.65		-0.07	0	0.62	0.65		-0.07	0
Coparenting with partner	0.71	0.73		-0.05	0	0.71	0.73		-0.04	0	0.74	0.72		0.05	0
Number of children	2.40	2.63		-0.10	0	2.34	2.59		-0.11	0	2.64	2.66		-0.01	0
Number of incarcerations	5.37	5.53		-0.02	0	5.52	5.37		0.02	0	5.01	5.68		-0.10	0
Years incarcerated	3.09	3.04		0.01	0	3.16	3.39		-0.06	0	3.18	3.13		0.01	0
Incarcerated for probation violation	0.25	0.22		0.07	0	0.24	0.23		0.03	0	0.25	0.21		0.07	0
Conviction crime: Person	0.34	0.34		0.01	0	0.34	0.36		-0.05	0	0.34	0.34		-0.01	0
Conviction crime: Property	0.15	0.14		0.03	0	0.14	0.16		-0.05	0	0.15	0.17		-0.04	0
Conviction crime: Drug	0.37	0.38		-0.04	0	0.37	0.36		0.01	0	0.39	0.38		0.00	0
Problem alcohol/drug use	4.03	3.93		0.04	0	3.94	3.99		-0.02	0	3.77	4.05		-0.10	0
HS Diploma/GED	0.71	0.72		-0.03	0	0.73	0.72		0.01	0	0.73	0.72		0.01	0
Unemployed	0.39	0.36		0.06	0	0.42	0.37		0.09	0	0.38	0.37		0.02	0
Ever married	0.50	0.50		0.01	0	0.49	0.48		0.02	0	0.50	0.49		0.02	0
Homeless	0.05	0.04		0.08	0	0.05	0.03		0.09	0	0.05	0.04		0.06	0
Illegal income	0.54	0.55		-0.03	0	0.55	0.54		0.03	0	0.54	0.56		-0.03	0
Changes in childhood parenting situation	1.73	2.20		-0.09	0	1.72	2.02		-0.06	0	1.68	2.22		-0.11	0
<b>SAMPLE SIZE</b>	<b>249</b>	<b>343</b>				<b>242</b>	<b>322</b>				<b>229</b>	<b>310</b>			

\*p<.05, \*\*p<.01, \*\*\*p<.001

Exhibit A-32. Weighted Balance Checks (Treatment vs. Comparison) for Men in Ohio at 9-, 18-, and 34-month Interviews

Variable	9M Weighted Balance					18M Weighted Balance					34M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	31.69	32.46		-0.10	0	32.35	31.39		0.12	0	32.37	31.41		0.12	0
Race: Black	0.61	0.61		-0.01	0	0.63	0.59		0.06	0	0.60	0.62		-0.05	0
Race: White	0.26	0.24		0.04	0	0.23	0.29		-0.14	0	0.26	0.25		0.01	0
Race: Other/multi-racial	0.13	0.15		-0.04	0	0.15	0.12		0.09	0	0.14	0.13		0.05	0
Hispanic	0.09	0.08		0.03	0	0.09	0.07		0.08	0	0.10	0.06		0.16	0
English not primary/not citizen	0.02	0.02		0.00	0	0.02	0.01		0.03	0	0.01	0.01		0.03	0
Survey partner: Married	0.21	0.16		0.13	0	0.22	0.16		0.13	0	0.22	0.18		0.08	0
Survey partner: Intimate	0.69	0.72		-0.05	0	0.68	0.74		-0.13	0	0.68	0.72		-0.08	0
Survey partner: Parenting	0.10	0.13		-0.11	0	0.10	0.09		0.01	0	0.10	0.10		0.01	0
Other romantic partners	0.23	0.26		-0.06	0	0.20	0.23		-0.07	0	0.19	0.21		-0.04	0
Relationship length	6.77	7.22		-0.07	0	7.13	6.82		0.04	0	7.16	6.87		0.04	0
Coresidence prior to incarceration	0.66	0.63		0.06	0	0.64	0.69		-0.09	0	0.63	0.63		0.00	0
Coparenting with partner	0.85	0.84		0.04	0	0.84	0.84		0.00	0	0.84	0.85		-0.02	0
Number of children	2.96	2.98		-0.01	0	2.95	2.92		0.01	0	2.96	2.93		0.02	0
Number of incarcerations	6.19	7.13		-0.12	0	6.28	6.57		-0.04	0	6.30	6.57		-0.03	0
Years incarcerated	3.15	3.50		-0.08	0	3.39	3.12		0.06	0	3.16	3.39		-0.05	0
Incarcerated for probation violation	0.17	0.19		-0.05	0	0.16	0.16		-0.01	0	0.15	0.15		-0.01	0
Conviction crime: Person	0.49	0.50		-0.01	0	0.52	0.45		0.14	0	0.51	0.52		-0.02	0
Conviction crime: Property	0.21	0.23		-0.04	0	0.21	0.19		0.04	0	0.22	0.21		0.04	0
Conviction crime: Drug	0.27	0.30		-0.08	0	0.30	0.28		0.06	0	0.28	0.26		0.04	0
Problem alcohol/drug use	3.84	3.89		-0.02	0	3.79	3.98		-0.06	0	3.84	3.91		-0.02	0
HS Diploma/GED	0.61	0.59		0.04	0	0.63	0.60		0.05	0	0.60	0.61		-0.01	0
Unemployed	0.48	0.50		-0.04	0	0.48	0.46		0.02	0	0.48	0.49		-0.02	0
<b>SAMPLE SIZE</b>	<b>387</b>	<b>129</b>				<b>361</b>	<b>141</b>				<b>360</b>	<b>135</b>			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-33. Weighted Balance Checks (Treatment vs. Comparison) for Men in New Jersey at 9- and 18-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	33.68	34.18		-0.06	0	34.39	33.24		0.13	0
Race: Black	0.80	0.68		0.26	1	0.69	0.79		-0.24	1
Race: White	0.09	0.08		0.02	0	0.09	0.07		0.06	0
Race: Other/multi-racial	0.12	0.24		-0.35	1	0.22	0.14		0.24	1
Hispanic	0.14	0.22		-0.24	1	0.21	0.13		0.21	1
English not primary/not citizen	0.09	0.10		-0.03	0	0.01	0.06		-0.34	1
Survey partner: Married	0.17	0.18		-0.02	0	0.20	0.12		0.20	1
Survey partner: Intimate	0.75	0.75		-0.01	0	0.73	0.83		-0.23	1
Survey partner: Parenting	0.08	0.07		0.04	0	0.07	0.05		0.08	0
Other romantic partners	0.08	0.07		0.03	0	0.09	0.05		0.14	0
Relationship length	7.37	7.03		0.05	0	8.03	7.01		0.15	0
Coresidence prior to incarceration	0.68	0.67		0.01	0	0.59	0.78	*	-0.39	1
Coparenting with partner	0.77	0.77		0.01	0	0.79	0.78		0.00	0
Number of children	2.50	2.28		0.13	0	2.29	2.32		-0.02	0
Number of incarcerations	4.97	4.48		0.07	0	4.55	5.19		-0.09	0
Years incarcerated	2.81	2.72		0.04	0	2.90	3.05		-0.06	0
Incarcerated for probation violation	0.42	0.48		-0.12	0	0.46	0.34		0.24	1
Conviction crime: Person	0.31	0.38		-0.16	0	0.32	0.34		-0.04	0
Conviction crime: Property	0.12	0.24		-0.33	1	0.12	0.30	*	-0.48	1
Conviction crime: Drug	0.35	0.27		0.19	0	0.31	0.27		0.09	0
Problem alcohol/drug use	3.04	2.79		0.09	0	3.12	2.70		0.15	0
HS Diploma/GED	0.59	0.53		0.13	0	0.57	0.50		0.16	0
Unemployed	0.28	0.42		-0.30	1	0.37	0.40		-0.07	0
Relationship predated incarceration	0.85	0.89		-0.12	0	0.83	0.94		-0.32	1
Any children	0.91	0.89		0.07	0	0.90	0.93		-0.11	0
Number of juvenile incarcerations	1.62	1.86		-0.09	0	1.60	1.17		0.20	0
Disciplinary infractions	1.49	2.07		-0.16	0	2.33	1.75		0.13	0
Days in segregation	80.74	86.93		-0.03	0	84.26	69.20		0.08	0
Never worked	0.06	0.05		0.08	0	0.05	0.10		-0.20	0
<b>SAMPLE SIZE</b>	<b>108</b>	<b>67</b>				<b>108</b>	<b>65</b>			

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-34. Weighted Balance Checks (Treatment vs. Comparison) for Men in New York at 9- and 18-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Age	37.60	35.88		0.20	1	38.48	34.82		0.43	1
Race: Black	0.71	0.60		0.23	1	0.67	0.74		-0.14	0
Race: White	0.09	0.08		0.04	0	0.12	0.05		0.23	1
Race: Other/multi-racial	0.20	0.32		-0.28	1	0.21	0.21		0.00	0
Hispanic	0.22	0.33		-0.24	1	0.19	0.24		-0.12	0
English not primary/not citizen	0.11	0.25		-0.36	1	0.12	0.13		-0.01	0
Survey partner: Married	0.58	0.42		0.33	1	0.57	0.46		0.22	1
Survey partner: Intimate	0.38	0.55		-0.33	1	0.39	0.50		-0.21	1
Survey partner: Parenting	0.03	0.03		0.01	0	0.03	0.04		-0.03	0
Other romantic partners	0.02	0.05		-0.13	0	0.03	0.00		0.25	1
Relationship length	8.88	7.83		0.14	0	8.79	7.46		0.18	0
Coresidence prior to incarceration	0.42	0.41		0.03	0	0.45	0.45		0.00	0
Coparenting with partner	0.62	0.52		0.22	1	0.58	0.54		0.10	0
Number of children	1.63	1.48		0.09	0	1.33	1.55		-0.15	0
Number of incarcerations	3.02	4.20		-0.19	0	2.85	3.72		-0.17	0
Years incarcerated	9.02	9.36		-0.05	0	9.30	8.09		0.18	0
Incarcerated for probation violation	0.08	0.03		0.26	1	0.05	0.08		-0.12	0
Conviction crime: Person	0.66	0.64		0.06	0	0.68	0.67		0.02	0
Conviction crime: Property	0.11	0.12		-0.04	0	0.16	0.10		0.17	0
Conviction crime: Drug	0.15	0.23		-0.23	1	0.14	0.26		-0.28	1
Problem alcohol/drug use	2.28	1.74		0.23	1	2.20	2.35		-0.06	0
HS Diploma/GED	0.77	0.77		0.00	0	0.80	0.58		0.49	1
Unemployed	0.33	0.57	*	-0.50	1	0.27	0.52	*	-0.54	1
Relationship predated incarceration	0.56	0.61		-0.11	0	0.56	0.66		-0.24	1
<b>SAMPLE SIZE</b>	<b>102</b>	<b>43</b>				<b>98</b>	<b>37</b>			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-35. Weighted Balance Checks (Treatment vs. Comparison) for Women in Indiana at 9-, 18- and 34-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance					34M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>															
(Female) Age	32.43	32.60		-0.02	0	32.62	32.28		0.03	0	32.45	32.63		-0.02	0
(Female) Race: Black	0.37	0.36		0.01	0	0.36	0.38		-0.04	0	0.38	0.35		0.07	0
(Female) Race: White	0.57	0.57		-0.01	0	0.57	0.57		0.01	0	0.56	0.59		-0.07	0
(Female) Race: Other/multi-racial	0.07	0.07		0.00	0	0.07	0.06		0.07	0	0.06	0.06		0.01	0
(Female) Hispanic	0.03	0.04		-0.05	0	0.02	0.03		-0.06	0	0.03	0.03		-0.02	0
<b>Male Partner Variables</b>															
Age	34.08	34.25		-0.02	0	34.24	34.21		0.00	0	34.16	34.05		0.01	0
Race: Black	0.48	0.47		0.03	0	0.47	0.49		-0.03	0	0.47	0.46		0.02	0
Race: White	0.44	0.45		-0.02	0	0.46	0.42		0.07	0	0.44	0.47		-0.05	0
Race: Other/multi-racial	0.07	0.08		-0.03	0	0.06	0.08		-0.08	0	0.09	0.07		0.07	0
Hispanic	0.05	0.06		-0.01	0	0.05	0.06		-0.04	0	0.04	0.05		-0.01	0
Survey partner: Married	0.23	0.25		-0.04	0	0.26	0.24		0.06	0	0.26	0.24		0.05	0
Survey partner: Intimate	0.74	0.70		0.08	0	0.71	0.71		-0.02	0	0.70	0.72		-0.03	0
Survey partner: Parenting	0.03	0.05		-0.11	0	0.03	0.05		-0.08	0	0.03	0.04		-0.06	0
Other romantic partners	0.08	0.06		0.05	0	0.08	0.06		0.06	0	0.08	0.07		0.02	0
Relationship length	7.27	7.20		0.01	0	7.50	7.00		0.07	0	7.41	6.95		0.07	0
Coresidence prior to incarceration	0.64	0.65		-0.03	0	0.64	0.66		-0.04	0	0.63	0.62		0.02	0
Coparenting with partner	0.73	0.73		-0.01	0	0.74	0.73		0.02	0	0.73	0.71		0.04	0
Number of children	2.58	2.61		-0.01	0	2.59	2.54		0.02	0	2.68	2.54		0.06	0
Number of incarcerations	5.34	5.53		-0.03	0	5.41	5.40		0.00	0	5.11	5.56		-0.06	0
Years incarcerated	3.09	3.13		-0.01	0	3.05	3.03		0.00	0	3.08	3.02		0.02	0
Incarcerated for probation violation	0.23	0.24		-0.01	0	0.22	0.23		-0.01	0	0.23	0.23		-0.02	0
Conviction crime: Person	0.34	0.35		-0.01	0	0.35	0.32		0.05	0	0.33	0.34		-0.02	0
Conviction crime: Property	0.15	0.16		-0.03	0	0.14	0.15		-0.03	0	0.17	0.16		0.02	0
Conviction crime: Drug	0.37	0.40		-0.05	0	0.38	0.40		-0.03	0	0.41	0.37		0.07	0
Problem alcohol/drug use	3.87	4.04		-0.06	0	3.87	4.00		-0.05	0	3.72	4.06		-0.13	0
HS Diploma/GED	0.71	0.72		-0.02	0	0.73	0.72		0.02	0	0.72	0.74		-0.04	0
Unemployed	0.41	0.39		0.04	0	0.41	0.41		-0.01	0	0.41	0.41		0.00	0
Ever Married	0.49	0.51		-0.03	0	0.52	0.47		0.10	0	0.51	0.49		0.03	0
Homeless	0.04	0.04		-0.02	0	0.04	0.05		-0.04	0	0.04	0.05		-0.09	0

Variable	9M Weighted Balance					18M Weighted Balance					34M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
Illegal income	0.55	0.57		-0.04	0	0.55	0.58		-0.05	0	0.58	0.55		0.05	0
Changes in childhood parenting situation	1.73	2.06		-0.06	0	1.71	2.14		-0.08	0	1.64	2.12		-0.09	0
<b>SAMPLE SIZE</b>	<b>247</b>	<b>290</b>				<b>243</b>	<b>302</b>				<b>239</b>	<b>291</b>			

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-36. Weighted Balance Checks (Treatment vs. Comparison) for Women in Ohio at 9-, 18-, and 34-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance					34M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzrd Diff	Stndrdzrd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzrd Diff	Stndrdzrd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzrd Diff	Stndrdzrd diff  > 0.2
<b>Female Variables</b>															
(Female) Age	30.34	30.94		-0.07	0	30.48	30.97		-0.06	0	30.38	30.76		-0.04	0
(Female) Race: Black	0.53	0.54		-0.02	0	0.54	0.55		-0.02	0	0.52	0.55		-0.06	0
(Female) Race: White	0.36	0.33		0.06	0	0.34	0.35		-0.01	0	0.36	0.36		-0.01	0
(Female) Race: Other/multi-racial	0.11	0.13		-0.06	0	0.12	0.10		0.05	0	0.12	0.09		0.11	0
(Female) Hispanic	0.08	0.06		0.06	0	0.09	0.06		0.13	0	0.08	0.09		-0.06	0
<b>Male Partner Variables</b>															
Age	31.66	31.94		-0.03	0	31.59	32.12		-0.07	0	31.75	32.11		-0.04	0
Race: Black	0.62	0.65		-0.08	0	0.63	0.63		0.00	0	0.63	0.63		0.00	0
Race: White	0.24	0.25		-0.03	0	0.23	0.25		-0.05	0	0.24	0.25		-0.03	0
Race: Other/multi-racial	0.15	0.10		0.15	0	0.14	0.12		0.08	0	0.13	0.12		0.03	0
Hispanic	0.10	0.06		0.14	0	0.11	0.09		0.07	0	0.09	0.09		-0.02	0
Survey partner: Married	0.22	0.20		0.04	0	0.22	0.18		0.08	0	0.22	0.19		0.07	0
Survey partner: Intimate	0.70	0.71		-0.02	0	0.68	0.71		-0.06	0	0.70	0.71		-0.01	0
Survey partner: Parenting	0.08	0.09		-0.04	0	0.10	0.11		-0.03	0	0.08	0.10		-0.08	0
Other romantic partners	0.21	0.25		-0.10	0	0.21	0.20		0.02	0	0.21	0.18		0.08	0
Relationship length	6.98	7.21		-0.04	0	6.98	7.39		-0.06	0	6.97	6.98		0.00	0
Coresidence prior to incarceration	0.68	0.67		0.01	0	0.65	0.71		-0.13	0	0.64	0.72		-0.16	0
Coparenting with partner	0.85	0.85		0.00	0	0.86	0.87		-0.04	0	0.85	0.88		-0.08	0
Number of children	3.05	2.91		0.06	0	2.96	2.96		0.00	0	3.01	2.99		0.01	0
Number of incarcerations	6.25	6.66		-0.05	0	6.09	6.55		-0.06	0	6.53	6.74		-0.03	0
Years incarcerated	2.95	3.31		-0.09	0	3.08	3.09		0.00	0	3.08	3.31		-0.05	0
Incarcerated for probation violation	0.15	0.14		0.05	0	0.15	0.19		-0.11	0	0.16	0.18		-0.05	0
Conviction crime: Person	0.48	0.53		-0.10	0	0.52	0.47		0.12	0	0.54	0.49		0.10	0
Conviction crime: Property	0.22	0.24		-0.05	0	0.20	0.18		0.05	0	0.21	0.13		0.22	1
Conviction crime: Drug	0.30	0.23		0.16	0	0.31	0.28		0.06	0	0.27	0.29		-0.05	0
Problem alcohol/drug use	3.69	4.00		-0.11	0	3.75	4.12		-0.13	0	3.84	3.90		-0.02	0
HS Diploma/GED	0.59	0.58		0.02	0	0.60	0.60		-0.01	0	0.62	0.58		0.08	0
Unemployed	0.51	0.52		-0.03	0	0.48	0.51		-0.06	0	0.52	0.48		0.08	0
<b>SAMPLE SIZE</b>	<b>348</b>	<b>122</b>				<b>362</b>	<b>125</b>				<b>364</b>	<b>124</b>			

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Exhibit A-37. Weighted Balance Checks (Treatment vs. Comparison) for Women in New Jersey at 9- and 18-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>										
(Female) Age	34.02	33.67		0.04	0	33.64	33.84		-0.02	0
(Female) Race: Black	0.71	0.70		0.01	0	0.76	0.66		0.21	1
(Female) Race: White	0.17	0.14		0.07	0	0.13	0.22		-0.24	1
(Female) Race: Other/multi-racial	0.13	0.15		-0.07	0	0.11	0.12		-0.03	0
(Female) Hispanic	0.14	0.07		0.22	1	0.12	0.14		-0.05	0
<b>Male Partner Variables</b>										
Age	34.49	34.33		0.02	0	34.11	34.85		-0.09	0
Race: Black	0.77	0.86		-0.22	1	0.77	0.83		-0.16	0
Race: White	0.08	0.05		0.12	0	0.07	0.07		0.03	0
Race: Other/multi-racial	0.15	0.09		0.17	0	0.16	0.10		0.17	0
Hispanic	0.15	0.07		0.22	1	0.13	0.14		-0.04	0
Survey partner: Married	0.21	0.21		0.00	0	0.20	0.19		0.04	0
Survey partner: Intimate	0.70	0.79		-0.20	0	0.70	0.81		-0.24	1
Survey partner: Parenting	0.09	0.00	***	0.41	1	0.09	0.00	***	0.44	1
Other romantic partners	0.07	0.07		0.02	0	0.06	0.05		0.06	0
Relationship length	8.29	7.81		0.07	0	8.39	7.64		0.11	0
Coresidence prior to incarceration	0.70	0.67		0.07	0	0.65	0.63		0.04	0
Coparenting with partner	0.82	0.82		-0.01	0	0.82	0.81		0.04	0
Number of children	2.33	2.75		-0.26	1	2.53	2.56		-0.02	0
Number of incarcerations	5.52	4.09		0.21	1	5.55	4.88		0.09	0
Years incarcerated	2.63	2.94		-0.14	0	2.82	3.13		-0.14	0
Incarcerated for probation violation	0.38	0.48		-0.20	1	0.39	0.41		-0.06	0
Conviction crime: Person	0.33	0.34		-0.02	0	0.35	0.31		0.08	0
Conviction crime: Property	0.09	0.13		-0.11	0	0.14	0.14		0.01	0
Conviction crime: Drug	0.34	0.30		0.09	0	0.33	0.33		-0.01	0
Problem alcohol/drug use	3.05	3.07		-0.01	0	3.24	2.60		0.22	1
HS Diploma/GED	0.58	0.59		-0.01	0	0.59	0.66		-0.13	0
Unemployed	0.30	0.36		-0.11	0	0.35	0.40		-0.10	0
<b>SAMPLE SIZE</b>	<b>102</b>	<b>61</b>				<b>108</b>	<b>72</b>			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Exhibit A-38. Weighted Balance Checks (Treatment vs. Comparison) for Women in New York at 9- and 18-month Interviews**

Variable	9M Weighted Balance					18M Weighted Balance				
	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2	T_Wtd_Mean	C_Wtd_Mean	p_sig	Stndrdzd Diff	Stndrdzd diff  > 0.2
<b>Female Variables</b>										
(Female) Age	36.85	38.80		-0.19	0	37.79	37.42		0.03	0
(Female) Race: Black	0.67	0.50		0.34	1	0.58	0.56		0.04	0
(Female) Race: White	0.18	0.38		-0.47	1	0.22	0.34		-0.29	1
(Female) Race: Other/multi-racial	0.15	0.12		0.09	0	0.20	0.10		0.27	1
(Female) Hispanic	0.27	0.12		0.39	1	0.26	0.10		0.40	1
<b>Male Partner Variables</b>										
Age	36.59	36.23		0.04	0	37.85	35.80		0.23	1
Race: Black	0.71	0.57		0.31	1	0.69	0.61		0.17	0
Race: White	0.06	0.05		0.03	0	0.08	0.04		0.19	0
Race: Other/multi-racial	0.23	0.38		-0.36	1	0.23	0.35		-0.29	1
Hispanic	0.28	0.42		-0.32	1	0.28	0.38		-0.23	1
Survey partner: Married	0.61	0.58		0.06	0	0.64	0.52		0.25	1
Survey partner: Intimate	0.36	0.37		-0.03	0	0.32	0.45		-0.25	1
Survey partner: Parenting	0.03	0.04		-0.07	0	0.04	0.04		-0.01	0
Other romantic partners	0.05	0.07		-0.08	0	0.05	0.07		-0.08	0
Relationship length	8.81	9.22		-0.05	0	9.40	9.05		0.04	0
Coresidence prior to incarceration	0.40	0.44		-0.09	0	0.40	0.45		-0.11	0
Coparenting with partner	0.61	0.58		0.05	0	0.66	0.61		0.11	0
Number of children	1.68	1.62		0.04	0	1.66	1.57		0.05	0
Number of incarcerations	2.98	4.65		-0.26	1	2.83	4.29		-0.25	1
Years incarcerated	9.11	9.11		0.00	0	8.94	8.65		0.04	0
Incarcerated for probation violation	0.06	0.05		0.04	0	0.05	0.05		0.03	0
Conviction crime: Person	0.71	0.64		0.15	0	0.64	0.67		-0.06	0
Conviction crime: Property	0.11	0.13		-0.06	0	0.12	0.12		0.00	0
Conviction crime: Drug	0.15	0.21		-0.15	0	0.22	0.18		0.11	0
Problem alcohol/drug use	1.96	1.75		0.09	0	2.50	1.72		0.32	1
HS Diploma/GED	0.77	0.75		0.06	0	0.78	0.68		0.25	1
Unemployed	0.32	0.53		-0.42	1	0.34	0.47		-0.26	1
<b>SAMPLE SIZE</b>	<b>73</b>	<b>32</b>				<b>75</b>	<b>34</b>			

\*p<.05, \*\*p<.01, \*\*\*p<.001

## Latent Growth Curve Modeling Approach

The linear latent growth curve model (often abbreviated LGC; McArdle, 1988) posits that for individual  $i$  at time  $t$ , their observed outcome  $Y_{it}$  is a function of a time specific intercept  $v_t$ , their intercept  $I_i$ , their slope  $S_i$ , and a person specific error term  $\varepsilon_{it}$ :

$$Y_{it} = v_t + Y_{it}^I + Y_{st}^S = \varepsilon_{it}$$

To connect the terminology from the mixed effects modeling literature the latent variable literature<sup>53</sup>, the random intercept  $I$  and random slope  $S$  are considered latent factors. The factor loadings  $Y_{it}^I$  are usually fixed to 1 for all  $t$  for the random intercepts. The factor loadings  $Y_{st}^S$  are usually fixed the value of the time points for the study for the random intercepts. For the current study, these time point were  $t = (0, 9, 18, 34)$  months.<sup>54</sup> The interpretation of the average random slope,  $E(S_i) = -.1$  is determined by the scaling of time, where  $E()$  is the expectation operator (i.e., the mean of the random slopes). For example, if  $E(S_i) = -.1$  for communication skills and  $t = (0, 9, 18, 34)$ , we interpret this effect as a one month increase in time is associated with a one month deterioration in communication skills.<sup>55</sup>

When using Equation 1, it is typically assumed that  $I$  and  $S$  are uncorrelated with the  $\varepsilon = it$ , but the correlation of  $I$  and  $S$  is estimated. If the correlation of  $I$  and  $S$  is positive, this indicates that individuals starting with, for example, high communication scores have higher rates of change in communication. On the other hand, if the correlation of  $I$  and  $S$  is negative, this indicates those with high communication scores have lower rates of change over time.

The linear latent growth curve model of Equation 1 requires at least three time points to be identified.<sup>56</sup> The latent growth curve model deals with missing data and attrition using maximum likelihood and assuming data are missing at random (MAR; Little & Rubin, 2014) conditional on the observed and latent variables in the model. Any participant with at least one observation is retained in the analysis. This approach theoretically reduces bias and increases

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<sup>53</sup> Simple latent growth curve models can be fit equivalently as mixed effects models either using mixed effects regression software or multilevel modeling software, or using structural equation modeling software.

<sup>54</sup> If individuals have person specific times of observations, a subscript  $i$  is added to yield  $Y_{st}^I$ .

<sup>55</sup> Time can be rescaled, e.g.,  $t = (0.0, 0.26, 0.53, 1.0)$ . In this situation,  $E(S_i) = 03.4$  if, then a one unit increase in study duration (i.e., 34 months) is associated with a 3.4 point deterioration in communication skills.

<sup>56</sup> Nonlinear patterns of change over time (e.g., quadratic change, cubic change, logistic change, etc.) require addition time points for the model to be identified. These are incorporated by adding additional random effects and appropriately parameterizing the model.

statistical power relative to approaches that assume data are missing completely at random (MCAR) such as repeated measures ANOVA.

The latent growth curve model of Equation 1 can be generalized to deal with dyadic data (Ledermann & Macho, 2014). Instead of one observation per person per time point, we have pairs of observations for each couple at each time point and posit a couple factor:

$$Y_{Mit} = \tau_{M1} + \lambda_{Mt}\eta_{it} + \varepsilon_{Mit} \quad (2)$$

$$Y_{Fit} = \tau_{F1} + \lambda_{Ft}\eta_{it} + \varepsilon_{Fit} \quad (3)$$

For couple  $i$  at time point  $t$ , we have an observation  $Y$  for males  $M$  and females  $F$ . Each couple shares a couple level latent factor  $\eta_{it}$  measured by the couple's observed scores  $Y_{Mit}$  and  $Y_{Fit}$ . Readers familiar with factor analysis will recognize this as a factor model with two indicators, which is not identified under standard constraints. Different types of constraints can be made to test whether the people in each couple are exchangeable or not (i.e., are there gender differences; in the current study, we assume there are). These constraints are not elaborated on here, and the reader is referred to Ledermann and Macho (2014).

In Equations 2 and 3, we assume that  $\varepsilon_{Mit}$  and  $\varepsilon_{Fit}$  are uncorrelated at each time point  $t$  (i.e., the couple level latent factor  $\eta_{it}$  is sufficient to explain the correlation between  $Y_{Mit}$  and  $Y_{Fit}$ ). Within gender, we allow these error terms are autocorrelated (e.g.,  $COV(\varepsilon_{Mit}, \varepsilon_{Mi(t+1)})$  is freely estimated, where  $COV()$  is the covariance operator).

The couple level factor of Equations 2 and 3 are substituted into Equation 1 to obtain the linear latent growth curve model for dyadic data:

$$\eta_{it} = \nu_t + \gamma_{It}I_i + \gamma_{st}S_{i+}\zeta_{it} \quad (4)$$

Note that the error term changes to  $\zeta_{it}$  allowing for a residual at the level of the couple factor in addition to the residuals within each gender in each couple  $\varepsilon_{Mit}$  and  $\varepsilon_{Fit}$ . These are all assumed to be mutually uncorrelated.

The model of Equations 2-4 is called the common fate growth model (Ledermann & Macho, 2014; see also Whittaker, Beretvas, and Falbo, 2014). The path diagram for this model as used herein is shown in **Exhibit A-39**. The common fate growth model allows us to estimate whether each couple changes over time and whether the latent couple-level change varies between intervention and control groups. This, in turn, allows us to compare the trajectories of treatment couples to those of comparison couples, to understand whether treatment couples improved more (or deteriorated less) than the comparison couples over time, beginning with

baseline. This is done by extending the common fate growth model to a multiple group common fate growth model:

$$\eta_{git} = \nu_t + \gamma_{It}I_{gi} + \gamma_{st}S_{gi} + \zeta_{git} \quad (5)$$

The subscript  $g$  indicates group membership, either intervention or control. The parameters of primary interest are then  $E(S_{intervention})$  and  $E(S_{control})$ , and the treatment effect on *change* over time is  $E(S_{intervention}) - E(S_{control})$ . This is the effect reported in (list tables here).

The latent growth curve model and its generalization the multiple group common fate growth model has several strengths that increase its utility for the MFS-IP data. First, it can accommodate the propensity weights developed to adjust for selection and attrition bias (described above). We used Mplus version 7 (Muthén & Muthén, 2012) with the weighted (with propensity weights) robust maximum likelihood estimator (MLR) to estimate the latent growth curve models.

Second, because it incorporates baseline as well as follow-up data points, it better describes any selection bias associated with the matched and wait-list comparison group designs implemented for this study. Specifically, if treatment couples start off in a better place with their relationships (e.g., have higher relationship happiness, better communication skills) than comparison couples because they were more motivated to enroll in programming, but do not improve as a result of the intervention, this trajectory will be captured by a zero slope. In contrast, traditional approaches of comparing follow-up values between treatment and comparison couples might show higher values for the former simply because they started off with better relationships (and did not deteriorate over time). Selection bias is shown in a non-zero estimate of  $E(S_{intervention}) - E(S_{control})$ .

Third, latent growth curve modeling does not require complete data on all participants. Any participant with at least one observation is retained in the analysis. Therefore, unlike the comparison in weighted means approach, women who did not complete the baseline interview but did complete a follow-up interview are retained in the analyses. This improves sample size relative to analyses with complete data, and has been shown to be less biased than models that exclude cases with missing data. Fourth, the latent growth curve model makes less restrictive assumptions about the covariance of the repeated observations than do repeated measures analysis of variance models.

Finally, the model can control for whether the male partner had any community exposure time during each of the follow-up interview waves, which allows us to conduct the same type of sensitivity analysis as done for the comparison in weighted means approach. Specifically, we determine whether the model fit is improved by controlling for any community exposure and explore whether having any community exposure is a significant predictor of each outcome.

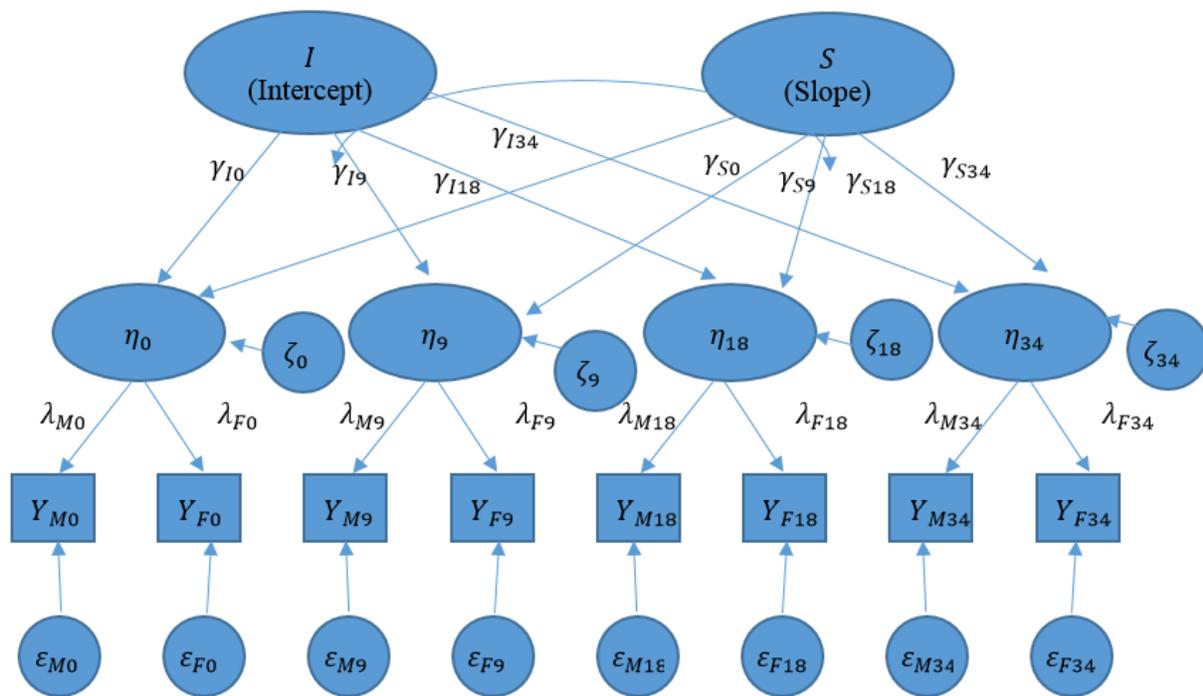
This is done by regressing the couple level factor  $\eta_{it}$  on an indicator of community exposure,

$$\eta_{git} = v_t + B_{gt}Exposure_{git} + \gamma_{It}I_{gi} + \gamma_{st}S_{gi} + \zeta_{git} \quad (6)$$

where  $\beta_{gt}$  is the effect of community exposure at time  $t$  in group  $g$ .

Equations 1-6 present the model assuming continuous approximately normal observed variables  $Y_{Mit}$  and  $Y_{Fit}$ . In the case of binary observed outcomes, we specified logistic regression relationships between the couple-level latent factors  $\eta_{it}$  and the observed binary variables and specify a logit link. The latent factors  $\eta_{it}$  and the slopes and intercepts are still assumed to be multivariate normally distributed.

**Exhibit A-39. Path Diagram of the Common Fate Growth Model**



Note. The subscript for individuals  $i$ , residual (auto)correlations, and means/intercepts are excluded for simplicity (see Figure 1 of Ledermann & Macho, 2014 for a more detailed diagram).

## Factor Analysis Approach

The outcomes explored in the impact analysis are organized into three primary domains:

- Intimate relationship status and quality;
- Parenting and coparenting relationship quality; and

- Employment, drug use, and recidivism.

The primary analytic approach involves examining results for individual outcomes (including single items as well as scale scores) within each domain. To better understand the overall pattern of outcomes within each domain, we conducted exploratory factor analysis (EFA), which assesses whether one (or more) latent underlying construct(s), or “factors”, can adequately explain the correlation among the individual outcomes in each domain. Factor analysis was used to test whether the data supported an empirical 1:1 mapping of domains onto respective factors, or whether additional factors (and hence, subdomains) were needed to adequately describe the data. EFA modeling was conducted iteratively in an attempt to find the best model fit. If a domain such as intimate relationship status and quality required more than one factor to achieve good model fit, that domain would be subdivided. If individual items within a domain caused model misfit, they were excluded from further domain-level analyses.

Initial EFA analyses were fit using the men’s 9-month interview data. Analyses were repeated in the subsamples with and without community exposure, because not all outcomes were common to both subsamples. We then used confirmatory factor analyses (CFA) to test whether the (sub)domain factors held at other time points and for the women’s survey responses.

The EFA and CFA results suggest that the three individual outcome variables in the **employment, drug use, and recidivism domain** did not form a factor and should be analyzed as individual outcome variables. For the **intimate relationship status and quality domain**, five empirically distinct factors underlay the outcomes:

- General Intimate Relationship Quality
- Healthy Relationship Beliefs
- (Subsample with no community exposure) In-Prison Partner Contact
- (Subsample with community exposure) Partner Violence
- (Subsample with community exposure) Cohabitation and Partner Support

The items that were included in each of the five factors are shown in **Exhibit A-40**. A few variables within the intimate relationship status domain did not fit into any factor and were therefore excluded from the factor analysis. These outcomes are listed the exhibit.

For the **parenting and coparenting relationship quality domain**, three empirically distinct factors underlay the outcomes:

- General Parenting and Coparenting Quality
- (Subsample with no community exposure) In-Prison Father-Child Contact

- (Subsample with community exposure) Parenting and Coparenting Experiences during Reentry

The items that were included in in the parenting/coparenting domains, as well as the small number of outcomes that did not fit into any factor, are shown in **Exhibit A-41**.

The outcome variables within each of the eight factors were summed to create a factor score at each time point and for both men and women. Mean imputation was used to address missing data when creating the factor scores.

We then assessed treatment effects using the factor scores as the outcome variables. We conducted the same analyses at the factor level that were conducted for individual outcomes, including comparison of weighted means between male and female treatment and comparison group members (controlling for the baseline version of the each variable in the factor) and latent growth curve modeling to assess trajectories for couples.

**Exhibit A-40. Items Making up Factors Related to Intimate Relationship Status and Quality**

Variable	Scale	Question
<b>General Relationship Quality</b>		
rMNACASI6V056	DAS 1	On a scale from 1 to 10 where 1 means not at all happy and 10 means perfectly happy, which number best describes your happiness with your relationship now?
rMNACASI6V057	DAS 2	How often do you and your ^Companion agree on displays of affection? By displays of affection, I mean holding hands, hugging, kissing, or other kinds of physical affection.
rMNACASI6V058	DAS 3	How often have you discussed or considered divorce, separation, or ending your current relationship?
rMNACASI6V059	DAS 4	In general, how often do you think that things between you and your ^Companion are going well?
rMNACASI6V060	DAS 5	Do you confide in your ^Companion? By confide, I mean share secrets or personal, sensitive information.
rMNACASI6V061	DAS 6	Do you ever regret getting into your current relationship?
rMNACASI6V062	DAS 7	How often do you and your ^Companion calmly discuss something?
rMNACASI6V063	DAS 8	How often do you and your ^Companion work together on something?
rMNACASI6V081	Bonding 2	You believe you and your ^Companion can handle whatever conflicts will arise in the future.
rMNACASI6V080	Bonding 1	You and your ^Companion have fun together.
rMNACASI6V083	Support 1	Your ^Companion encourages or helps you to do things that are important to you.
rMNACASI6V084	Support 2	When you have problems, your ^Companion really understands what you're going through.
RMNACASI6V064	Communication 1	Even when arguing, you and your ^Companion can keep a sense of humor.
RMNACASI6V067	Communication 4	You are good at working out your differences with each other.
MBACASI6V068	Communication Skills 1	When discussing issues, you repeat back what [female] says to make sure you understand
MBACASI6V069	Communication Skills 2	When your talks begin to get out of hand, you agree to stop them and talk later.
RMNACASI6V073	Fidelity 1	How often are you tempted to have sexual or romantic contact with someone other than your ^Companion?

Variable	Scale	Question
RMNACASI6V075	Fidelity 3	You know you can count on your ^Companion to remain faithful to you. By faithful, we mean never having sexual contact with anyone except you.
RMNACASI6V077	Fidelity 5	It is very important to you to be completely faithful to your ^Companion. By faithful, we mean never having sexual contact with anyone except your ^Companion.
RMNACASI6V078	Fidelity 6	It is very important to you that your ^Companion be completely faithful to you.
nevercheat9	Exclusivity	R is NOT involved with anyone else (1=not involved; 0=involved)
relstatus9	Relationship Status	Relationship status at FU (romantically involved or not)
<b>Healthy Relationship Beliefs</b>		
rMN6Z021	Relationship Skills 1	Once a couple starts to have problems, it usually is not possible to fix them.
rMN6Z022	Relationship Skills 2	Couples should not have to work on their relationships in order to have a happy relationship.
rMN6Z023	Relationship Skills 3	Most people can learn to communicate better with their spouse.
rMN6Z024	Relationship Skills 4	When one spouse says something mean or hurtful, it is OK for the other spouse to say something mean or hurtful back.
rMN6Z025	Relationship Skills 5	When wives and husbands have very different views about important things in the family, it is best to not talk about those things.
rMN6Z026	Relationship Skills 6	People can learn to avoid situations where they might be tempted to cheat on their spouse or partner.
rMN6Z027	Relationship Skills 7	It is sometimes OK for couples to get a little rough physically, like pushing or hitting.
<b>(Subsample with no community exposure) In-Prison Partner Contact</b>		
MN3Q006d	R2FMailD	R sends mail to [female](y/n)
MN3Q007d	F2RMailD	R receives mail from [female](y/n)
MN3Q008d	VisitPartD	R receives personal visits from [female] (y/n)
MN3Q004d	PhonePartD	R talks on phone to [female] (y/n)
<b>(Subsample with community exposure) Partner Violence</b>		
rc_man9_perp_phys	PhyAbu_P	No physical abuse: perpetration
rc_man9_perp_severe	SevPhy_P	No severe physical or sexual abuse: perpetration
rc_man9_victim_severe	SevPhy_V	No severe physical or sexual abuse: victimization

Variable	Scale	Question
rc_m9_freq_vict_phys	FrePhy_V	No frequent physical abuse: victimization
rc_man9_victim_phys	PhyAbu_V	No physical abuse: victimization
rc_man9_perp_emo	EmoAbu_P	No emotional abuse: perpetration
rc_m9_freq_vict_emot	FreEmo_V	No frequent emotional abuse: victimization
<b>(Subsample with community exposure) Partner Violence</b>		
support_to_partner9	SupPart9	Support provided to partner since release (0-6; higher=more support)
support_from_partner9	GetSupp9	Support received from partner since release (0-6; higher=more support)
MN5J044	LivePar	Lived w/ [FEMALE] at any point since release/while out
<b>Outcomes that did not fit into a factor</b>		
Communcation Skills 3	FNACASIV070	When discussing issues you allow [female] to finish talking before you respond.
Communcation Skills 4	FNACASIV071	[Female] interrupts you when you are talking.
Fidelity 2	FNACASIV074	During your relationship with your ^Companion, was there ever a time when you had sexual or romantic contact with someone else?
Fidelity 4	FNACASIV076	You know how to avoid situations where you might be tempted to cheat on your ^Companion.
Conflict Resolution Skills 2	FNACASIV065	Your arguments get very heated.
Conflict Resolution Skills 3	FNACASIV066	Small issues suddenly become big arguments.
For Life	rMNACASI6V086	Staying married to your spouse for the rest of your life is an important goal for you. (0-3; higher=more agreement)
Marriage Attitude 1	rMNACASI6V085	Getting and staying married is an important goal for you.
Marriage Attitude 2	rMNACASI6V086	Staying married to your spouse for the rest of your life is an important goal for you.
No frequent physical abuse: perpetration	rc_m9_freq_perp_phys	No frequent physical abuse: perpetration
No frequent emotional abuse: perpetration	rc_m9_freq_perp_emot	No frequent emotional abuse: perpetration
No emotional abuse: victimization	rc_man9_victim_emo	No emotional abuse: victimization
Frequency of personal visits between partners	rMN3Q008	How often do you currently receive personal visits from [female]? (0-5; higher=more often)

**Exhibit A-41. Items Making up Factors Related to Parenting and Coparenting Relationship Quality**

<b>General Parenting and Coparenting Relationship Quality</b>		
parental_warmth9	Warmth9	Parental Warmth Scale (0-12; higher=greater warmth)
rMN6N096	GoodParent	What kind of parent would you say you are (0-3; higher=better)
rMN6N097	Relat_FC	How is your current relationship with focal child (0-3; higher=better)
jointdecision9	jointdecision9	R and partner have made/make major decisions for focal child together (5N061/6N100)
<b>(Subsample with no community exposure) In-Prison Father-Child Contact</b>		
MN3R024	PhoneFC	Talk on the phone w/ the focal child?
MN3R028	MailFC	How often send mail to focal child?
MN3R032	GetMailFC	Receive mail from focal child?
MN3R036	GetVizFC	Receive visits from focal child
<b>(Subsample with community exposure) Parenting and Coparenting Experiences during Reentry</b>		
MN5N062	FreqActFC	Frequency of activities with focal child in a typical week
rMN5N064	EnjoyFam	How often do you enjoy being together as a family? (0-3; higher=more often)
rMN5N063	FamActs	How often do you all do family-oriented activities together? (0-3; higher=more often)
MN4G069	MoneySup	Any financial support provided for focal child
MN5J046	LiveFC	Lived w/ focal child at any point since release/while out

General Parenting and Coparenting Relationship Quality		
Outcomes that did not fit into a factor		
Partner fulfills parenting responsibilities	rMN6N099a	How often you and [female] count on one another to follow through on parenting responsibilities? (0-3; higher=more often)
Father coresidence with any of his children	MN5J048yes_any	R lived with one or more of his children since release/while out
Frequency of nonresidential father-child interaction	rMN5J047a	How often do you see focal child (0-5; higher=more frequent)
Partner fulfills parenting responsibilities	rMN6N099a	How often you and [female] count on one another to follow through on parenting responsibilities? (0-3; higher=more often)

## **Adjustments for Multiple Comparisons**

Given the large number of statistical tests that were conducted, based on the number of outcomes explored, the number of follow-up waves, and the two sets of statistical approaches that were employed, the probability that some findings might emerge as significant by chance was fairly high. This is known as the multiple comparison problem. To account for multiple comparisons, we used the Holm-Bonferroni method to adjust the p-values for the outcomes. The adjustment is only used to report the p-values that reduce the possibility of a random significant finding and are not a reflection of how effective the treatment may have been for an individual site or outcome. The results of these adjustments are presented in **Appendix C** (intimate relationship status and quality outcomes), **Appendix D** (parenting and coparenting outcomes), and **Appendix E** (employment, substance abuse, and recidivism outcomes).

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# Appendix B. Service Receipt

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This appendix summarizes the treatment differential findings for the total male and female samples, by site. The treatment differential tells us whether the treatment group actually received more services than the comparison group. Service receipt was measured at *baseline*, which reflects whether the respondent had received the service since the male partner had been incarcerated (until the day of the baseline interview);<sup>57</sup> *nine months*, which reflects whether the respondent had received the service between the baseline and 9-month interviews; and *18 months*, which reflects whether the respondent had received the service between the 9- and 18-month interviews.<sup>58</sup> The 34-month interview did not ask about service receipt because, by that point, any services the respondents received would not have been OFA-funded. The baseline, 9-month, and 18-month interviews measured the receipt of services most likely to be delivered as part of OFA-funded demonstration programming (e.g., relationship education classes/workshops, parenting classes, case management) but did not attempt to parse out only services that were directly funded by OFA. The treatment differential was determined by comparing the proportion of treatment and comparison group members who reported the receipt of each service, with the data weighted to adjust for selection and attrition bias.

## Total Male Sample

**Exhibit B-1** presents summary indicators of the treatment differential for the total male sample. Services for which a difference between the treatment and comparison group should logically be expected based on the program offerings and site-specific design<sup>59</sup> are designated by an asterisk.

The significance indicators in the table reflect whether a significantly larger proportion of treatment group members reported receiving the service than comparison group members (which indicates a positive treatment differential), noted by the “+” symbol. For some services, a significantly *lower* proportion of treatment group members reported receiving the service

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<sup>57</sup> As described in **Chapter 2** and **Appendix A**, the baseline interviews were not pre-intervention interviews in Ohio and New Jersey. This is because some treatment group members had already begun receiving the services that were evaluated in these sites by the time the baseline interviews were conducted, due to the manner in which enrollment was defined by the sites and the timeframe with which enrollment rosters could be submitted to the evaluation team. Therefore, some baseline differences in service receipt are to be expected. In addition, both the treatment and comparison men in Indiana likely received some OFA-funded services prior to the baseline interview because, in this site, the impact design was intended to isolate the impact of the couples’ healthy relationship retreat only—not the entire set of program offerings. Although the New York design was also intended to isolate the impact of the couple’s healthy relationship seminar, because the comparison group men (who were in different prisons) did not have access to any OFA-funded services, a New York treatment differential for relationship classes is expected.

<sup>58</sup> An 18-month treatment differential was only likely in New Jersey, which had a long program duration.

<sup>59</sup> See footnote above. Also, a treatment differential for relationship classes/workshops is not to be expected for men in Indiana, because the interview question wording would have captured both the classroom based healthy relationship education that both treatment and comparison men could have received, as well as the couples’ healthy relationship retreat that only the treatment group received.

than the proportion of comparison group members (reflecting a negative treatment differential), noted by the “-” symbol.

**Exhibit B-1. Service Receipt Differential for Total Male Sample at Baseline, 9M, and 18M**

Service	Indiana	Ohio	New Jersey	New York
<b>Family-Related Services</b>				
Relationship classes/workshops				
Prior to baseline	n.s.	++*	+++*	+++*
Between baseline and 9M	+++	+++*	+++*	+++*
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Relationship counseling				
Prior to baseline	n.s.	n.s.	+++	++
Between baseline and 9M	n.s.	+++	++	n.s.
Between 9M and 18M	n.s.	n.s.	--	n.s.
Parenting classes				
Prior to baseline	n.s.	n.s.*	+++*	---
Between baseline and 9M	--	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	++	n.s.
Child custody assistance				
Prior to baseline	n.s.	n.s.	+	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Family mediation				
Prior to baseline	n.s.	--	++	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	++	n.s.	n.s.	+
<b>Other Services</b>				
Case management				
Prior to baseline	n.s.	n.s.	n.s.*	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.*	--
Between 9M and 18M	n.s.	n.s.	n.s.*	n.s.
Mental health counseling				
Prior to baseline	n.s.	n.s.	++	n.s.
Between baseline and 9M	n.s.	n.s.	+++	n.s.
Between 9M and 18M	n.s.	n.s.	+++	n.s.
Substance use services				
Prior to baseline	n.s.	+	+++	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Anger management				
Prior to baseline	n.s.	+	n.s.	+++
Between baseline and 9M	--	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.

Service	Indiana	Ohio	New Jersey	New York
<b>Batterer intervention</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	+++
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>GED/education</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Job training</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	+	n.s.	n.s.	n.s.
Between 9M and 18M	++	n.s.	n.s.	n.s.
<b>Financial planning</b>				
Prior to baseline	n.s.	--	n.s.*	+
Between baseline and 9M	n.s.	n.s.	n.s.*	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Life skills education</b>				
Prior to baseline	n.s.	n.s.	++	+
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Housing assistance</b>				
Prior to baseline	n.s.	n.s.	n.s.	+++
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 1 M	n.s.	n.s.	n.s.	n.s.
<b>Support groups</b>				
Prior to baseline	n.s.	n.s.	+++	++
Between baseline and 9M	n.s.	+	n.s.	++
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Spiritual/religious help</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Sample Sizes</b>				
Baseline	686 (T=281, C=405)	688 (T=506, C=182)	309 (T=183, C=126)	201 (T=138, C=63)
9M	516 (T=387, C=129)	592 (T=249, C=343)	175 (T=108, C=67)	145 (T=102, C=43)
18M	502 (T=361, C=141)	563 (T=242, C=321)	172 (T=107, C=65)	135 (T=98, C=37)

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

\* Services for which a difference between the treatment and comparison group should logically be expected based on the program offerings and site-specific design are designated by an asterisk

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

The most consistent, significant treatment differential was for *relationship education classes/workshops*, the primary program component in each site.<sup>60</sup> This differential was evident at baseline (except for the male sample in Indiana) and nine months (in all sites), which is largely consistent with the nature of the programming and the study design in each site. Several other differences in service receipt may have been indirectly associated with OFA demonstration program participation.

Many of the other differences—such as the significantly higher proportion of treatment males than comparison males receiving parenting classes, substance abuse treatment, and life skills education in New Jersey—are also consistent with the programs’ offerings and study design.<sup>61</sup> As noted previously, some baseline differences in service receipt are to be expected. The baseline interview was not a pure, pre-intervention interview in New Jersey, where some treatment group members had already begun receiving the program by the time the baseline interviews were conducted (due to the manner in which enrollment was defined by the sites and the timeframe with which enrollment rosters could be submitted to the evaluation team).

For some services, a treatment differential was not expected at any time point, based on the study design and program components being evaluated. A differential for parenting classes was not expected in Indiana and New York, even though those programs delivered parenting classes as part of their OFA-funded programs, because the impact study design was intended to isolate the impact of couples’ relationship retreats in Indiana and seminars in New York.

It is important to note that even for relationship education classes/workshops, the treatment differential was fairly modest. **Exhibit B-2** shows the proportion of treatment and comparison men in each site who reported having received relationship education classes/workshops at *any* interview wave. As evident, not all men in the treatment group reported receiving relationship education, and a substantial proportion of men in the comparison group received this service. (This is not surprising in Indiana because treatment and comparison men both had access to classroom-based relationship education classes and the question wording for this item would have captured this format as well as the couples’ retreats, which only treatment men received.) However, a significant treatment differential clearly exists for relationship education.

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<sup>60</sup> In Indiana and New York, relationship education was delivered in the format of a couple’s retreat and seminar, respectively. The interview question asked about “group classes or workshops on healthy marriage or romantic relationships” with the intention of picking up seminars/retreats and ongoing course formats.

<sup>61</sup> However, men in the treatment group in New Jersey were no more likely to report receiving case management than the comparison group, which is not consistent with the program offerings and study design.

**Exhibit B-2. Proportion of Treatment and Comparison Men who Received Relationship Classes/Workshops at Any Wave**

	Indiana	Ohio	New Jersey	New York
Treatment group	76%	68%	80%	88%
Comparison group	56%	50%	17%	28%
Significance	+++	+++	+++	+++

+++ : Statistically significant positive impact at the .01 level.

Note: Data are weighted to adjust for selection bias.

**Exhibits B-3** through **B-6** present the detailed results of the treatment differential analyses for the male sample in each site, including the weighted means (which reflect the proportions of treatment and comparison group members who reported receiving each service) and effect sizes for the differential. The data are weighted to adjust for selection and attrition bias.

**Exhibit B-3. Detailed Results of the Treatment Differential Analyses for Indiana Males at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship classes								
Prior to baseline	686	281	405	0.426	0.393	n.s.	0.03	0.14
Between baseline and 9M	592	249	343	0.654	0.272	+++	0.38	1.62
Between 9M and 18M	558	241	317	0.088	0.133	n.s.	-0.04	-0.46
Relationship counseling								
Prior to baseline	686	281	405	0.054	0.065	n.s.	-0.01	-0.20
Between baseline and 9M	589	248	341	0.063	0.042	n.s.	0.02	0.42
Between 9M and 18M	557	240	317	0.037	0.033	n.s.	0.00	0.13
Parenting classes								
Prior to baseline	686	281	405	0.575	0.603	n.s.	-0.03	-0.12
Between baseline and 9M	494	199	295	0.414	0.522	--	-0.11	-0.44
Between 9M and 18M	472	196	276	0.203	0.191	n.s.	0.01	0.07
Child custody assistance								
Prior to baseline	569	226	343	0.076	0.050	n.s.	0.03	0.45
Between baseline and 9M	498	200	298	0.032	0.042	n.s.	-0.01	-0.29
Between 9M and 18M	472	196	276	0.038	0.033	n.s.	0.01	0.17
Family mediation								
Prior to baseline	686	281	405	0.188	0.141	n.s.	0.05	0.35
Between baseline and 9M	592	249	343	0.281	0.258	n.s.	0.02	0.12
Between 9M and 18M	559	241	318	0.261	0.182	++	0.08	0.46
<b>Other Services</b>								
Case management								
Prior to baseline	686	281	405	0.518	0.490	n.s.	0.03	0.11
Between baseline and 9M	592	249	343	0.305	0.364	n.s.	-0.06	-0.27
Between 9M and 18M	559	241	318	0.247	0.317	n.s.	-0.07	-0.35
Mental health counseling								
Prior to baseline	686	281	405	0.193	0.183	n.s.	0.01	0.06
Between baseline and 9M	592	249	343	0.076	0.113	n.s.	-0.04	-0.43
Between 9M and 18M	559	241	318	0.085	0.098	n.s.	-0.01	-0.16

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	686	281	405	0.556	0.545	n.s.	0.01	0.04
Between baseline and 9M	591	248	343	0.402	0.371	n.s.	0.03	0.13
Between 9M and 18M	559	241	318	0.251	0.303	n.s.	-0.05	-0.26
Anger management								
Prior to baseline	686	281	405	0.465	0.429	n.s.	0.04	0.15
Between baseline and 9M	592	249	343	0.183	0.268	--	-0.08	-0.49
Between 9M and 18M	559	241	318	0.129	0.150	n.s.	-0.02	-0.18
Batterer intervention								
Prior to baseline	686	281	405	0.156	0.121	n.s.	0.04	0.30
Between baseline and 9M	592	249	343	0.077	0.119	n.s.	-0.04	-0.47
Between 9M and 18M	559	241	318	0.049	0.063	n.s.	-0.01	-0.26
GED/education								
Prior to baseline	686	281	405	0.594	0.607	n.s.	-0.01	-0.05
Between baseline and 9M	592	249	343	0.475	0.444	n.s.	0.03	0.13
Between 9M and 18M	559	241	318	0.357	0.346	n.s.	0.01	0.05
Job training								
Prior to baseline	685	281	404	0.407	0.447	n.s.	-0.04	-0.17
Between baseline and 9M	592	249	343	0.433	0.353	+	0.08	0.33
Between 9M and 18M	559	241	318	0.353	0.252	++	0.10	0.48
Financial planning								
Prior to baseline	686	281	405	0.427	0.430	n.s.	0.00	-0.01
Between baseline and 9M	592	249	343	0.347	0.333	n.s.	0.01	0.06
Between 9M and 18M	559	241	318	0.204	0.206	n.s.	0.00	-0.01
Life skills education								
Prior to baseline	686	281	405	0.590	0.532	n.s.	0.06	0.24
Between baseline and 9M	590	248	342	0.306	0.344	n.s.	-0.04	-0.17
Between 9M and 18M	559	241	318	0.178	0.161	n.s.	0.02	0.12

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Housing assistance								
Prior to baseline	686	281	405	0.046	0.031	n.s.	0.01	0.39
Between baseline and 9M	592	249	343	0.045	0.042	n.s.	0.00	0.06
Between 9M and 18M	559	241	318	0.045	0.069	n.s.	-0.02	-0.47
Support groups								
Prior to baseline	686	281	405	0.463	0.425	n.s.	0.04	0.15
Between baseline and 9M	592	249	343	0.322	0.310	n.s.	0.01	0.06
Between 9M and 18M	558	241	317	0.203	0.197	n.s.	0.01	0.03
Spiritual/religious help								
Prior to baseline	686	281	405	0.555	0.605	n.s.	-0.05	-0.20
Between baseline and 9M	592	249	343	0.435	0.487	n.s.	-0.05	-0.21
Between 9M and 18M	559	241	318	0.419	0.396	n.s.	0.02	0.10

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-4. Detailed Results of the Treatment Differential Analyses for Ohio Males at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship classes								
Prior to baseline	688	506	182	0.421	0.325	++	0.10	0.41
Between baseline and 9M	516	387	129	0.542	0.253	+++	0.29	1.25
Between 9M and 18M	497	356	141	0.260	0.235	n.s.	0.02	0.13
Relationship counseling								
Prior to baseline	688	506	182	0.041	0.032	n.s.	0.01	0.26
Between baseline and 9M	516	387	129	0.043	0.002	+++	0.04	2.96
Between 9M and 18M	497	356	141	0.024	0.024	n.s.	0.00	-0.01
Parenting classes								
Prior to baseline	687	505	182	0.373	0.361	n.s.	0.01	0.05
Between baseline and 9M	477	370	107	0.298	0.226	n.s.	0.07	0.37
Between 9M and 18M	461	345	116	0.183	0.226	n.s.	-0.04	-0.27
Child custody assistance								
Prior to baseline	630	479	151	0.035	0.020	n.s.	0.02	0.59
Between baseline and 9M	476	368	108	0.045	0.052	n.s.	-0.01	-0.15
Between 9M and 18M	461	345	116	0.035	0.045	n.s.	-0.01	-0.24
Family mediation								
Prior to baseline	688	506	182	0.096	0.180	--	-0.08	-0.73
Between baseline and 9M	514	385	129	0.194	0.132	n.s.	0.06	0.46
Between 9M and 18M	497	357	140	0.188	0.164	n.s.	0.02	0.17
<b>Other Services</b>								
Case management								
Prior to baseline	688	506	182	0.410	0.408	n.s.	0.00	0.01
Between baseline and 9M	515	386	129	0.269	0.291	n.s.	-0.02	-0.10
Between 9M and 18M	498	357	141	0.216	0.224	n.s.	-0.01	-0.05
Mental health counseling								
Prior to baseline	688	506	182	0.242	0.258	n.s.	-0.02	-0.09
Between baseline and 9M	515	386	129	0.123	0.161	n.s.	-0.04	-0.31
Between 9M and 18M	498	357	141	0.116	0.122	n.s.	-0.01	-0.05

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	687	505	182	0.517	0.433	+	0.08	0.34
Between baseline and 9M	515	386	129	0.269	0.214	n.s.	0.06	0.30
Between 9M and 18M	498	357	141	0.204	0.217	n.s.	-0.01	-0.08
Anger management								
Prior to baseline	688	506	182	0.419	0.339	+	0.08	0.34
Between baseline and 9M	515	386	129	0.186	0.133	n.s.	0.05	0.40
Between 9M and 18M	498	357	141	0.138	0.092	n.s.	0.05	0.45
Batterer intervention								
Prior to baseline	688	506	182	0.157	0.130	n.s.	0.03	0.22
Between baseline and 9M	515	386	129	0.101	0.055	n.s.	0.05	0.65
Between 9M and 18M	498	357	141	0.060	0.052	n.s.	0.01	0.15
GED/education								
Prior to baseline	688	506	182	0.573	0.603	n.s.	-0.03	-0.13
Between baseline and 9M	515	386	129	0.470	0.462	n.s.	0.01	0.03
Between 9M and 18M	498	357	141	0.419	0.352	n.s.	0.07	0.29
Job training								
Prior to baseline	688	506	182	0.290	0.330	n.s.	-0.04	-0.19
Between baseline and 9M	514	385	129	0.297	0.225	n.s.	0.07	0.37
Between 9M and 18M	498	357	141	0.236	0.250	n.s.	-0.01	-0.08
Financial planning								
Prior to baseline	688	506	182	0.175	0.266	--	-0.09	-0.53
Between baseline and 9M	514	385	129	0.133	0.127	n.s.	0.01	0.05
Between 9M and 18M	498	357	141	0.133	0.108	n.s.	0.02	0.23
Life skills education								
Prior to baseline	686	505	181	0.288	0.321	n.s.	-0.03	-0.16
Between baseline and 9M	514	385	129	0.138	0.121	n.s.	0.02	0.16
Between 9M and 18M	497	356	141	0.098	0.133	n.s.	-0.03	-0.34

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Housing assistance								
Prior to baseline	688	506	182	0.058	0.053	n.s.	0.00	0.09
Between baseline and 9M	514	385	129	0.073	0.078	n.s.	-0.01	-0.07
Between 9M and 18M	498	357	141	0.052	0.033	n.s.	0.02	0.48
Support groups								
Prior to baseline	687	505	182	0.326	0.305	n.s.	0.02	0.09
Between baseline and 9M	514	385	129	0.244	0.159	+	0.08	0.53
Between 9M and 18M	498	357	141	0.190	0.160	n.s.	0.03	0.21
Spiritual/religious help								
Prior to baseline	687	505	182	0.471	0.493	n.s.	-0.02	-0.09
Between baseline and 9M	514	385	129	0.323	0.340	n.s.	-0.02	-0.08
Between 9M and 18M	498	357	141	0.349	0.336	n.s.	0.01	0.05

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-5. Detailed Results of the Treatment Differential Analyses for New Jersey Males at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship classes								
Prior to baseline	309	183	126	0.758	0.112	+++	0.65	3.21
Between baseline and 9M	175	108	67	0.305	0.086	+++	0.22	1.54
Between 9M and 18M	167	104	63	0.086	0.048	n.s.	0.04	0.62
Relationship counseling								
Prior to baseline	309	183	126	0.172	0.030	+++	0.14	1.90
Between baseline and 9M	174	107	67	0.119	0.015	++	0.10	2.18
Between 9M and 18M	166	103	63	0.039	0.145	--	-0.11	-1.44
Parenting classes								
Prior to baseline	309	183	126	0.477	0.208	+++	0.27	1.25
Between baseline and 9M	158	103	55	0.268	0.184	n.s.	0.08	0.48
Between 9M and 18M	153	99	54	0.104	0.024	++	0.08	1.55
Child custody assistance								
Prior to baseline	279	172	107	0.098	0.040	+	0.06	0.96
Between baseline and 9M	158	103	55	0.028	0.011	n.s.	0.02	0.98
Between 9M and 18M	153	99	54	0.033	0.010	n.s.	0.02	1.19
Family mediation								
Prior to baseline	309	183	126	0.288	0.131	++	0.16	0.99
Between baseline and 9M	175	108	67	0.270	0.253	n.s.	0.02	0.09
Between 9M and 18M	167	104	63	0.130	0.192	n.s.	-0.06	-0.46
<b>Other Services</b>								
Case management								
Prior to baseline	309	183	126	0.345	0.305	n.s.	0.04	0.19
Between baseline and 9M	175	108	67	0.254	0.230	n.s.	0.02	0.13
Between 9M and 18M	167	104	63	0.184	0.233	n.s.	-0.05	-0.30
Mental health counseling								
Prior to baseline	309	183	126	0.254	0.128	++	0.13	0.84
Between baseline and 9M	175	108	67	0.200	0.034	+++	0.17	1.95
Between 9M and 18M	167	104	63	0.135	0.018	+++	0.12	2.12

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	309	183	126	0.532	0.325	+++	0.21	0.86
Between baseline and 9M	175	108	67	0.277	0.215	n.s.	0.06	0.33
Between 9M and 18M	167	104	63	0.265	0.156	n.s.	0.11	0.66
Anger management								
Prior to baseline	308	183	125	0.460	0.427	n.s.	0.03	0.14
Between baseline and 9M	175	108	67	0.158	0.229	n.s.	-0.07	-0.46
Between 9M and 18M	167	104	63	0.103	0.082	n.s.	0.02	0.25
Batterer intervention								
Prior to baseline	309	183	126	0.165	0.147	n.s.	0.02	0.14
Between baseline and 9M	175	108	67	0.141	0.081	n.s.	0.06	0.61
Between 9M and 18M	167	104	63	0.056	0.010	n.s.	0.05	1.82
GED/education								
Prior to baseline	309	183	126	0.471	0.364	n.s.	0.11	0.44
Between baseline and 9M	175	108	67	0.244	0.181	n.s.	0.06	0.38
Between 9M and 18M	167	104	63	0.179	0.179	n.s.	0.00	0.00
Job training								
Prior to baseline	309	183	126	0.497	0.484	n.s.	0.01	0.05
Between baseline and 9M	175	108	67	0.341	0.378	n.s.	-0.04	-0.16
Between 9M and 18M	167	104	63	0.281	0.339	n.s.	-0.06	-0.27
Financial planning								
Prior to baseline	309	183	126	0.295	0.197	n.s.	0.10	0.53
Between baseline and 9M	175	108	67	0.164	0.254	n.s.	-0.09	-0.55
Between 9M and 18M	167	104	63	0.094	0.070	n.s.	0.02	0.32
Life skills education								
Prior to baseline	308	183	125	0.406	0.264	++	0.14	0.64
Between baseline and 9M	175	108	67	0.170	0.137	n.s.	0.03	0.25
Between 9M and 18M	167	104	63	0.075	0.098	n.s.	-0.02	-0.28

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Housing assistance								
Prior to baseline	309	183	126	0.085	0.071	n.s.	0.01	0.20
Between baseline and 9M	175	108	67	0.072	0.083	n.s.	-0.01	-0.16
Between 9M and 18M	167	104	63	0.116	0.065	n.s.	0.05	0.63
Support groups								
Prior to baseline	309	183	126	0.387	0.218	+++	0.17	0.82
Between baseline and 9M	175	108	67	0.252	0.302	n.s.	-0.05	-0.25
Between 9M and 18M	167	104	63	0.164	0.210	n.s.	-0.05	-0.30
Spiritual/religious help								
Prior to baseline	309	183	126	0.536	0.540	n.s.	0.00	-0.02
Between baseline and 9M	175	108	67	0.307	0.378	n.s.	-0.07	-0.31
Between 9M and 18M	167	104	63	0.300	0.307	n.s.	-0.01	-0.04

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-6. Detailed Results of the Treatment Differential Analyses for New York Males at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship classes								
Prior to baseline	201	138	63	0.840	0.218	+++	0.62	2.93
Between baseline and 9M	145	102	43	0.544	0.095	+++	0.45	2.43
Between 9M and 18M	134	98	36	0.198	0.184	n.s.	0.01	0.09
Relationship counseling								
Prior to baseline	201	138	63	0.089	0.018	++	0.07	1.70
Between baseline and 9M	145	102	43	0.093	0.000	n.s.	0.09	17.80
Between 9M and 18M	134	98	36	0.037	0.026	n.s.	0.01	0.35
Parenting classes								
Prior to baseline	201	138	63	0.789	0.969	---	-0.18	-2.14
Between baseline and 9M	101	65	36	0.360	0.300	n.s.	0.06	0.27
Between 9M and 18M	96	65	31	0.133	0.257	n.s.	-0.12	-0.81
Child custody assistance								
Prior to baseline	141	86	55	0.075	0.020	n.s.	0.06	1.38
Between baseline and 9M	101	65	36	0.043	0.046	n.s.	0.00	-0.07
Between 9M and 18M	96	65	31	0.036	0.027	n.s.	0.01	0.28
Family mediation								
Prior to baseline	201	138	63	0.188	0.198	n.s.	-0.01	-0.06
Between baseline and 9M	145	102	43	0.204	0.220	n.s.	-0.02	-0.10
Between 9M and 18M	135	98	37	0.307	0.100	+	0.21	1.38
<b>Other Services</b>								
Case management								
Prior to baseline	201	138	63	0.322	0.292	n.s.	0.03	0.14
Between baseline and 9M	145	102	43	0.186	0.404	--	-0.22	-1.09
Between 9M and 18M	135	98	37	0.281	0.462	n.s.	-0.18	-0.79
Mental health counseling								
Prior to baseline	201	138	63	0.299	0.158	n.s.	0.14	0.82
Between baseline and 9M	145	102	43	0.201	0.142	n.s.	0.06	0.42
Between 9M and 18M	135	98	37	0.158	0.189	n.s.	-0.03	-0.22

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	201	138	63	0.510	0.475	n.s.	0.03	0.14
Between baseline and 9M	145	102	43	0.290	0.180	n.s.	0.11	0.62
Between 9M and 18M	135	98	37	0.244	0.283	n.s.	-0.04	-0.20
Anger management								
Prior to baseline	201	138	63	0.799	0.546	+++	0.25	1.19
Between baseline and 9M	145	102	43	0.396	0.317	n.s.	0.08	0.35
Between 9M and 18M	135	98	37	0.408	0.325	n.s.	0.08	0.36
Batterer intervention								
Prior to baseline	201	138	63	0.296	0.228	n.s.	0.07	0.35
Between baseline and 9M	145	102	43	0.174	0.012	+++	0.16	2.82
Between 9M and 18M	135	98	37	0.083	0.035	n.s.	0.05	0.91
GED/education								
Prior to baseline	201	138	63	0.694	0.618	n.s.	0.08	0.33
Between baseline and 9M	145	102	43	0.390	0.341	n.s.	0.05	0.21
Between 9M and 18M	135	98	37	0.385	0.306	n.s.	0.08	0.35
Job training								
Prior to baseline	201	138	63	0.818	0.713	n.s.	0.11	0.60
Between baseline and 9M	145	102	43	0.390	0.534	n.s.	-0.14	-0.58
Between 9M and 18M	135	98	37	0.445	0.406	n.s.	0.04	0.16
Financial planning								
Prior to baseline	201	138	63	0.400	0.199	+	0.20	0.99
Between baseline and 9M	145	102	43	0.211	0.208	n.s.	0.00	0.01
Between 9M and 18M	135	98	37	0.238	0.155	n.s.	0.08	0.53
Life skills education								
Prior to baseline	198	135	63	0.529	0.342	+	0.19	0.77
Between baseline and 9M	145	102	43	0.361	0.326	n.s.	0.03	0.15
Between 9M and 18M	135	98	37	0.300	0.234	n.s.	0.07	0.34

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Housing assistance								
Prior to baseline	201	138	63	0.162	0.030	+++	0.13	1.82
Between baseline and 9M	145	102	43	0.064	0.065	n.s.	0.00	-0.02
Between 9M and 18M	135	98	37	0.121	0.113	n.s.	0.01	0.08
Support groups								
Prior to baseline	201	138	63	0.649	0.403	++	0.25	1.01
Between baseline and 9M	145	102	43	0.427	0.215	++	0.21	1.01
Between 9M and 18M	135	98	37	0.466	0.235	n.s.	0.23	1.04
Spiritual/religious help								
Prior to baseline	201	138	63	0.690	0.695	n.s.	-0.01	-0.02
Between baseline and 9M	145	102	43	0.547	0.443	n.s.	0.10	0.42
Between 9M and 18M	135	98	37	0.587	0.543	n.s.	0.04	0.18

n.s.           No statistically significant impact.  
 +++/++/+    Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/-     Statistically significant negative impact at the .01/.05/.10 level.

## Total Female Sample

**Exhibit B-7** presents summary indicators of the treatment differential for the total female sample. As for the males, services for which a difference between the treatment and comparison group should logically be expected based on the program offerings and site-specific design are designated by asterisk in the specific cells. The significance indicators in the table reflect whether a significantly larger proportion of treatment group members reported receiving the service than comparison group members (which indicates a positive treatment differential), noted by the “+” symbol. For some services, a significantly *lower* proportion of treatment group members reported receiving the service than the proportion of comparison group members (reflecting a negative treatment differential), noted by the “-” symbol.

**Exhibit B-7. Service Receipt Differential for Total Female Sample at Baseline, 9M, and 18M**

Service	Indiana	Ohio	New Jersey	New York
<b>Family-Related Services</b>				
Relationship Classes				
Prior to baseline	+	++	n.s.*	+++
Between baseline and 9M	+++*	+++	+++*	+++*
Between 9M and 18M	n.s.	n.s.	n.s.	+++
Relationship counseling				
Prior to baseline	n.s.	-	n.s.	n.s.
Between baseline and 9M	n.s.	++	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Parenting classes				
Prior to baseline	--	-	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Child custody assistance				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	--	++	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
Family mediation				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	-	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Other Services</b>				
Case management				
Prior to baseline	--	n.s.	n.s.*	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.*	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.*	n.s.

Service	Indiana	Ohio	New Jersey	New York
<b>Mental health counseling</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Substance use services</b>				
Prior to baseline	-	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Anger management</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>GED/education</b>				
Prior to baseline	n.s.	n.s.	++	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Job training</b>				
Prior to baseline	-	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Financial planning</b>				
Prior to baseline	n.s.	n.s.	n.s.*	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.*	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Life skills education</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Housing assistance</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Support groups</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	n.s.	n.s.	n.s.	n.s.
<b>Spiritual/religious help</b>				
Prior to baseline	n.s.	n.s.	n.s.	n.s.
Between baseline and 9M	n.s.	n.s.	n.s.	n.s.
Between 9M and 18M	++	n.s.	n.s.	n.s.

Service	Indiana	Ohio	New Jersey	New York
<b>Sample Sizes</b>				
Baseline	577 (T=264, C=313)	527 (T=394, C=133)	180 (T=113, C=67)	115 (T=78, C=37)
9M	537 (T=247, C=290)	470 (T=348, C=122)	163 (T=102, C=61)	105 (T=73, C=32)
18M	545 (T=243, C=302)	487 (T=362, C=125)	180 (T=108, C=72)	109 (T=75, C=34)

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

\* As for the males, services for which a difference between the treatment and comparison group should logically be expected based on the program offerings and site-specific design are designated by asterisk in the specific cells.

A significant treatment differential was generally evident for *relationship education classes/workshops* at each site. This differential was evident at baseline (except for the female sample in New Jersey) and nine months (for all sites), which is largely consistent with the nature of OFA-funded demonstration programming and the study design in each site. For women, very few other services were significantly more likely to be reported by the treatment than the comparison group,<sup>62</sup> and some services were *less* likely to be received by the treatment group.<sup>63</sup> Lack of other treatment differentials for women is not surprising given that, in three of the four impact sites, relationship skills education was the only service available to women (see **Chapter 2**). The New Jersey program, in contrast, provided case management, parenting, and financial planning to women—a service menu that does not appear to have led to a detectable treatment differential among the female impact sample in New Jersey.

**Exhibit B-8** shows the proportion of treatment and comparison women in each site who reported having received relationship education classes/workshops at *any* interview wave. As evident from the exhibit, less than half of the treatment women in New Jersey and New York and less than one-third of the treatment women in Ohio reported receiving relationship education at any time period. The Ohio finding is not surprising, because women did not have to attend relationship education classes; but much larger proportions of treatment women in New Jersey and New York should have participated in relationship education (based on the study design). This suggests that the wording of the survey item used to measure receipt of relationship education classes/workshops may not have resonated with respondents.

<sup>62</sup> Treatment women in Ohio were more likely than comparison women to report receiving relationship counseling and child custody assistance between the baseline and 9-month follow-up interviews. Treatment women in Indiana were more likely than comparison women to report receiving spiritual or religious help between the 9-month and 18-month interviews. Finally, treatment women in New Jersey were more likely than comparison women to report having received GED or educational services prior to the baseline interviews (at any point during the male partner's incarceration).

<sup>63</sup> Treatment women in Indiana were less likely than comparison women to have received several services prior to the baseline interviews (during the male partner's incarceration) including parenting classes, case management, substance abuse services, and job training; they were also less likely to report receiving child custody assistance between the baseline and 9-month follow ups. In Ohio, treatment women were less likely to report receiving relationship counseling and parenting classes prior to the baseline interviews.

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**Exhibit B-8. Proportion of Treatment and Comparison Women who Received Relationship Classes/Workshops at any Wave**

	Indiana	Ohio	New Jersey	New York
Treatment group	77%	31%	44%	43%
Comparison group	12%	18%	3%	0%
Significance	+++	++	+++	n.s

+++/++ Statistically significant positive impact at the .01/.05 level.

Note: Data are weighted to adjust for selection bias.

**Exhibits B-9** through **B-12** present the detailed results of the treatment differential analyses for each site, including the weighted means (which reflect the proportions of treatment and comparison group members who reported receiving each service) and effect sizes for the differential.

**Exhibit B-9. Detailed Results of the Treatment Differential Analyses for Indiana Females at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship classes								
Prior to baseline	577	264	313	0.090	0.047	+	0.04	0.69
Between baseline and 9M	537	247	290	0.764	0.072	+++	0.69	3.74
Between 9M and 18M	540	241	299	0.032	0.028	n.s.	0.00	0.13
Relationship counseling								
Prior to baseline	577	264	313	0.025	0.034	n.s.	-0.01	-0.35
Between baseline and 9M	537	247	290	0.047	0.029	n.s.	0.02	0.52
Between 9M and 18M	540	242	298	0.066	0.035	n.s.	0.03	0.67
Parenting classes								
Prior to baseline	576	264	312	0.057	0.119	--	-0.06	-0.80
Between baseline and 9M	432	187	245	0.072	0.086	n.s.	-0.01	-0.20
Between 9M and 18M	440	187	253	0.031	0.062	n.s.	-0.03	-0.74
Child custody assistance								
Prior to baseline	436	187	249	0.022	0.054	n.s.	-0.03	-0.91
Between baseline and 9M	432	187	245	0.012	0.043	--	-0.03	-1.33
Between 9M and 18M	440	187	253	0.014	0.037	n.s.	-0.02	-1.02
Family mediation								
Prior to baseline	577	264	313	0.157	0.175	n.s.	-0.02	-0.13
Between baseline and 9M	537	247	290	0.104	0.140	n.s.	-0.04	-0.34
Between 9M and 18M	541	242	299	0.087	0.104	n.s.	-0.02	-0.19
<b>Other Services</b>								
Case management								
Prior to baseline	575	262	313	0.098	0.156	--	-0.06	-0.54
Between baseline and 9M	537	247	290	0.122	0.175	n.s.	-0.05	-0.42
Between 9M and 18M	540	241	299	0.121	0.122	n.s.	0.00	-0.01
Mental health counseling								
Prior to baseline	577	264	313	0.173	0.185	n.s.	-0.01	-0.08
Between baseline and 9M	537	247	290	0.132	0.144	n.s.	-0.01	-0.10
Between 9M and 18M	541	242	299	0.124	0.123	n.s.	0.00	0.01

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	577	264	313	0.067	0.110	-	-0.04	-0.55
Between baseline and 9M	537	247	290	0.046	0.047	n.s.	0.00	-0.01
Between 9M and 18M	541	242	299	0.047	0.039	n.s.	0.01	0.19
Anger management								
Prior to baseline	577	264	313	0.038	0.043	n.s.	-0.01	-0.14
Between baseline and 9M	537	247	290	0.029	0.024	n.s.	0.00	0.17
Between 9M and 18M	541	242	299	0.016	0.028	n.s.	-0.01	-0.59
GED/education								
Prior to baseline	577	264	313	0.418	0.389	n.s.	0.03	0.12
Between baseline and 9M	537	247	290	0.305	0.287	n.s.	0.02	0.08
Between 9M and 18M	541	242	299	0.277	0.301	n.s.	-0.02	-0.11
Job training								
Prior to baseline	577	264	313	0.149	0.220	-	-0.07	-0.48
Between baseline and 9M	537	247	290	0.107	0.124	n.s.	-0.02	-0.17
Between 9M and 18M	541	242	299	0.102	0.095	n.s.	0.01	0.08
Financial planning								
Prior to baseline	577	264	313	0.094	0.098	n.s.	0.00	-0.04
Between baseline and 9M	537	247	290	0.043	0.056	n.s.	-0.01	-0.28
Between 9M and 18M	541	242	299	0.024	0.053	n.s.	-0.03	-0.82
Life skills education								
Prior to baseline	577	264	313	0.049	0.056	n.s.	-0.01	-0.15
Between baseline and 9M	537	247	290	0.038	0.045	n.s.	-0.01	-0.17
Between 9M and 18M	541	242	299	0.030	0.049	n.s.	-0.02	-0.51
Housing assistance								
Prior to baseline	577	264	313	0.220	0.228	n.s.	-0.01	-0.04
Between baseline and 9M	536	247	289	0.144	0.200	n.s.	-0.06	-0.40
Between 9M and 18M	541	242	299	0.131	0.143	n.s.	-0.01	-0.10

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Support groups								
Prior to baseline	577	264	313	0.105	0.115	n.s.	-0.01	-0.11
Between baseline and 9M	537	247	290	0.080	0.070	n.s.	0.01	0.15
Between 9M and 18M	541	242	299	0.068	0.037	n.s.	0.03	0.65
Spiritual/religious help								
Prior to baseline	577	264	313	0.277	0.239	n.s.	0.04	0.20
Between baseline and 9M	537	247	290	0.247	0.185	n.s.	0.06	0.37
Between 9M and 18M	541	242	299	0.244	0.163	++	0.08	0.51

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-10. Detailed Results of the Treatment Differential Analyses for Ohio Females at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship Classes								
Prior to baseline	525	393	132	0.181	0.087	++	0.09	0.84
Between baseline and 9M	467	345	122	0.280	0.096	+++	0.18	1.30
Between 9M and 18M	484	359	125	0.045	0.080	n.s.	-0.04	-0.63
Relationship counseling								
Prior to baseline	525	393	132	0.027	0.068	-	-0.04	-0.97
Between baseline and 9.	469	347	122	0.037	0.007	++	0.03	1.75
Between 9M and 18M	483	358	125	0.036	0.035	n.s.	0.00	0.03
Parenting classes								
Prior to baseline	525	393	132	0.088	0.155	-	-0.07	-0.64
Between baseline and 9M	422	318	104	0.058	0.066	n.s.	-0.01	-0.14
Between 9M and 18M	440	330	110	0.051	0.059	n.s.	-0.01	-0.16
Child custody assistance								
Prior to baseline	456	344	112	0.060	0.056	n.s.	0.00	0.08
Between baseline and 9M	421	317	104	0.044	0.004	++	0.04	2.41
Between 9M and 18M	440	330	110	0.052	0.059	n.s.	-0.01	-0.12
Family mediation								
Prior to baseline	524	392	132	0.187	0.211	n.s.	-0.02	-0.15
Between baseline and 9M	469	347	122	0.141	0.155	n.s.	-0.01	-0.11
Between 9M and 18M	484	359	125	0.171	0.130	n.s.	0.04	0.33
<b>Other Services</b>								
Case management								
Prior to baseline	524	392	132	0.145	0.176	n.s.	-0.03	-0.23
Between baseline and 9M	469	347	122	0.198	0.201	n.s.	0.00	-0.02
Between 9M and 18M	484	359	125	0.214	0.213	n.s.	0.00	0.01
Mental health counseling								
Prior to baseline	525	393	132	0.188	0.193	n.s.	0.00	-0.03
Between baseline and 9M	469	347	122	0.134	0.165	n.s.	-0.03	-0.24
Between 9M and 18M	484	359	125	0.134	0.091	n.s.	0.04	0.44

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	525	393	132	0.106	0.101	n.s.	0.00	0.05
Between baseline and 9M	469	347	122	0.056	0.044	n.s.	0.01	0.27
Between 9M and 18M	484	359	125	0.038	0.039	n.s.	0.00	-0.03
Anger management								
Prior to baseline	525	393	132	0.050	0.071	n.s.	-0.02	-0.37
Between baseline and 9M	469	347	122	0.022	0.014	n.s.	0.01	0.44
Between 9M and 18M	484	359	125	0.019	0.026	n.s.	-0.01	-0.30
GED/education								
Prior to baseline	525	393	132	0.466	0.469	n.s.	0.00	-0.01
Between baseline and 9M	468	346	122	0.381	0.405	n.s.	-0.02	-0.10
Between 9M and 18M	484	359	125	0.377	0.385	n.s.	-0.01	-0.03
Job training								
Prior to baseline	524	392	132	0.290	0.245	n.s.	0.05	0.23
Between baseline and 9M	469	347	122	0.193	0.178	n.s.	0.02	0.10
Between 9M and 18M	484	359	125	0.167	0.176	n.s.	-0.01	-0.06
Financial planning								
Prior to baseline	524	392	132	0.122	0.121	n.s.	0.00	0.01
Between baseline and 9M	469	347	122	0.063	0.078	n.s.	-0.01	-0.23
Between 9M and 18M	484	359	125	0.098	0.077	n.s.	0.02	0.26
Life skills education								
Prior to baseline	524	392	132	0.068	0.081	n.s.	-0.01	-0.18
Between baseline and 9M	469	347	122	0.041	0.071	n.s.	-0.03	-0.57
Between 9M and 18M	484	359	125	0.022	0.032	n.s.	-0.01	-0.41
Housing assistance								
Prior to baseline	525	393	132	0.250	0.234	n.s.	0.02	0.09
Between baseline and 9M	469	347	122	0.198	0.183	n.s.	0.02	0.10
Between 9M and 18M	484	359	125	0.171	0.128	n.s.	0.04	0.33

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Support groups								
Prior to baseline	524	392	132	0.094	0.070	n.s.	0.02	0.32
Between baseline and 9M	469	347	122	0.082	0.056	n.s.	0.03	0.41
Between 9M and 18.	484	359	125	0.071	0.091	n.s.	-0.02	-0.27
Spiritual/religious help								
Prior to baseline	525	393	132	0.271	0.282	n.s.	-0.01	-0.06
Between baseline and 9M	469	347	122	0.225	0.255	n.s.	-0.03	-0.17
Between 9M and 18M	484	359	125	0.213	0.239	n.s.	-0.03	-0.15

n.s.           No statistically significant impact.  
 +++/++/+    Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/-     Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-11. Detailed Results of the Treatment Differential Analyses for New Jersey Females at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship Classes								
Prior to baseline	180	113	67	0.400	0.000	n.s.	0.40	19.33
Between baseline and 9M	163	102	61	0.254	0.017	+++	0.24	2.97
Between 9M and 18M	172	103	69	0.044	0.030	n.s.	0.01	0.39
Relationship counseling								
Prior to baseline	180	113	67	0.033	0.029	n.s.	0.00	0.12
Between baseline and 9M	162	101	61	0.063	0.018	n.s.	0.04	1.27
Between 9M and 18M	170	101	69	0.069	0.056	n.s.	0.01	0.23
Parenting classes								
Prior to baseline	180	113	67	0.111	0.024	n.s.	0.09	1.64
Between baseline and 9M	137	91	46	0.094	0.130	n.s.	-0.04	-0.37
Between 9M and 18M	146	92	54	0.053	0.069	n.s.	-0.02	-0.27
Child custody assistance								
Prior to baseline	146	92	54	0.020	0.000	n.s.	0.02	17.76
Between baseline and 9M	137	91	46	0.079	0.180	n.s.	-0.10	-0.94
Between 9M and 18M	146	92	54	0.094	0.163	n.s.	-0.07	-0.63
Family mediation								
Prior to baseline	180	113	67	0.128	0.159	n.s.	-0.03	-0.26
Between baseline and 9M	163	102	61	0.110	0.238	-	-0.13	-0.93
Between 9M and 18M	172	103	69	0.087	0.157	n.s.	-0.07	-0.67
<b>Other Services</b>								
Case management								
Prior to baseline	180	113	67	0.088	0.074	n.s.	0.01	0.19
Between baseline and 9M	163	102	61	0.126	0.156	n.s.	-0.03	-0.25
Between 9M and 18M	172	103	69	0.093	0.154	n.s.	-0.06	-0.58
Mental health counseling								
Prior to baseline	180	113	67	0.101	0.122	n.s.	-0.02	-0.21
Between baseline and 9M	163	102	61	0.080	0.100	n.s.	-0.02	-0.25
Between 9M and 18M.	172	103	69	0.095	0.151	n.s.	-0.06	-0.52

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	180	113	67	0.062	0.018	n.s.	0.04	1.27
Between baseline and 9M	163	102	61	0.056	0.046	n.s.	0.01	0.21
Between 9M and 18M	172	103	69	0.071	0.094	n.s.	-0.02	-0.31
Anger management								
Prior to baseline	180	113	67	0.032	0.038	n.s.	-0.01	-0.18
Between baseline and 9M	163	102	61	0.020	0.041	n.s.	-0.02	-0.73
Between 9M and 18M	172	103	69	0.019	0.034	n.s.	-0.02	-0.59
GED/education								
Prior to baseline	180	113	67	0.289	0.159	++	0.13	0.77
Between baseline and 9M	163	102	61	0.196	0.171	n.s.	0.03	0.17
Between 9M and 18M	172	103	69	0.179	0.230	n.s.	-0.05	-0.31
Job training								
Prior to baseline	179	112	67	0.198	0.229	n.s.	-0.03	-0.19
Between baseline and 9M	163	102	61	0.116	0.182	n.s.	-0.07	-0.52
Between 9M and 18M	172	103	69	0.091	0.107	n.s.	-0.02	-0.18
Financial planning								
Prior to baseline	180	113	67	0.049	0.129	n.s.	-0.08	-1.06
Between baseline and 9M	163	102	61	0.065	0.057	n.s.	0.01	0.14
Between 9M and 18M	172	103	69	0.058	0.098	n.s.	-0.04	-0.56
Life skills education								
Prior to baseline	180	113	67	0.051	0.042	n.s.	0.01	0.21
Between baseline and 9M	163	102	61	0.036	0.022	n.s.	0.01	0.50
Between 9M and 18M	172	103	69	0.064	0.069	n.s.	0.00	-0.08
Housing assistance								
Prior to baseline	180	113	67	0.177	0.122	n.s.	0.05	0.43
Between baseline and 9M	163	102	61	0.127	0.197	n.s.	-0.07	-0.53
Between 9M and 18M	172	103	69	0.145	0.219	n.s.	-0.07	-0.50

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Support groups								
Prior to baseline	180	113	67	0.097	0.063	n.s.	0.03	0.46
Between baseline and 9M	163	102	61	0.094	0.081	n.s.	0.01	0.16
Between 9M and 18M	172	103	69	0.084	0.094	n.s.	-0.01	-0.12
Spiritual/religious help								
Prior to baseline	180	113	67	0.276	0.253	n.s.	0.02	0.12
Between baseline and 9M	163	102	61	0.192	0.272	n.s.	-0.08	-0.45
Between 9M and 18M	172	103	69	0.256	0.256	n.s.	0.00	0.00

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit B-12. Detailed Results of the Treatment Differential Analyses for New York Females at Baseline, 9M, and 18M**

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
<b>Family-Related Services</b>								
Relationship Classes								
Prior to baseline	115	78	37	0.179	0.000	+++	0.18	17.85
Between baseline and 9M	105	73	32	0.398	0.000	+++	0.40	18.29
Between 9M and 18M	109	75	34	0.171	0.000	+++	0.17	17.87
Relationship counseling								
Prior to baseline	115	78	37	0.024	0.029	n.s.	-0.01	-0.23
Between baseline and 9M	105	73	32	0.010	0.015	n.s.	-0.01	-0.44
Between 9M and 18M	109	75	34	0.053	0.042	n.s.	0.01	0.25
Parenting classes								
Prior to baseline	115	78	37	0.106	0.037	n.s.	0.07	1.14
Between baseline and 9M	77	51	26	0.093	0.024	n.s.	0.07	1.43
Between 9M and 18M	79	53	26	0.024	0.045	n.s.	-0.02	-0.66
Child custody assistance								
Prior to baseline	81	53	28	0.014	0.084	n.s.	-0.07	-1.89
Between baseline and 9M	77	51	26	0.056	0.000	n.s.	0.06	17.65
Between 9M and 18M	79	53	26	0.035	0.000	n.s.	0.03	17.58
Family mediation								
Prior to baseline	115	78	37	0.096	0.053	n.s.	0.04	0.64
Between baseline and 9M	105	73	32	0.146	0.072	n.s.	0.07	0.80
Between 9M and 18M	109	75	34	0.042	0.076	n.s.	-0.03	-0.62
<b>Other Services</b>								
Case management								
Prior to baseline	115	78	37	0.068	0.034	n.s.	0.03	0.73
Between baseline and 9M	105	73	32	0.030	0.070	n.s.	-0.04	-0.88
Between 9M and 18M	109	75	34	0.030	0.134	n.s.	-0.10	-1.62
Mental health counseling								
Prior to baseline	115	78	37	0.106	0.109	n.s.	0.00	-0.03
Between baseline and 9M	104	72	32	0.032	0.057	n.s.	-0.03	-0.60
Between 9M and 18M	109	75	34	0.075	0.074	n.s.	0.00	0.02

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Substance use services								
Prior to baseline	115	78	37	0.020	0.019	n.s.	0.00	0.02
Between baseline and 9M	105	73	32	0.000	0.000	n.s.	0.00	.
Between 9M and 18M	109	75	34	0.000	0.027	n.s.	-0.03	-17.80
Anger management								
Prior to baseline	115	78	37	0.029	0.079	n.s.	-0.05	-1.05
Between baseline and 9M	105	73	32	0.009	0.015	n.s.	-0.01	-0.48
Between 9M and 18M	109	75	34	0.000	0.028	n.s.	-0.03	-17.80
GED/education								
Prior to baseline	115	78	37	0.290	0.275	n.s.	0.01	0.07
Between baseline and 9M	105	73	32	0.141	0.078	n.s.	0.06	0.66
Between 9M and 18M	109	75	34	0.159	0.219	n.s.	-0.06	-0.39
Job training								
Prior to baseline	115	78	37	0.171	0.093	n.s.	0.08	0.70
Between baseline and 9M	105	73	32	0.180	0.105	n.s.	0.08	0.63
Between 9M and 18M	109	75	34	0.124	0.101	n.s.	0.02	0.23
Financial planning								
Prior to baseline	115	78	37	0.091	0.074	n.s.	0.02	0.22
Between baseline and 9M	105	73	32	0.039	0.015	n.s.	0.02	0.99
Between 9M and 18M	109	75	34	0.044	0.041	n.s.	0.00	0.07
Life skills education								
Prior to baseline	115	78	37	0.087	0.035	n.s.	0.05	0.97
Between baseline and 9M	105	73	32	0.043	0.000	n.s.	0.04	17.69
Between 9M and 18M	109	75	34	0.016	0.000	n.s.	0.02	17.65
Housing assistance								
Prior to baseline	115	78	37	0.137	0.227	n.s.	-0.09	-0.62
Between baseline and 9M	105	73	32	0.126	0.132	n.s.	-0.01	-0.06
Between 9M and 18M	109	75	34	0.155	0.200	n.s.	-0.04	-0.31

Service	Total_N	T_N	C_N	T_Mean	C_Mean	Significance	Estimated Impact	Effect Size
Support groups								
Prior to baseline	115	78	37	0.074	0.033	n.s.	0.04	0.85
Between baseline and 9M	105	73	32	0.063	0.031	n.s.	0.03	0.74
Between 9M and 18M	109	75	34	0.030	0.027	n.s.	0.00	0.13
Spiritual/religious help								
Prior to baseline	115	78	37	0.321	0.189	n.s.	0.13	0.71
Between baseline and 9M	105	73	32	0.279	0.212	n.s.	0.07	0.37
Between 9M and 18M	109	75	34	0.242	0.116	n.s.	0.13	0.89

n.s.           No statistically significant impact.  
 +++/++/+    Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/-     Statistically significant negative impact at the .01/.05/.10 level.



# Appendix C. Detailed Results for Intimate Relationship Status and Quality Outcomes

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This appendix contains statistical findings and supporting details not presented in **Chapter 5**, including

- a description of the measurement of all intimate relationship quality outcomes (pp. C1-C5);
- the summary findings for all intimate relationship quality outcomes based on both the treatment-comparison differences by wave approach and the latent growth curve approach (pp. C5-C46);
- the summary findings for the sensitivity analyses conducted (using both statistical approaches) to explore whether the impact findings were different for couples in which the male partner remained incarcerated during the follow up period than couples in which the male partner had at least some community exposure (pp. C47-C56);
- the factor analysis results for the intimate relationship quality domain (pp. C57-64);
- the results of the adjustments for multiple comparisons within the intimate relationship quality domain (pp. C64-C65); and
- the site-specific, detailed findings for all intimate relationship quality outcomes, based on both statistical approaches (pp. C65-C96).

## Description of Intimate Relationship Quality Outcomes

**Exhibit C-1** describes the measurement of all intimate relationship status and quality outcomes that were analyzed in the impact study. The first set of outcomes are not dependent on the male partner's incarceration status (although they may have different meanings for couples based on this consideration) whereas the remaining outcomes were only measured if the male partner had had any community exposure during the follow-up period (reentry-specific outcomes) or if the male partner had been incarcerated the entire follow-up period (incarceration-specific outcomes).

**Exhibit C-1. Intimate Relationship Quality Outcomes**

Outcome	Description
<b>Outcomes Relevant to All Couples</b>	
Relationship status	Dichotomous indicator reflecting the respondent’s report that the study couple was in an intimate relationship (either married or not married but in an intimate relationship) at the time of the interview (0=no, 1=yes)
Communication skills	Score ranging from 0-12 based on 4 scale items assessing respondent’s report of the frequency (often, sometimes, rarely, or never) with which the couple uses positive communication strategies (e.g., repeating back what the partner says to make sure you understand, stopping and resuming talks when they get out of hand, allowing your partner to finish talking before you respond)
Beliefs about healthy relationships	Score ranging from 0-21 based on 7 scale items assessing respondent’s agreement (strongly agree, agree, disagree, strongly disagree) with statements about healthy relationships. Statements reflected beliefs that relationships can be improved (e.g., “once a couple starts to have problems, it usually is not possible to fix them”, “people can learn to avoid situations where they might be tempted to cheat on their spouse or partner”, “most people can learn to communicate better with their spouse”), work is required to keep a relationship healthy (e.g., “couples should not have to work on their relationships”), different viewpoints should be discussed within a couple (e.g., “when wives and husbands have very different views about important things in the family, it is best to not talk about those things”), and the acceptability of verbal or physical abuse (e.g., “when one spouse says something mean or hurtful, it is OK for the other spouse to say something mean or hurtful back”, “it is sometimes OK for couples to get a little rough physically, like pushing or hitting”).
Conflict resolution skills*	Score ranging from 0-12 based on 4 scale items assessing respondent’s reports of the frequency (often, sometimes, rarely, or never) with which the couple manages potentially harmful issues or arguments (e.g., working out differences, keeping a sense of humor when arguing, not letting small issues escalate)
Happiness with relationship*	Respondent’s rating of how happy he/she is with his/her relationship with study partner on a scale from 1-10
Relationship exclusive	Dichotomous indicator reflecting the respondent’s report that he/she does not currently have any other intimate partners (0=other partners, 1=no other partners)
Fidelity*	Dichotomous indicator reflecting the respondent’s report that he/she has never cheated on survey partner (0=ever cheated, 1=never cheated)

Outcome	Description
Dyadic Adjustment Scale	Score ranging from 1-26 based on 8 scale items measuring several dimensions of relationship quality. Specific items include happiness with relationship (described above) and the frequency (often, sometimes, rarely or never) with which the respondent confides in partner, feels that the relationship is going well, discusses ending the relationship with the partner, works together on things with partner, calmly discusses things with partner, and agrees on displays of affection with partner
Bonding*	Score ranging from 0-9 based on 3 scale items measuring respondent's perceptions of the stability of the couple's relationship (e.g., "you believe you and your survey partner can handle whatever conflicts will arise in the future") and the extent to which the couple has fun together. Respondents' agreement with the items was measured on a Likert-scale (strongly agree, agree, disagree, strongly disagree).
Support*	Score ranging from 0-6 based on 2 scale items measuring respondent's perception of the encouragement he/she receives from partner (measured on a Likert-scale) and the frequency with which the partner understands what he/she is going through (never, rarely, sometimes, often).
Attitudes toward marriage	Single item measured on a Likert-scale reflecting how the extent to which marriage is as an important goal for the respondent. Unmarried respondents were asked how much they agreed with the statement that "Getting and staying married is an important goal for you", while married respondents responded to the statement that "Staying married to your spouse for the rest of your life is an important goal for you."
<b>Reentry-Specific Outcomes</b>	
Coresidence	Dichotomous indicator reflecting that the respondent reported that the study couple has lived together at any point during the reference period (0=no, 1=yes)
Emotional support provided to partner	Score ranging from 0-6 based on 2 scale items measuring respondent's perception of the extent to which he/she has loved and made the partner feel wanted and helped the partner with problems he/she has faced during the reference period (measured on a Likert-scale)
Emotional support received from partner	Score ranging from 0-6 based on 2 scale items measuring respondent's perception of the extent to which the partner has loved and made the respondent feel wanted and helped the respondent with problems he/she has faced during the reference period (measured on a Likert-scale)

Outcome	Description
Partner violence <sup>64</sup> : No physical abuse <i>perpetration</i> *	Dichotomous indicator reflecting that the respondent reported not doing any of the following 5 types of physical abuse to his/her survey partner during the reference period: throwing something; pushing, shoving, hitting, slapping, grabbing; using a knife or gun on the partner; choking, slamming, kicking, burning, or beating; or forcing the partner to have sex
Partner violence: No physical abuse <i>victimization</i> *	Dichotomous indicator reflecting that the respondent reported that the survey partner did not do any of the above 5 types of physical abuse to them during the reference period
Partner violence: No emotional abuse <i>perpetration</i> *	Dichotomous indicator reflecting that the respondent reported not doing any of the following 4 types of emotional abuse to his/her survey partner during the reference period: threatening to hurt the partner; threatening to hurt the partner's children, family members or other loved ones; keeping the partner from seeing or talking with friends or family; keeping money from or making the partner ask for money
Partner violence: No emotional abuse <i>victimization</i> *	Dichotomous indicator reflecting that the respondent reported that the survey partner did not do any of the above 4 types of emotional abuse to them during the reference period
Partner violence: No severe physical or sexual abuse <i>perpetration</i> *	Dichotomous indicator reflecting that the respondent reported not doing any of the following 3 types of severe physical or sexual abuse to his/her survey partner during the reference period: using a knife or gun on the partner; choking, slamming, kicking, burning, or beating; or forcing the partner to have sex
Partner violence: No severe physical or sexual abuse <i>victimization</i>	Dichotomous indicator reflecting that the respondent reported that the survey partner did not do any of the above 3 types of severe physical/sexual abuse to them during the reference period
Partner violence: No frequent emotional abuse <i>perpetration</i> *	Dichotomous indicator reflecting that the respondent did not report perpetrating 6 or more incidents of emotional abuse (any of the 3 types of emotional abuse listed above) against survey partner during the reference period
Partner violence: No frequent emotional abuse <i>victimization</i>	Dichotomous indicator reflecting that the respondent did not report experiencing 6 or more incidents of emotional abuse (any of the 3 types of emotional abuse listed above) from survey partner during the reference period

<sup>64</sup> The partner violence measures were based on a shortened version of the revised Conflict Tactics Scale. The items elicited information on the number of times each respondent had perpetrated a given behavior and the number of times he or she was victimized by his or her survey partner during the reference period.

Outcome	Description
Partner violence: No frequent physical abuse <i>perpetration</i> *	Dichotomous indicator reflecting that the respondent did not report perpetrating 6 or more incidents of physical abuse (any of the 5 types of physical abuse listed above) against survey partner during the reference period
Partner violence: No frequent physical abuse <i>victimization</i> *	Dichotomous indicator reflecting that the respondent did not report experiencing 6 or more incidents of physical abuse (any of the 5 types of physical abuse listed above) from survey partner during the reference period
<b>Incarceration-Specific Outcomes</b>	
Any phone calls between partners	Dichotomous indicator reflecting that the respondent reported that he/she currently talks on the phone with partner at all
Frequency of phone calls between partners*	Frequency with which respondent reports that he/she currently talks on the phone with partner (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times per week)
Any personal visits between partners*	Dichotomous indicator reflecting that the respondent reported that he/she currently receives personal visits from/makes personal visits to incarcerated partner
Frequency of personal visits between partners*	Frequency with which respondent reports that he/she currently receives/makes personal visits to incarcerated partner (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times per week)

Note: \* indicates outcomes that were only measured for respondents whose relationship with the survey partner had ever been classified as intimate (as opposed to coparenting only) by either member of the study couple at a current or previous interview wave.

## Summary Findings

### *Treatment-Comparison Differences by Wave*

#### *Total Male Sample*

*Outcomes Relevant to All Couples.* Summary findings for treatment-comparison differences by wave (based on data weighted to adjust for selection and attrition bias) among the total male sample for intimate relationship quality outcomes that are not dependent on incarceration status are shown in **Exhibit C-2**.

*Reentry-Specific Outcomes.* Summary findings for treatment-comparison differences on outcomes only relevant to couples in which the male partner had any community exposure during the follow-up period are shown in **Exhibit C-3**.

*Incarceration-Specific Outcomes.* Summary indicators of the results of the comparisons for intimate relationship quality outcomes only relevant to couples in which the male partner remained incarcerated during the follow-up period are shown in **Exhibit C-4**.

**Exhibit C-2. Treatment-Comparison Differences in Intimate Relationship Quality Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Relationship status (romantically involved)								
9M	+++	0.94	n.s.	-0.37	-	-0.81	n.s.	-0.26
18M	+++	0.66	n.s.	-0.12	n.s.	-0.59	n.s.	0.46
34M	+++	0.61	n.s.	-0.06	n/a		n/a	
Communication skills								
9M	n.s.	0.07	n.s.	-0.07	--	-0.51	n.s.	0.10
18M	n.s.	-0.01	n.s.	0.02	n.s.	-0.03	n.s.	0.18
34M	n.s.	0.04	n.s.	-0.05	n/a		n/a	
Healthy relationship beliefs scale								
9M	n.s.	0.17	n.s.	-0.32	n.s.	0.00	n.s.	-0.07
18M	n.s.	0.03	n.s.	0.06	n.s.	0.03	n.s.	0.19
34M	n.s.	0.09	n.s.	-0.13	n/a		n/a	
Conflict resolution skills								
9M	n.s.	0.08	n.s.	-0.19	n.s.	0.10	n.s.	0.09
18M	n.s.	-0.02	n.s.	-0.06	n.s.	0.06	n.s.	0.18
34M	n.s.	0.02	n.s.	-0.18	n/a		n/a	
Happiness with relationship								
9M	+++	0.39	n.s.	0.07	n.s.	-0.38	n.s.	0.09
18M	+++	0.33	n.s.	-0.06	n.s.	-0.08	n.s.	0.03
34M	n.s.	0.14	n.s.	-0.03	n/a		n/a	
Relationship exclusive								
9M	+	0.60	n.s.	-0.28	n.s.	0.15	n.s.	-0.80
18M	+++	0.73	n.s.	-0.23	n.s.	0.00	+	1.70
34M	n.s.	0.24	n.s.	-0.26	n/a		n/a	
Fidelity								
9M	n.s.	0.15	n.s.	-0.09	n.s.	-0.20	n.s.	0.27
18M	n.s.	0.23	n.s.	0.12	n.s.	-0.25	+	1.08
34M	n.s.	0.24	n.s.	0.21	n/a		n/a	
Dyadic Adjustment Scale								
9M	++	0.34	n.s.	-0.16	n.s.	-0.27	n.s.	0.09
18M	++	0.30	n.s.	-0.05	n.s.	-0.16	n.s.	0.20
34M	+	0.28	n.s.	-0.20	n/a		n/a	
Bonding								

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
9M	+++	0.37	--	-0.30	n.s.	-0.18	n.s.	0.21
18M	+++	0.24	--	-0.32	n.s.	-0.12	n.s.	0.44
34M	+++	0.28	n.s.	-0.21	n/a		n/a	
Support								
9M	+++	0.28	--	-0.34	n.s.	-0.16	n.s.	0.20
18M	++	0.21	n.s.	-0.10	-	-0.35	n.s.	0.27
34M	++	0.26	n.s.	-0.17	n/a		n/a	
Attitudes toward marriage (for unmarried respondents)								
9M	n.s.	0.03	n.s.	-0.13	n.s.	-0.11	---	-0.24
18M	+	0.12	n.s.	0.03	n.s.	-0.18	n.s.	-0.10
34M	n.s.	-0.13	n.s.	-0.01	n/a		n/a	
Attitudes toward marriage (for married respondents)								
9M	n.s.	0.62	--	-0.42	n.s.	0.09	n.s.	0.11
18M	++	0.59	-	-0.78	-	-6.25	+++	0.51
34M	++	0.67	n.s.	-0.73	n/a		n/a	
Sample sizes								
9M	592 (T=249, C=343)	592 (T=249, C=343)	516 (T=387, C=129)	516 (T=387, C=129)	175 (T=108, C=67)	175 (T=108, C=67)	145 (T=102, C=43)	145 (T=102, C=43)
18M	564 (T=242, C=322)	564 (T=242, C=322)	502 (T=361, C=141)	502 (T=361, C=141)	172 (T=107, C=65)	172 (T=107, C=65)	135 (T=98, C=37)	135 (T=98, C=37)
34M	539 (T=229, C=310)	539 (T=229, C=310)	494 (T=359, C=135)	494 (T=359, C=135)	n/a	n/a	n/a	n/a

N/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-3. Treatment-Comparison Differences in Reentry-Specific, Intimate Relationship Quality Outcomes for Released Men: Partner Violence, Coresidence, and Emotional Support during Reentry**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Coresidence								
9M	n.s.	-0.46	n.s.	0.27	-	-0.98		
18M	+++	0.97	n.s.	-0.06	n.s.	-0.41	n.s.	0.87
34M	+++	0.77	n.s.	0	n/a		n/a	
Emotional support provided to partner								
9M	++	0.71	-	-1.55	n.s.	-0.16		
18M	n.s.	0.25	n.s.	-1.25				
34M	++	1.03	n.s.	1.39	n/a		n/a	
Emotional support received from partner								
9M	n.s.	0.17	n.s.	-0.94	n.s.	-0.22		
18M	+	0.74	n.s.	-0.85				
34 month	++	1.29	n.s.	1.4	n/a		n/a	
No physical abuse: perpetration								
9M	n.s.	0.07	n.s.	-0.15	n.s.	0.19		
18M	n.s.	-0.01	n.s.	0.48	n.s.	0.09	n.s.	11.2
34M	n.s.	-0.22	n.s.	-0.53	n/a		n/a	
No physical abuse: victimization								
9M	n.s.	0.35	n.s.	0.9	n.s.	0.57		
18M	n.s.	0.43	n.s.	0.21	n.s.	0.66	n.s.	0.58
34M	n.s.	0.07	n.s.	-0.15	n/a		n/a	
No emotional abuse: perpetration								
9M	n.s.	0.21	n.s.	-1.17	n.s.	0.69		
18M	n.s.	-0.54	n.s.	-0.4	+	0.93	n.s.	0.25
34M	n.s.	0.19	n.s.	0.05	n/a		n/a	
No emotional abuse: victimization								
9M	n.s.	0.39	n.s.	-0.52	n.s.	-0.02		
18M	n.s.	-0.15	n.s.	-0.16	n.s.	0.33	n.s.	0.49
34M	n.s.	0.04	n.s.	0.05	n/a		n/a	
No severe physical or sexual abuse: perpetration								
9M	n.s.	-1.69	n.s.	-10.79	++	3.1		
18M	n.s.	-0.74	++	2.53	++	2.08	n.s.	
34M	n.s.	0.26	n.s.	0.38	n/a		n/a	
No severe physical or sexual abuse: victimization								
9M	n.s.	-0.58	n.s.	-10.98	n.s.	0.7		

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
18M	n.s.	-0.35	n.s.	0.08	n.s.	2.04	n.s.	-0.96
34M	n.s.	-0.68	n.s.	-0.14	n/a	*	n/a	*
No frequent emotional abuse: perpetration								
9M	n.s.	9.75	n.s.	-11.53	n.s.	10.63	*	*
18M	n.s.	-0.71	n.s.	0.13	n.s.	1.09	n.s.	-10.29
34M	n.s.	-0.33	n.s.	-1.01	n/a	*	n/a	*
No frequent emotional abuse: victimization								
9M	n.s.	0.09	n.s.	-0.13	n.s.	0.01	*	*
18M	n.s.	-0.21	n.s.	0.37	n.s.	0.36	n.s.	0.32
34M	n.s.	0.23	n.s.	0.3	n/a	*	n/a	*
No frequent physical abuse: perpetration								
9M	n.s.	-0.86	n.s.	-10	n.s.	9.72	*	*
18M	n.s.	-0.38	n.s.	0.43	n.s.	23.11	n.s.	9.46
34M	n.s.	1.08	n.s.	-0.09	n/a	*	n/a	*
No frequent physical abuse: victimization								
9M	n.s.	-0.5	n.s.	-11.92	n.s.	-11.07	*	*
18M	n.s.	0.99	n.s.	0.73	n.s.	0.36	n.s.	-11.74
34M	n.s.	0.23	n.s.	-0.1	n/a	*	n/a	*
Sample sizes								
9M	139 (T=67, C=72)	139 (T=67, C=72)	121 (T=102, C=19)	121 (T=102, C=19)	145 (T=84, C=61)	145 (T=84, C=61)	16 (T=8, C=8)	16 (T=8, C=8)
18M	251 (T=111, C=140)	251 (T=111, C=140)	205 (T=153, C=52)	205 (T=153, C=52)	157 (T=96, C=61)	157 (T=96, C=61)	32 (T=15, C=17)	32 (T=15, C=17)
34M	369 (T=161, C=208)	369 (T=161, C=208)	277 (T=214, C=63)	277 (T=214, C=63)	n/a	n/a	n/a	n/a

\* Indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++ / ++++ Statistically significant positive impact at the .01/.05/.10 level.

--- / --- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-4. Treatment-Comparison Differences in Incarceration-Specific, Intimate Relationship Quality Outcomes for Still-Incarcerated men: In-prison Contact with Partner**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Any phone calls between partners								
9M	++	0.6	-	-0.7	*	*	n.s.	-1.01
18M	++	0.64	n.s.	0.35			n.s.	-12.51
34M	+	0.67	n.s.	-0.08	n/a	*	n/a	*
Frequency of phone calls between partners								
9M	++	0.42	--	-0.21	*	*	n.s.	-0.47
18M	++	0.53	n.s.	0.04			n.s.	-0.58
34M	++	1.02	n.s.	-0.34	n/a	*	n/a	*
Any personal visits between partners								
9M	+++	1.22	n.s.	-0.48	*	*	n.s.	0.51
18M	+++	0.89	n.s.	0.03			n.s.	0.71
34M	+	0.68	n.s.	0.12	n/a	*	n/a	*
Frequency of personal visits between partners								
9M	+++	0.79	n.s.	-0.06	*	*	n.s.	0.55
18M	++	0.71	n.s.	0			n.s.	0.83
34M	n.s.	0.91	n.s.	-0.05	n/a	*	n/a	*
Sample sizes								
9M	428 (T=180, C=248)	428 (T=180, C=248)	361 (T=258, C=103)	361 (T=258, C=103)	26 (T=20, C=6)	26 (T=20, C=6)	123 (T=89, C=34)	123 (T=89, C=34)
18M	288 (T=126, C=162)	288 (T=126, C=162)	261 (T=179, C=82)	261 (T=179, C=82)	8 (T=6, C=2)	8 (T=6, C=2)	99 (T=79, C=20)	99 (T=79, C=20)
34M	148 (T=63, C=85)	148 (T=63, C=85)	187 (T=124, C=63)	187 (T=124, C=63)	n/a	n/a	n/a	n/a

\* Indicates insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### Total Female Sample

*Outcomes Relevant to All Couples.* Summary findings for intimate relationship quality outcomes relevant to all couples among the total female sample are shown in **Exhibit C-5**.

*Reentry-Specific Outcomes.* **Exhibit C-6** shows summary results for the intimate relationship quality outcomes that are only relevant for women whose partners had any community exposure time during the follow-up wave.

*Incarceration-Specific Outcomes.* Finally, **Exhibit C-7** summarizes treatment effects for women for intimate relationship quality variables only relevant to women whose partners were incarcerated during the follow-up period.

**Exhibit C-5. Treatment-Comparison Differences in Intimate Relationship Quality Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Relationship status (romantically involved)								
9M	n.s.	0.31	n.s.	0.17	n.s.	-0.16	n.s.	-0.01
18M	+++	0.56	n.s.	0.13	n.s.	-0.05	n.s.	0.22
34M	++	0.48	n.s.	-0.25	n/a		n/a	
Communication skills								
9M	+	0.13	n.s.	0.07	n.s.	-0.26	n.s.	0.25
18M	n.s.	0.06	n.s.	-0.11	n.s.	-0.14	n.s.	0.47
34M	n.s.	0.16	n.s.	0.06	n/a		n/a	
Healthy relationship beliefs scale								
9M	n.s.	0.33	n.s.	-0.07	n.s.	0.06	n.s.	0.16
18M	n.s.	0.24	n.s.	0.04	n.s.	0.49	n.s.	0.16
34M	n.s.	0.13	-	-0.17	n/a		n/a	
Conflict resolution skills								
9M	+	0.17	n.s.	-0.1	n.s.	0.05	n.s.	0.17
18M	+	0.19	n.s.	-0.14	n.s.	-0.15	n.s.	0.15
34M	n.s.	0.03	n.s.	-0.04	n/a		n/a	
Happiness with relationship								
9M	++	0.28	n.s.	-0.08	n.s.	-0.13	n.s.	0.25
18M	n.s.	0.16	n.s.	0.12	n.s.	-0.18	n.s.	0.28
34M	n.s.	0.18	n.s.	-0.13	n/a		n/a	
Relationship exclusive								
9M	n.s.	0.37	n.s.	0.36	n.s.	-0.46	n.s.	1.58
18M	n.s.	0.37	n.s.	0.02	n.s.	-0.16	n.s.	0.33
34M	n.s.	0.36	n.s.	0.08	n/a		n/a	

The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Fidelity								
9M	n.s.	-0.27	n.s.	-0.22	n.s.	0.23	n.s.	-0.69
18M	n.s.	-0.15	n.s.	-0.3	n.s.	0.04	n.s.	0.77
34M	n.s.	0.3	n.s.	0.44	n/a		n/a	
Dyadic Adjustment Scale								
9M	++	0.33	n.s.	-0.06	n.s.	-0.08	n.s.	0.35
18M	+	0.3	n.s.	0.05	n.s.	-0.3	n.s.	0.31
34M	++	0.33	n.s.	-0.17	n/a		n/a	
Bonding								
9M	+	0.3	n.s.	-0.09	n.s.	-0.09	n.s.	0.32
18M	n.s.	0.28	n.s.	-0.07	n.s.	-0.43	n.s.	0.33
34M	+++	0.38	n.s.	-0.09	n/a		n/a	
Support								
9M	++	0.24	-	-0.22	n.s.	-0.26	n.s.	0.23
18M	+++	0.29	n.s.	-0.15	n.s.	-0.41	n.s.	0.41
34M	++	0.27	n.s.	-0.13	n/a		n/a	
Attitudes toward marriage (for unmarried respondents)								
9M	n.s.	0.09	-	-0.08	n.s.	-0.03	n.s.	-0.32
18M	n.s.	0	n.s.	0.06	n.s.	0.08	n.s.	-0.38
34M	--	-0.15	n.s.	-0.06	n/a		n/a	
Attitudes toward marriage (for married respondents)								
9M	++	0.98	n.s.	0.64	n.s.	-0.48	n.s.	-0.1
18M	++	0.67	n.s.	-0.2	n.s.	-0.44	n.s.	0.13
34M	n.s.	0.58	n.s.	-0.74	n/a		n/a	
Sample sizes								
9M	592 (T=249, C=343)	592 (T=249, C=343)	516 (T=387, C=129)	516 (T=387, C=129)	175 (T=108, C=67)	175 (T=108, C=67)	145 (T=102, C=43)	145 (T=102, C=43)
18M	564 (T=242, C=322)	564 (T=242, C=322)	502 (T=361, C=141)	502 (T=361, C=141)	172 (T=107, C=65)	172 (T=107, C=65)	135 (T=98, C=37)	135 (T=98, C=37)
34M	539 (T=229, C=310)	539 (T=229, C=310)	494 (T=359, C=135)	494 (T=359, C=135)	n/a	n/a	n/a	n/a

n/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-6. Treatment-Comparison Differences in Reentry-Specific, Intimate Relationship Quality Outcomes for Women Whose Partner was Released: Partner Violence, Co-residence, and Emotional Support during Reentry**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Coresidence								
9M	n.s.	-0.18	n.s.	0.03	-	-1.02		
18M	n.s.	0.17	n.s.	0.4	n.s.	-0.25	n.s.	0.69
34M	+++	0.74	n.s.	-0.12	n/a		n/a	
Emotional support provided to partner								
9M	n.s.	0.36	n.s.	-0.46	n.s.	-0.11		
18M	n.s.	0.53	n.s.	0.21				
34M	n.s.	0.57	n.s.	-0.39	n/a		n/a	
Emotional support received from partner								
9M	n.s.	0.05	n.s.	-0.74	n.s.	0.05		
18M	n.s.	0.38	n.s.	0.46				
34 month	n.s.	0.48	+	2.45	n/a		n/a	
No physical abuse: perpetration								
9M	n.s.	0.1	n.s.	0.02	n.s.	-0.67		
18M	n.s.	-0.17	-	-1.14	n.s.	-0.08	n.s.	2.46
34M	n.s.	-0.24	n.s.	0.17	n/a		n/a	
No physical abuse: victimization								
9M	n.s.	-0.01	n.s.	-1.24	n.s.	-0.46		
18M	n.s.	-0.16	n.s.	-0.07	n.s.	-0.23	n.s.	-0.21
34M	n.s.	-0.37	n.s.	0.36	n/a		n/a	
No emotional abuse: perpetration								
9M	n.s.	-0.35	n.s.	0.29	+	0.99		
18M	n.s.	0.02	--	-1.67	n.s.	-0.5	n.s.	1.8
34M	n.s.	-0.35	n.s.	0.41	n/a		n/a	
No emotional abuse: victimization								
9M	n.s.	-0.11	-	-1.18	n.s.	0.73		
18M	n.s.	-0.04	n.s.	-0.48	n.s.	-0.44	n.s.	-0.29
34M	n.s.	-0.12	n.s.	0.74	n/a		n/a	
No severe physical or sexual abuse: perpetration								
9M	n.s.	-0.04	n.s.	-12.62	n.s.	-1.73		
18M	n.s.	1.75	n.s.	-0.58	n.s.	-1.37	n.s.	
34M	n.s.	0.23	+	1.13	n/a		n/a	

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
No severe physical or sexual abuse: victimization								
9M	n.s.	-0.49	-	-1.95	n.s.	-0.29	*	*
18M	n.s.	0.84	n.s.	-0.73	-	-1.14	n.s.	9.2
34M	n.s.	0.05	n.s.	0.73	n/a	*	n/a	*
No frequent emotional abuse: perpetration								
9M	n.s.	0.28	n.s.	-0.28	+++	1.93	*	*
18M	n.s.	0.93	n.s.	-12.76	n.s.	0.02	n.s.	
34M	n.s.	-0.37	n.s.	0.08	n/a	*	n/a	*
No frequent emotional abuse: victimization								
9M	n.s.	-0.06	n.s.	-1.29	n.s.	-0.07	*	*
18M	n.s.	0.39	n.s.	-0.6	-	-1.13	n.s.	-0.58
34M	-	-0.8	n.s.	0.15	n/a	*	n/a	*
No frequent physical abuse: perpetration								
9M	n.s.	-1.6	n.s.	-1.44	n.s.	-1.68	*	*
18M	n.s.	0.37	n.s.	-1.1	n.s.	-0.63	n.s.	-16.27
34M	n.s.	-0.46	n.s.	0.6	n/a	*	n/a	*
No frequent physical abuse: victimization								
9M	n.s.	-1.75	n.s.	-12.72	n.s.	-0.36	*	*
18M	n.s.	0.57	n.s.	-0.91	n.s.	-0.38	n.s.	
34M	-	-0.86	n.s.	0.58	n/a	*	n/a	*
Sample sizes								
9M	120 (T=62, C=58)	120 (T=62, C=58)	105 (T=86, C=19)	105 (T=86, C=19)	128 (T=78, C=50)	128 (T=78, C=50)	14 (T=7, C=7)	14 (T=7, C=7)
18M	233 (T=113, C=120)	233 (T=113, C=120)	185 (T=144, C=41)	185 (T=144, C=41)	154 (T=90, C=64)	154 (T=90, C=64)	28 (T=15, C=13)	28 (T=15, C=13)
34M	346 (T=163, C=183)	346 (T=163, C=183)	265 (T=206, C=59)	265 (T=206, C=59)	n/a	n/a	n/a	n/a

\* Indicates insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-7. Treatment-Comparison Differences in Incarceration-Specific, Relationship Quality Outcomes for Women whose Partners are Still Incarcerated: In-prison Contact between Partners**

Outcomes (non-core)	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Any phone calls between partners								
9M	n.s.	0.43	n.s.	-0.43	n.s.	-12.11	n.s.	-1.23
18M	n.s.	-0.03	n.s.	0.27			n.s.	-0.27
34M	n.s.	0.52	n.s.	-0.33	n/a	*	n/a	*
Frequency of phone calls between partners								
9M	n.s.	0.36	-	-0.23	n.s.	-1.3	n.s.	0.35
18M	n.s.	0.32	n.s.	-0.01			n.s.	0.46
34M	n.s.	0.73	-	-0.64	n/a	*	n/a	*
Any personal visits between partners								
9M	++	0.65	n.s.	-0.48	n.s.	-11.24	++	2.94
18M	n.s.	0.1	n.s.	0.28			n.s.	0.48
34M	n.s.	0.15	n.s.	-0.26	n/a	*	n/a	*
Frequency of personal visits between partners								
9M	++	0.57	--	-0.2	n.s.	-0.6	++	1.33
18M	n.s.	0.49	n.s.	-0.09			n.s.	1.31
34M	n.s.	0.51	n.s.	-0.35	n/a	*	n/a	*
Sample sizes								
9M	402 (T=184, C=218)	402 (T=184, C=218)	334 (T=240, C=94)	334 (T=240, C=94)	33 (T=22, C=11)	33 (T=22, C=11)	87 (T=64, C=23)	87 (T=64, C=23)
18M	289 (T=126, C=163)	289 (T=126, C=163)	270 (T=194, C=76)	270 (T=194, C=76)	16 (T=11, C=5)	16 (T=11, C=5)	77 (T=57, C=20)	77 (T=57, C=20)
34M	159 (T=69, C=90)	159 (T=69, C=90)	196 (T=137, C=59)	196 (T=137, C=59)	n/a	n/a	n/a	n/a

\* Indicates insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### ***Differences in Treatment-Comparison Couple Trajectories over Time***

*Outcomes Relevant to All Couples.* Summary findings for the latent growth curve analyses comparing differences in the trajectories of treatment and comparison couples over time are shown in **Exhibit C-8**. The graphical illustration of the slopes for these outcomes is shown in **Exhibits C-9** through **C-20**. Overall, the slopes suggests that for most groups in each site, the general pattern is one of deterioration over time.

**Exhibit C-8. Treatment-Comparison (T-C) Differences in Intimate Relationship Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Relationship status	++	0.089	+++	0.176	n.s.	0.007	n.s.	-0.031	n.s.	-0.064	n.s.	-0.006	n.s.	-0.001	n.s.	0.004
Communication skills	n.s.	0.002	n.s.	0.03	—	-0.089	++	0.086	—	-0.139	n.s.	0.076	n.s.	0.035	n.s.	0.013
Healthy relationship beliefs	+++	0.137	n.s.	-0.049	n.s.	-0.042	n.s.	0.015	n.s.	0.014	n.s.	0.025	n.s.	0.057	n.s.	-0.071
Conflict resolution skills	n.s.	0.036	n.s.	-0.027	—	-0.094	n.s.	0.029	-	-0.097	+	0.103	n.s.	0.019	n.s.	0.031
Happiness with relationship (0-10)	+++	0.191	n.s.	-0.039	n.s.	-0.009	n.s.	-0.019	n.s.	-0.076	n.s.	0.001	n.s.	0.068	n.s.	-0.007
Relationship exclusive	+++	0.188	++	0.079	n.s.	0.027	n.s.	-0.054	n.s.	-0.042	n.s.	0.028	n.s.	-0.009	n.s.	0.094
Fidelity	n.s.	0.042	n.s.	0.052	n.s.	-0.054	+++	0.146	n.s.	-0.004	n.s.	-0.065	n.s.	0.021	n.s.	0.067
Dyadic Adjustment Scale	+++	0.21	n.s.	0.025	n.s.	-0.034	n.s.	-0.043	n.s.	-0.095	n.s.	-0.058	n.s.	0.019	n.s.	0.034
Bonding	+++	0.138	++	0.089	-	-0.076	n.s.	-0.037	n.s.	-0.084	n.s.	-0.034	n.s.	0.068	n.s.	0.089
Support	++	0.098	+++	0.106	--	-0.082	n.s.	-0.011	n.s.	-0.044	n.s.	-0.085	n.s.	0.039	n.s.	0.096
Attitudes toward marriage (married respondents)	++	0.144	++	0.121	n.s.	-0.046	--	-0.155	n.s.	0.045	--	-0.283	NoC	NoC	NoC	NoC
Attitudes toward marriage (unmarried respondents)	+++	0.123	---	-0.109	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Sample sizes	688	688	688	688	686	686	686	686	309	309	309	309	201	201	201	201

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit C-9. Trajectories for Relationship Status Based on Latent Growth Curve Model, by Site and Group

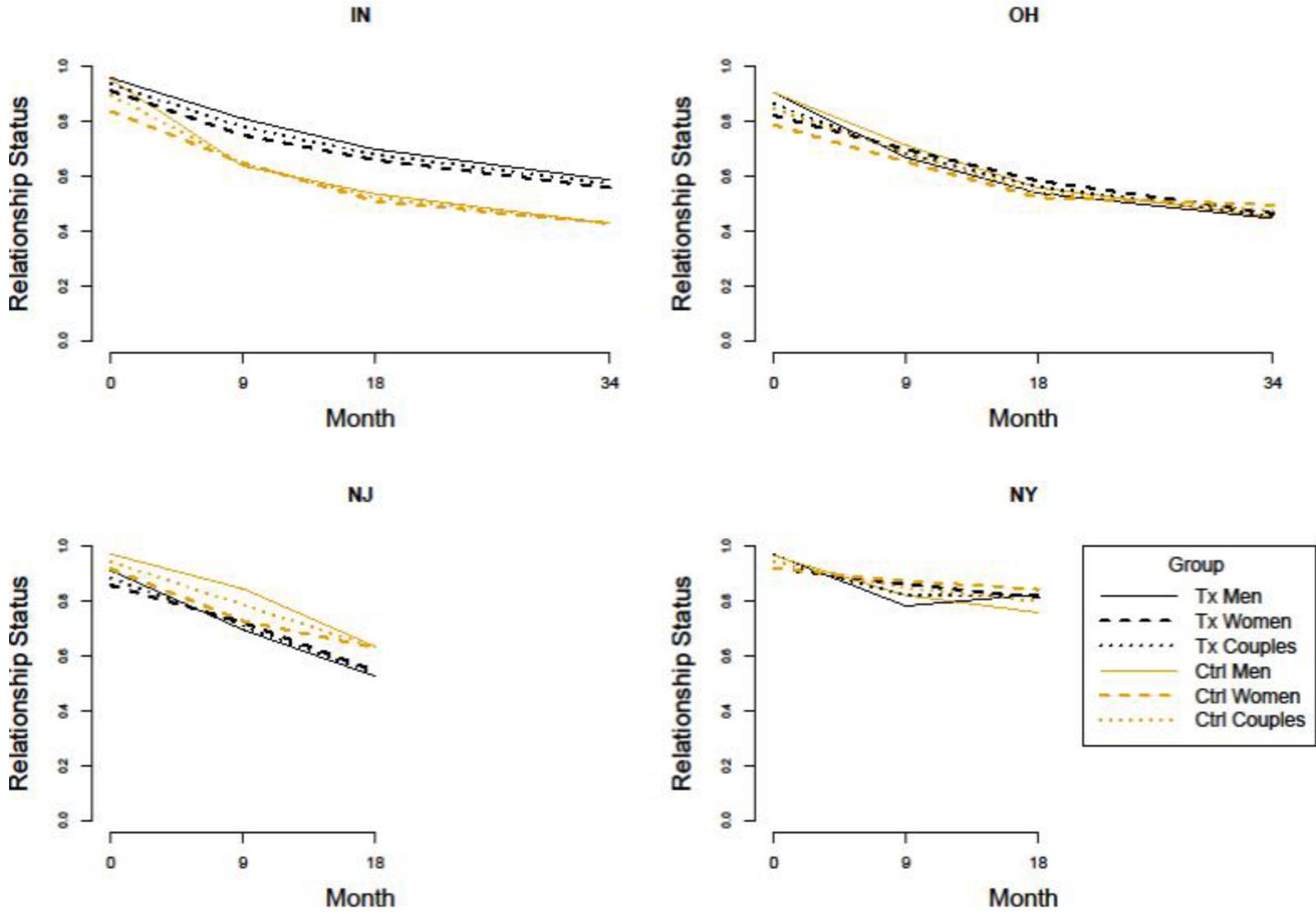


Exhibit C-10. Trajectories for Communication Skills Based on Latent Growth Curve Model, by Site and Group

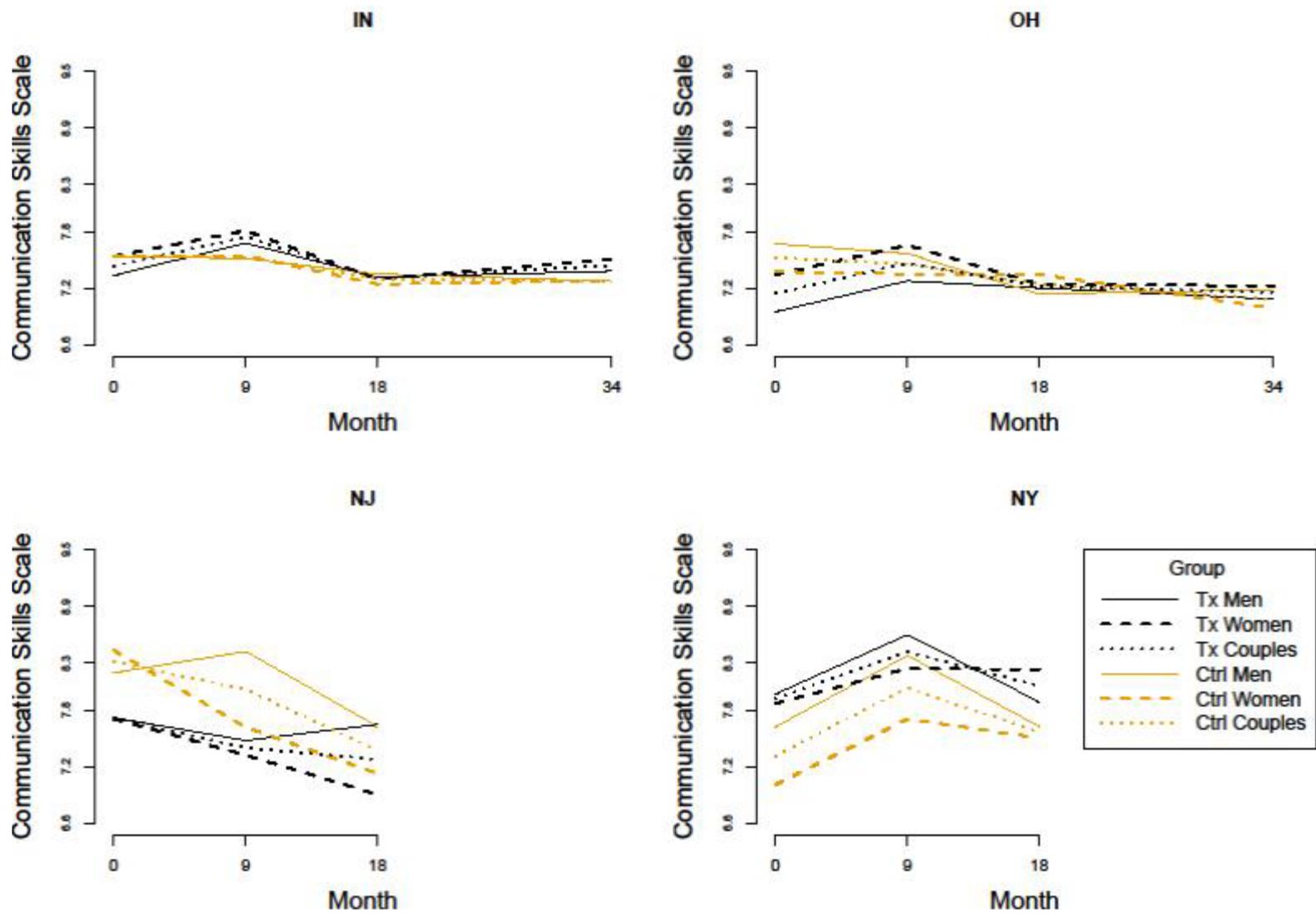


Exhibit C-11. Trajectories for Healthy Relationship Beliefs Based on Latent Growth Curve Model, by Site and Group

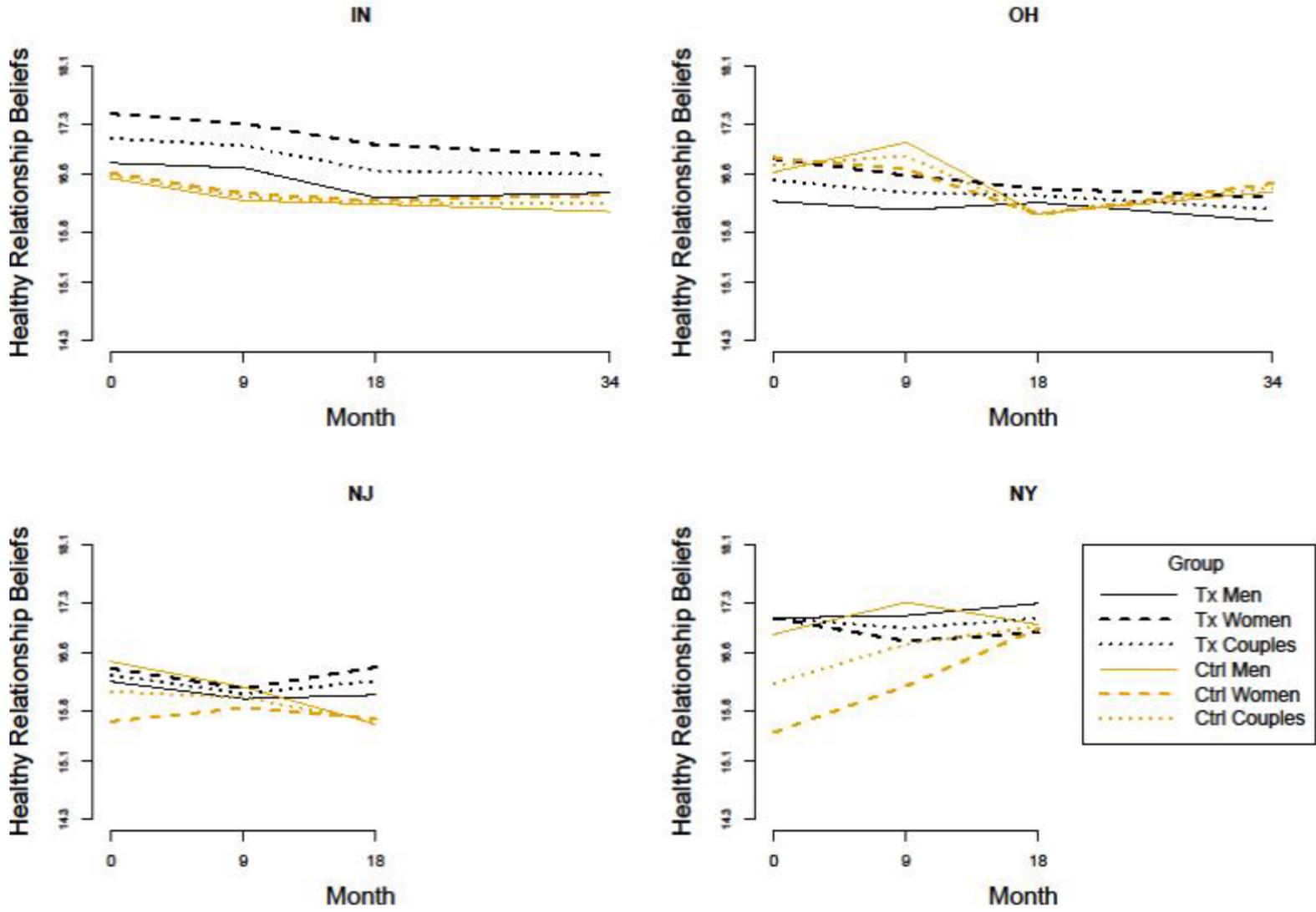


Exhibit C-12. Trajectories for Conflict Resolution Skills Based on Latent Growth Curve Model, by Site and Group

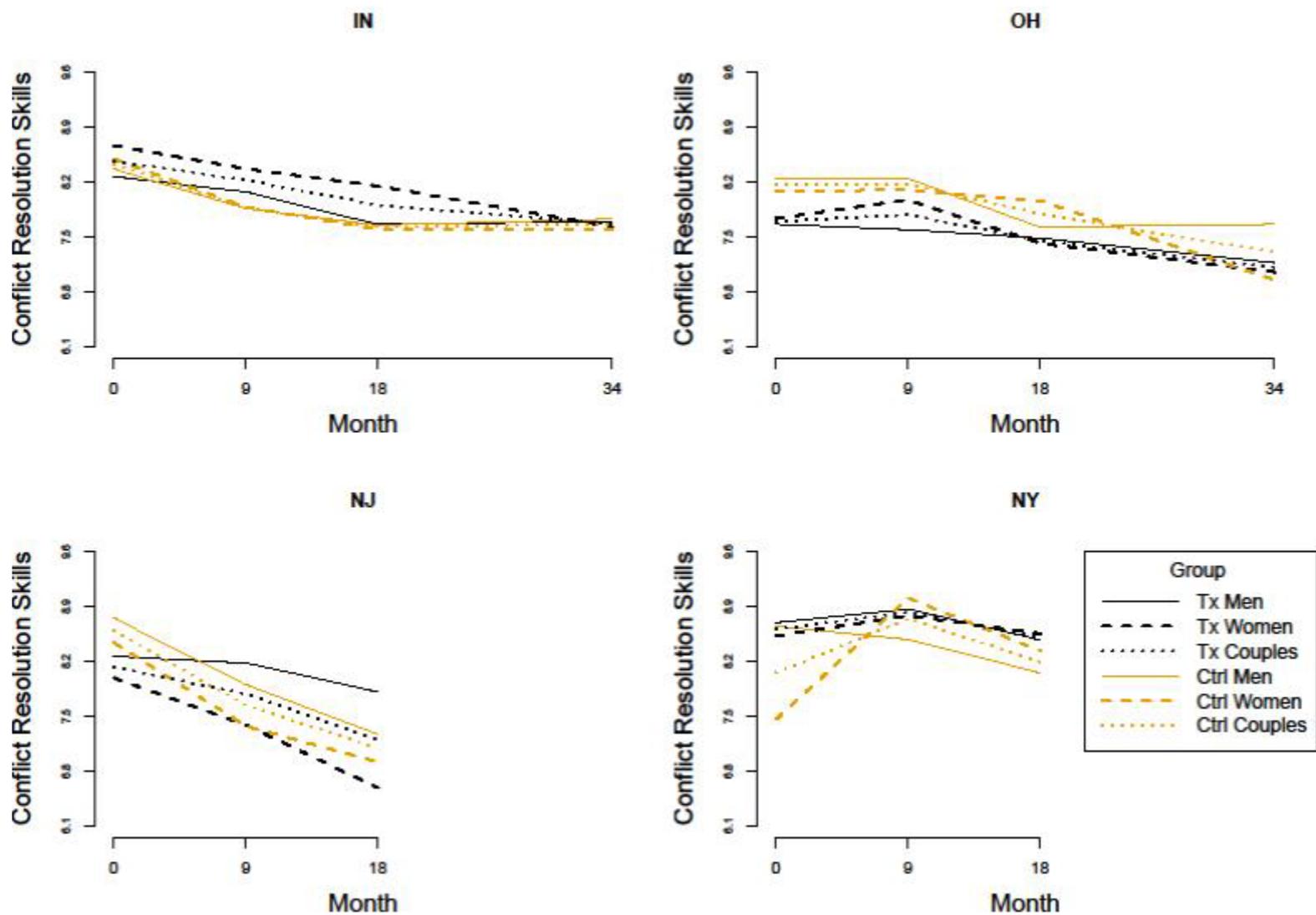


Exhibit C-13. Trajectories for Happiness with Relationship Based on Latent Growth Curve Model, by Site and Group

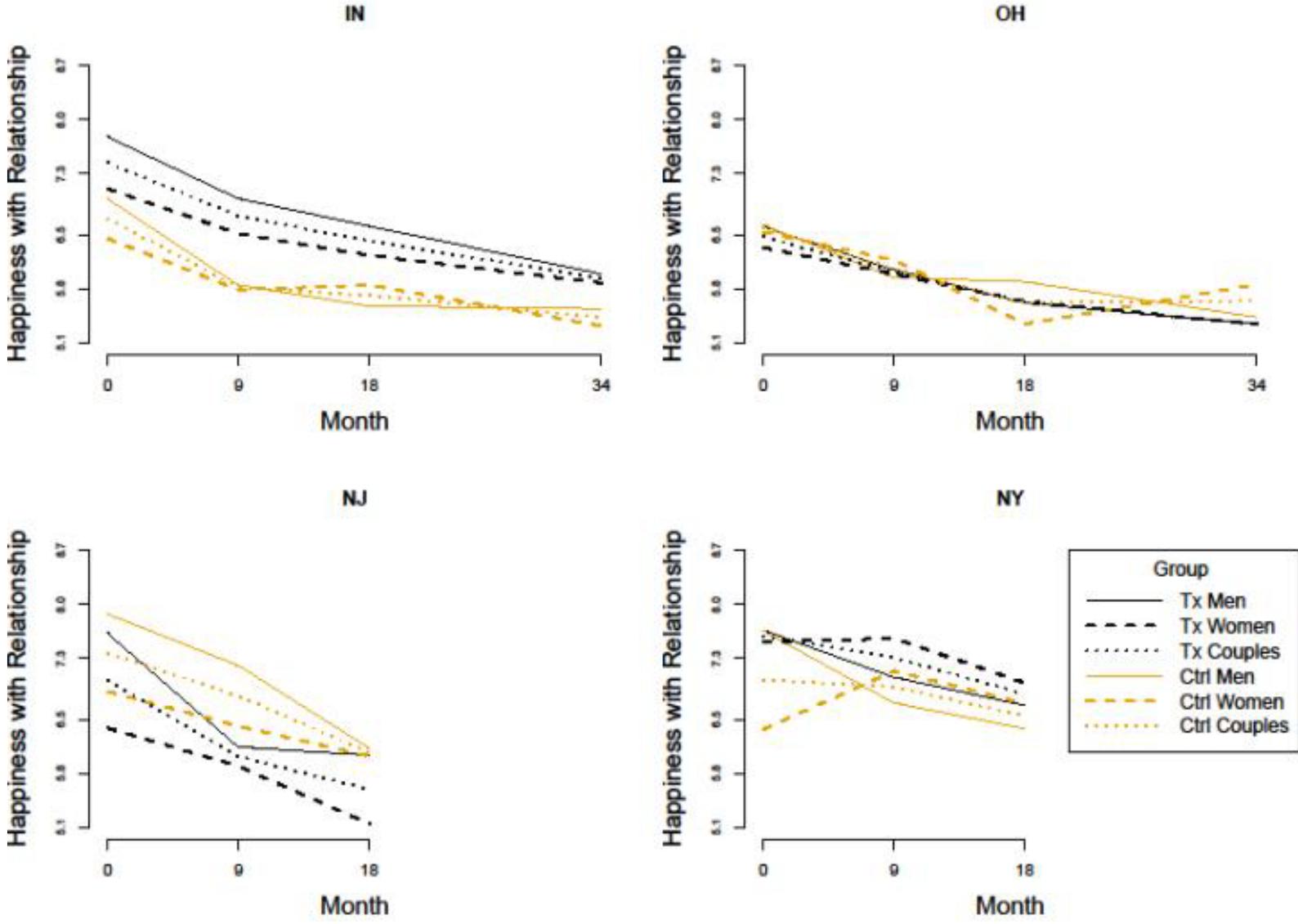


Exhibit C-14. Trajectories for Relationship Exclusivity based on Latent Growth Curve Models, by Site and Group

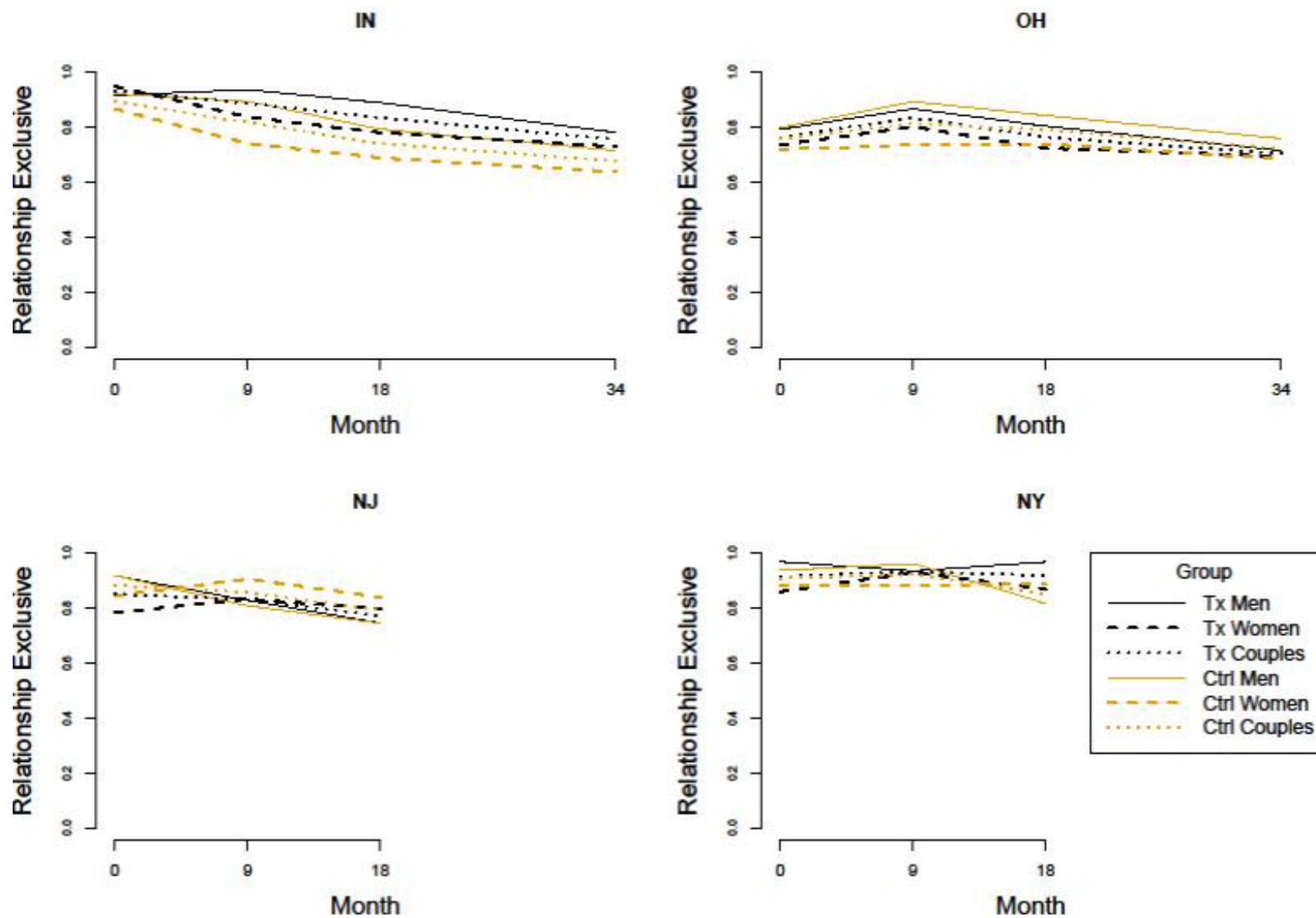


Exhibit C-15. Trajectories for Fidelity based on Latent Growth Curve Models, by Site and Group

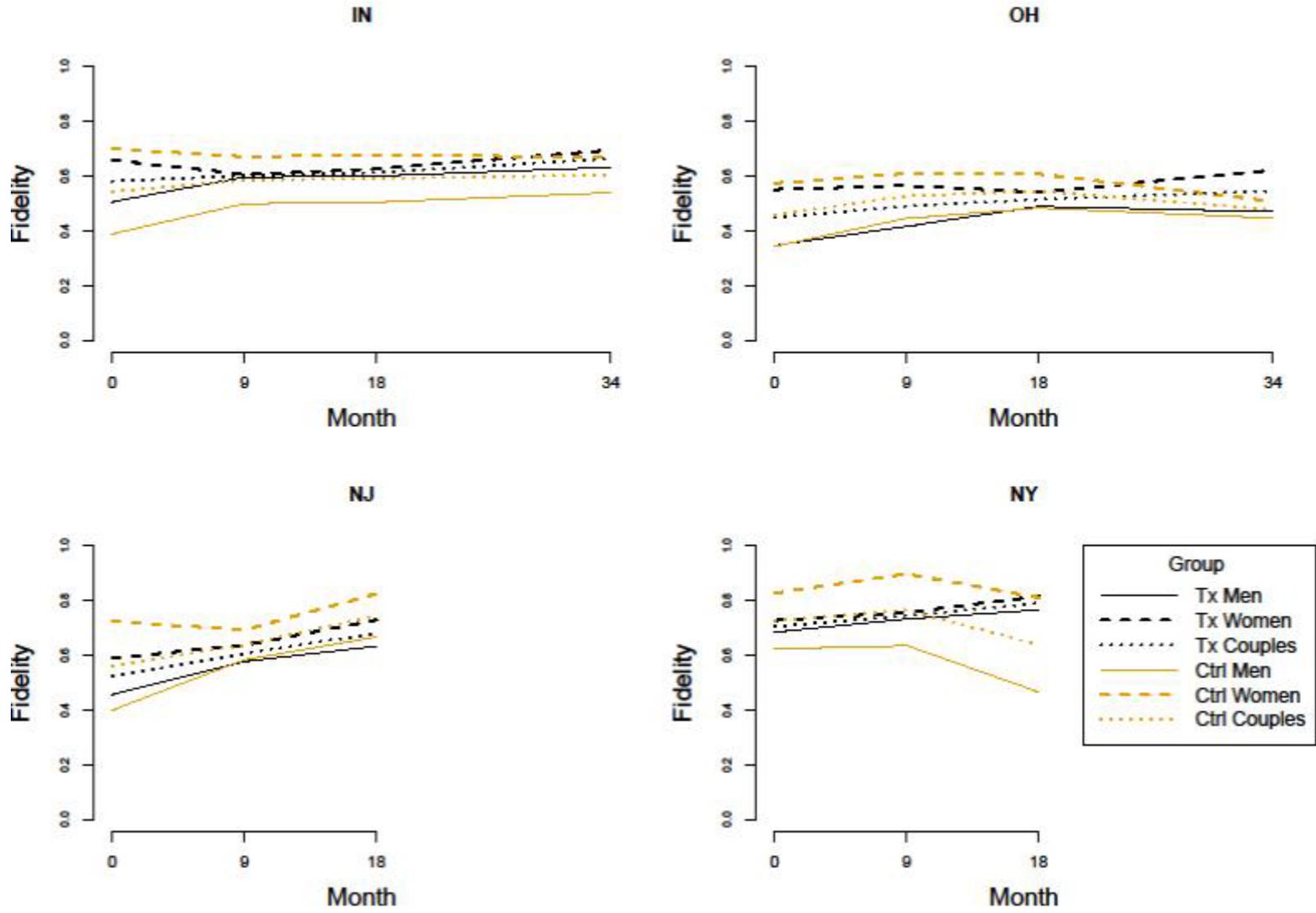


Exhibit C-16. Trajectories for Dyadic Adjustment based on Latent Growth Curve Models, by Site and Group

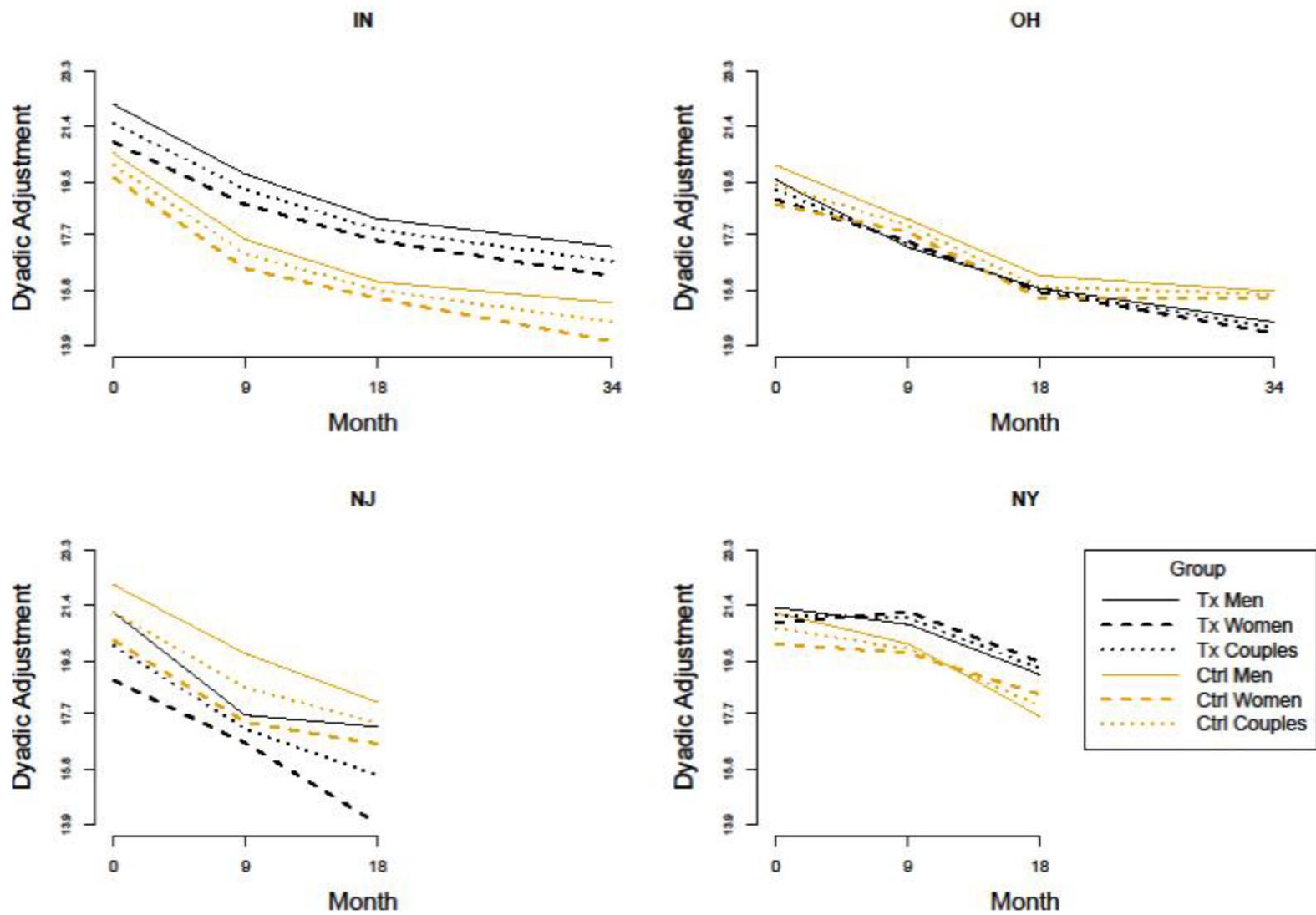


Exhibit C-17. Trajectories for Bonding based on Latent Growth Curve Models, by Site and Group

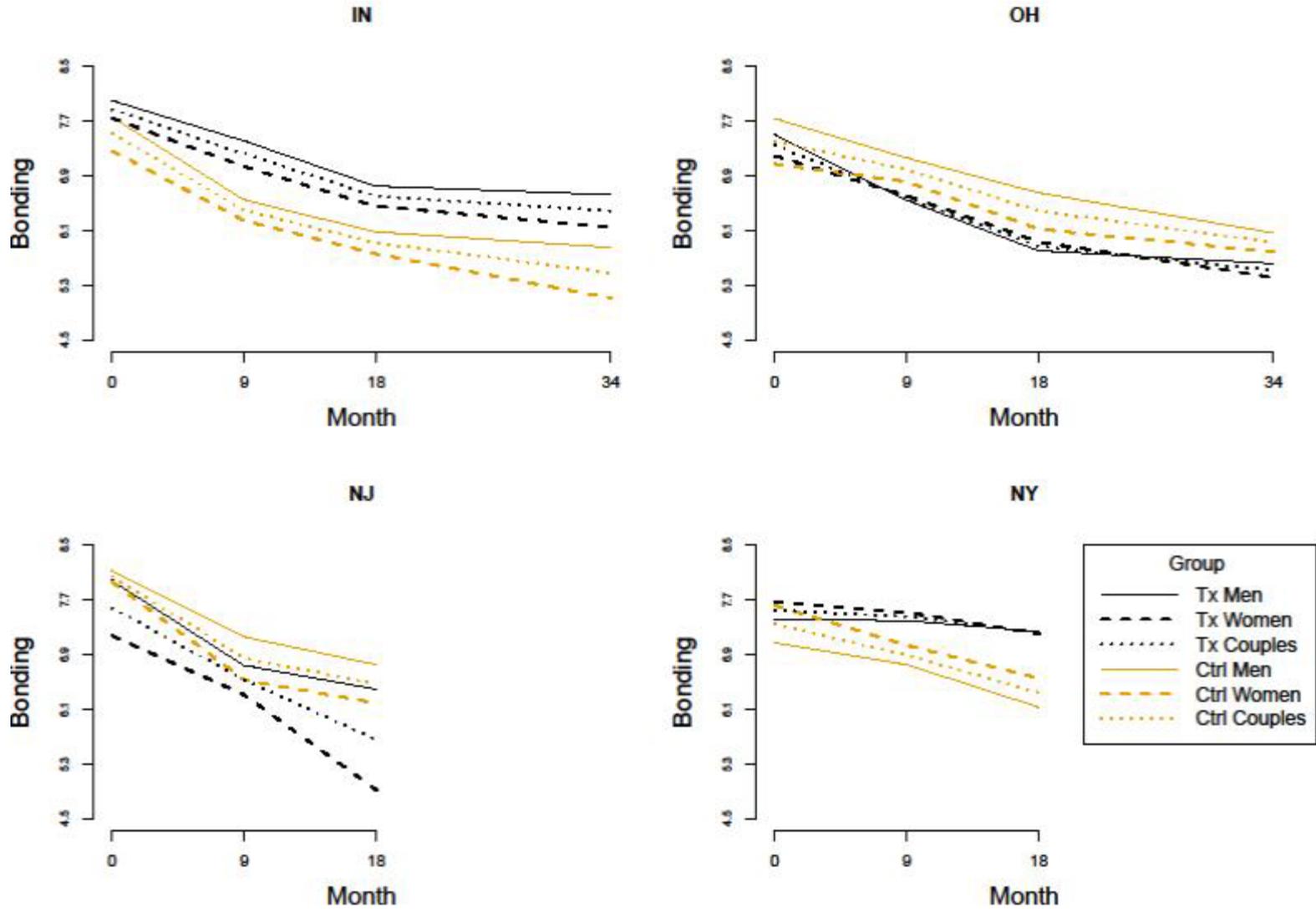


Exhibit C-18. Trajectories for Support based on Latent Growth Curve Models, by Site and Group

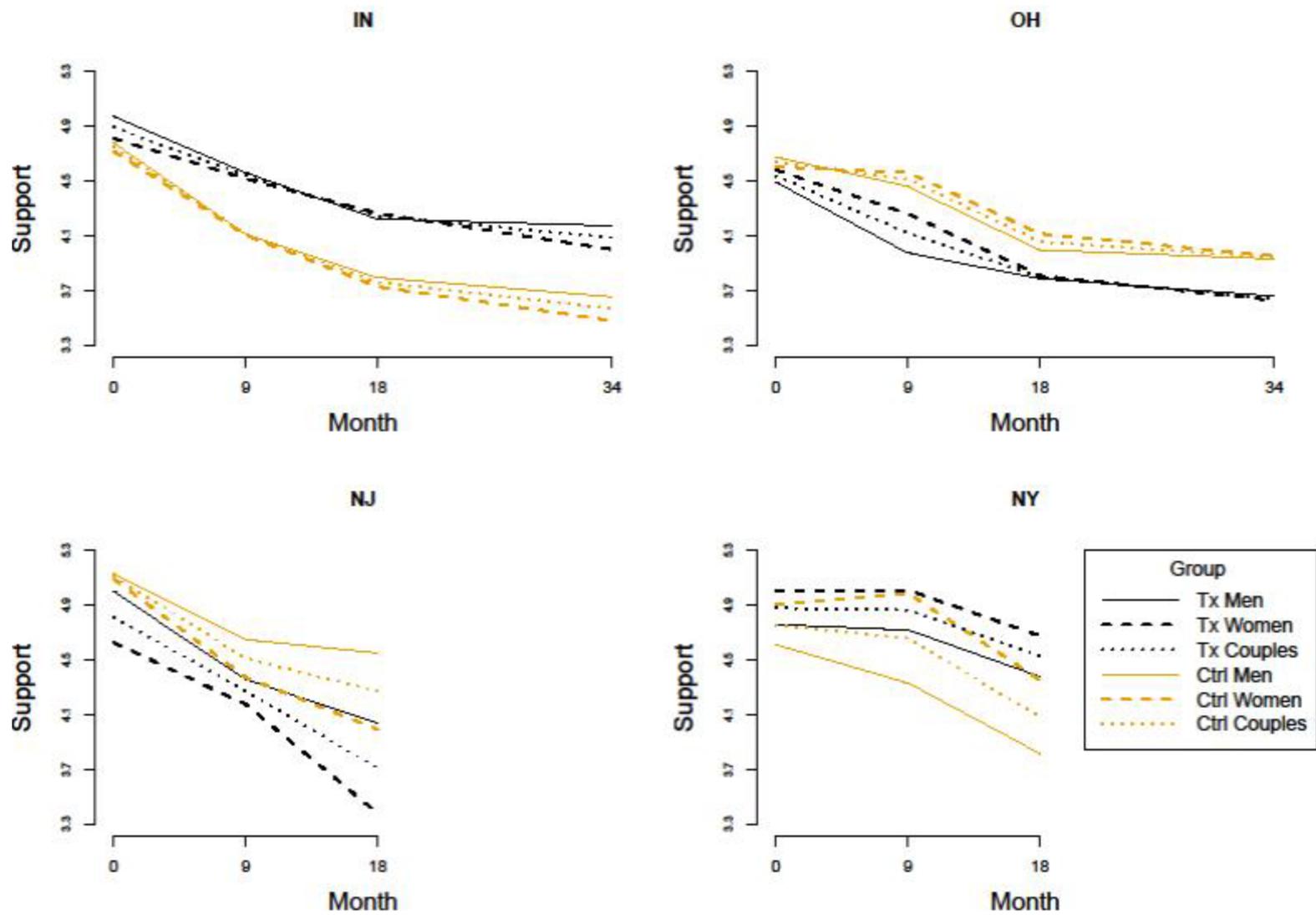


Exhibit C-19. Trajectories for Attitudes toward Marriage (among Married Respondents) based on Latent Growth Curve Models, by Site and Group

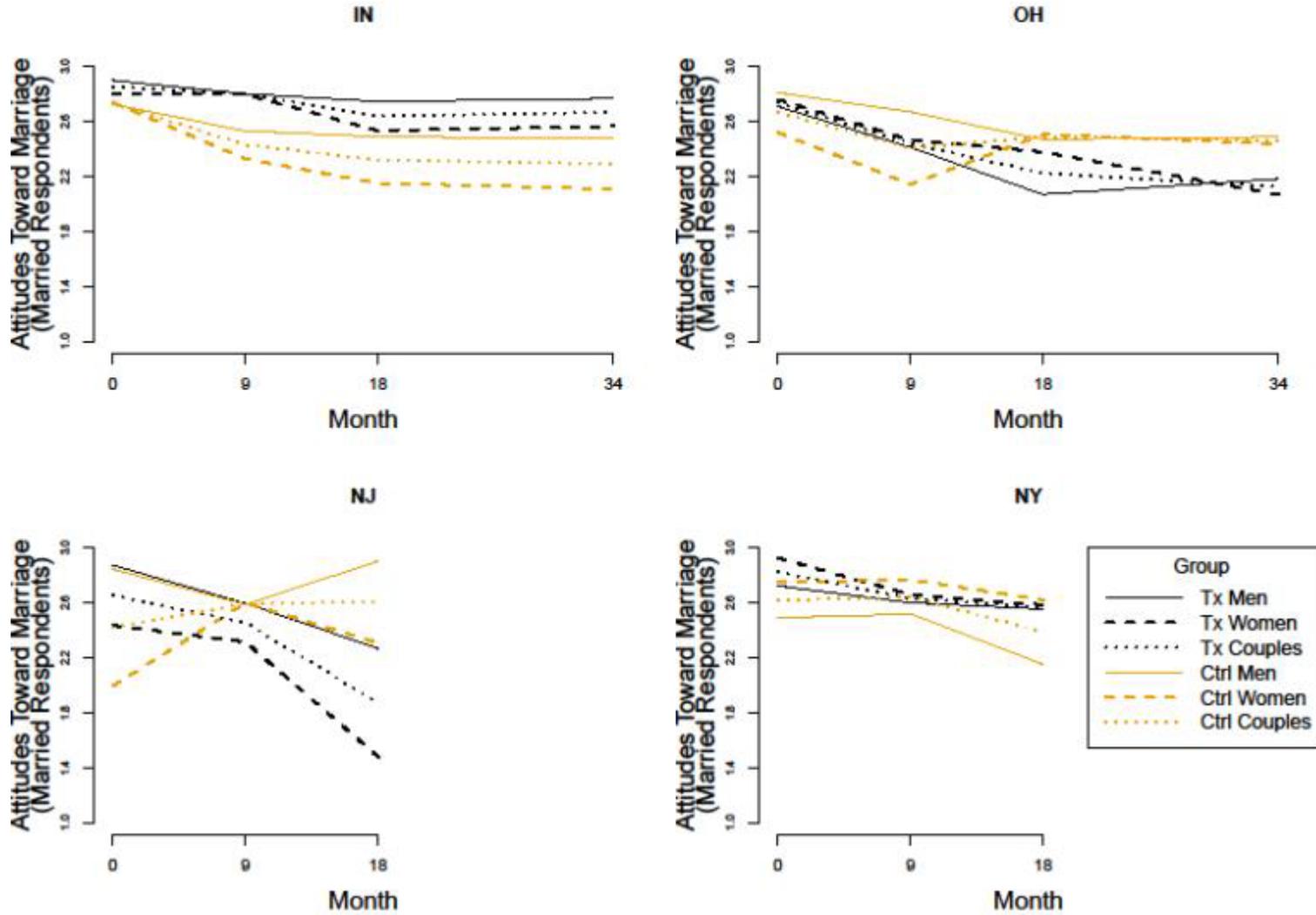
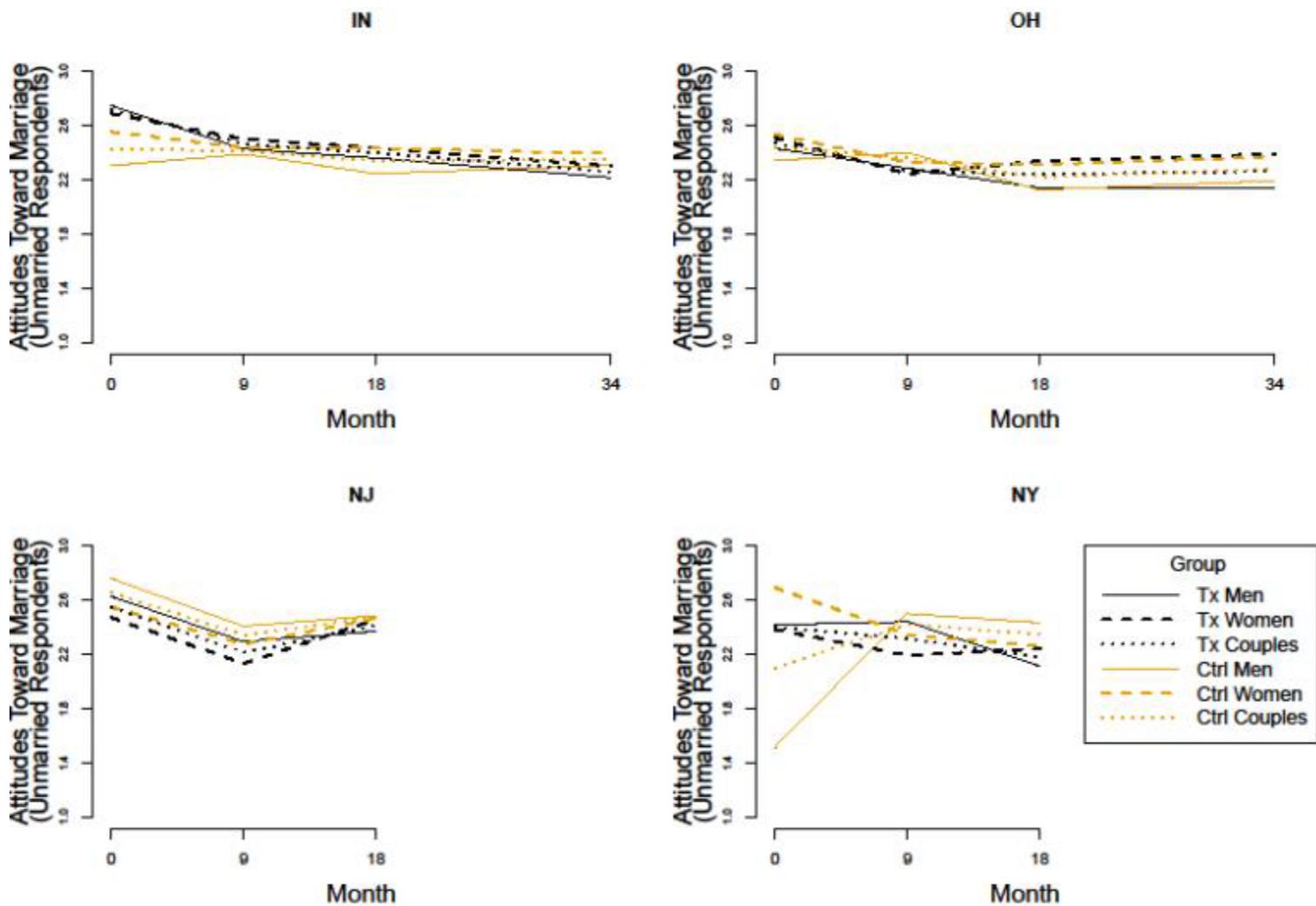


Exhibit C-20. Trajectories for Attitudes toward Marriage (among Unmarried Respondents) based on Latent Growth Curve Models, by Site and Group



*Reentry-Specific Outcomes.* When examining outcomes that are only relevant to couples in which the male partner had some community exposure during the follow-up period (see **Exhibit C-21**), the results suggest largely nonsignificant differences between the trajectories of treatment and comparison couples. However, a few positive treatment effects are evident in each site. The trajectories for each group on these outcomes are shown in **Exhibits C-22** through **C-32**.

*Incarceration-Specific Outcomes.* Summary findings for the in-prison contact outcomes dependent on the male partner's continued incarceration are shown in **Exhibit C-33**, with the graphics that illustrate the trajectories over time for each group are shown in **Exhibit C-34** through **C-37**.

**Exhibit C-21. Treatment-Comparison (T-C) Differences in Reentry-Specific, Intimate Relationship Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Co-residence	n.s.	-0.007	+++	0.119	n.s.	0.035	n.s.	-0.023	-	-0.108	n.s.	-0.046	n.s.	0.07	n.s.	0.378
Partner violence																
No physical abuse perpetration	n.s.	0.009	n.s.	-0.021	n.s.	-0.036	---	-0.117	n.s.	-0.051	n.s.	0.013	NoC	NoC	NoC	NoC
No physical abuse victimization	+	0.069	n.s.	-0.062	-	-0.068	+	0.074	n.s.	0.046	+	0.107	n.s.	-0.08	n.s.	0.017
No emotional abuse perpetration	n.s.	-0.051	n.s.	0.001	---	-0.115	---	-0.463	n.s.	0.013	n.s.	0.016	n.s.	0.024	+++	1.399
No emotional abuse victimization	n.s.	0	n.s.	-0.009	--	-0.083	n.s.	0.039	-	-0.103	n.s.	0.039	n.s.	-0.006	n.s.	0
No severe physical abuse perpetration	n.s.	-0.009	n.s.	0.053	--	-0.097	+++	0.125	n.s.	-0.017	+++	0.521	NoC	NoC	NoC	NoC
No severe physical abuse victimization	n.s.	0.041	n.s.	-0.013	n.s.	-0.034	n.s.	0.043	n.s.	0.056	n.s.	-0.024	NoC	NoC	NoC	NoC
No frequent emotional abuse perpetration	n.s.	0.026	n.s.	0	---	-0.454	--	-0.077	n.s.	-0.024	n.s.	0.036	NoC	NoC	NoC	NoC
No frequent emotional abuse victimization	n.s.	0.037	n.s.	-0.05	n.s.	0.031	n.s.	-0.049	n.s.	-0.077	n.s.	0.007	n.s.	-0.029	n.s.	-0.001
No frequent physical abuse perpetration	n.s.	-0.034	+++	0.614	-	-0.069	n.s.	0.06	-	-0.112	+	0.113	NoC	NoC	NoC	NoC
No frequent physical abuse victimization	n.s.	0.014	n.s.	-0.017	n.s.	0.018	n.s.	-0.012	n.s.	0.004	n.s.	0.006	NoC	NoC	NoC	NoC
Sample sizes	630	630	630	630	661	661	661	661	283	283	283	283	195	195	195	195

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit C-22. Trajectories for Coresidence based on Latent Growth Curve Models, by Site and Group

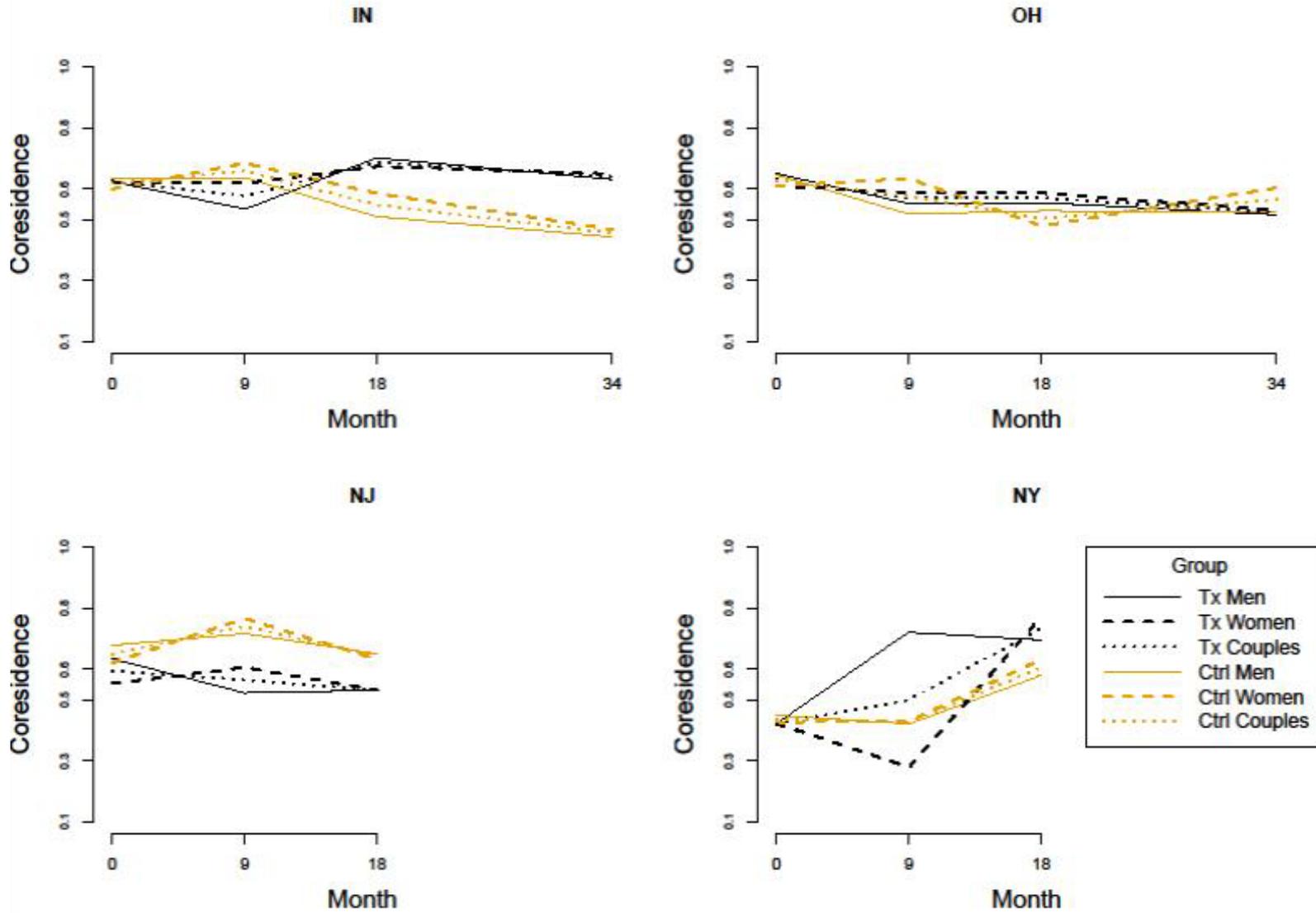


Exhibit C-23. Trajectories for Partner Violence (No Physical Abuse Perpetration) based on Latent Growth Curve Models, by Site and Group

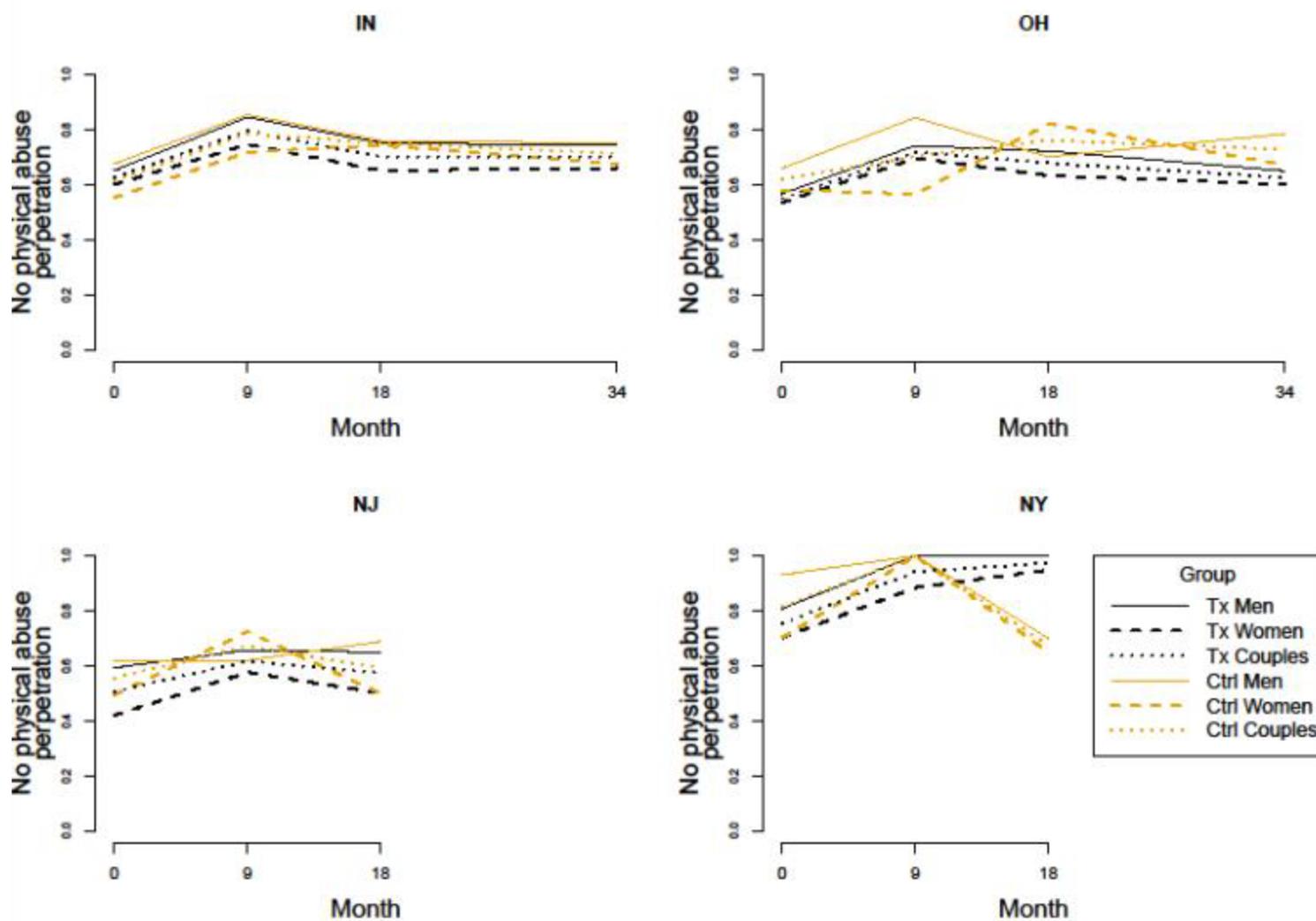


Exhibit C-24. Trajectories for Partner Violence (No Physical Abuse Victimization) based on Latent Growth Curve Models, by Site and Group

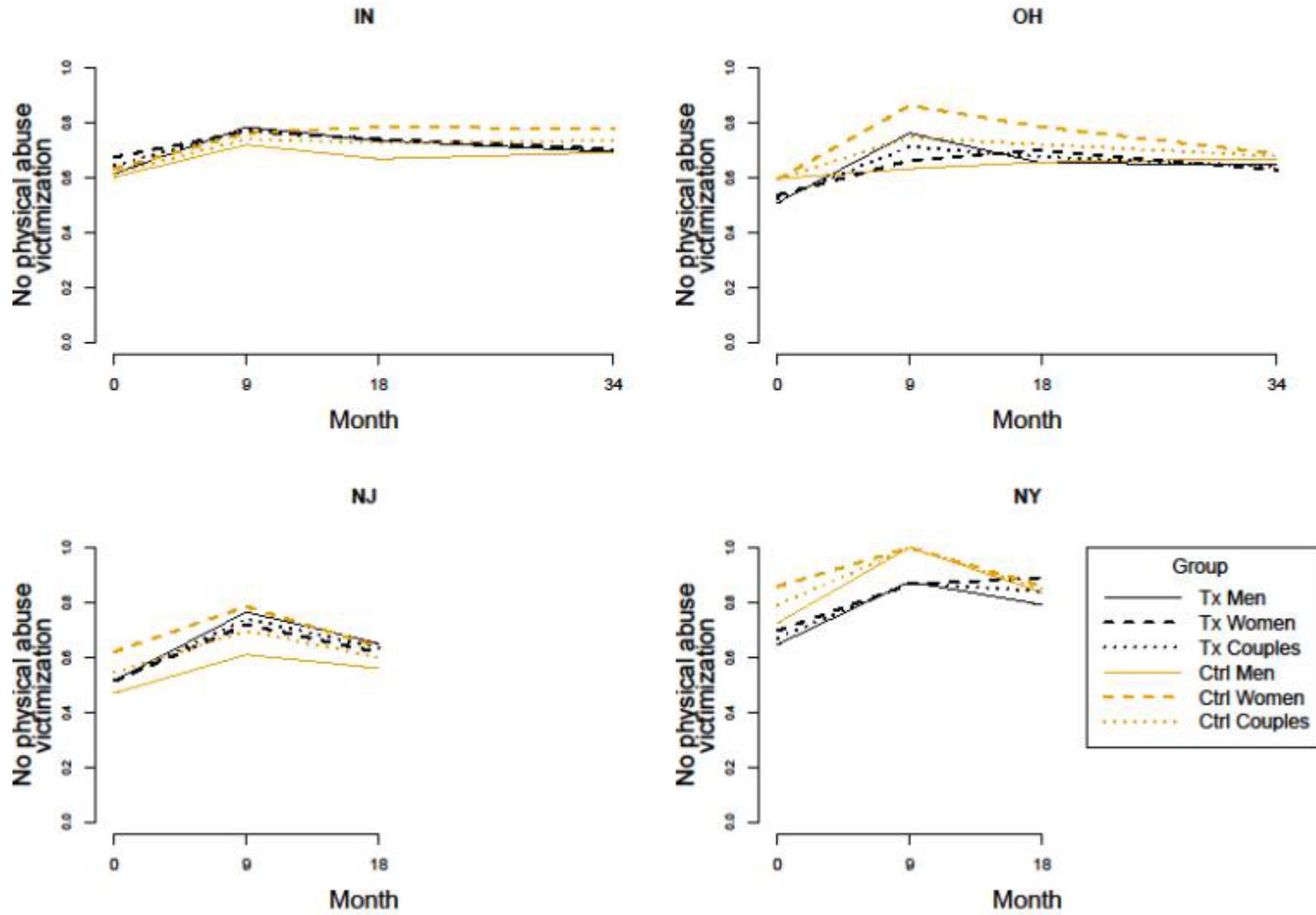


Exhibit C-25. Trajectories for Partner Violence (No Emotional Abuse Perpetration) based on Latent Growth Curve Models, by Site and Group

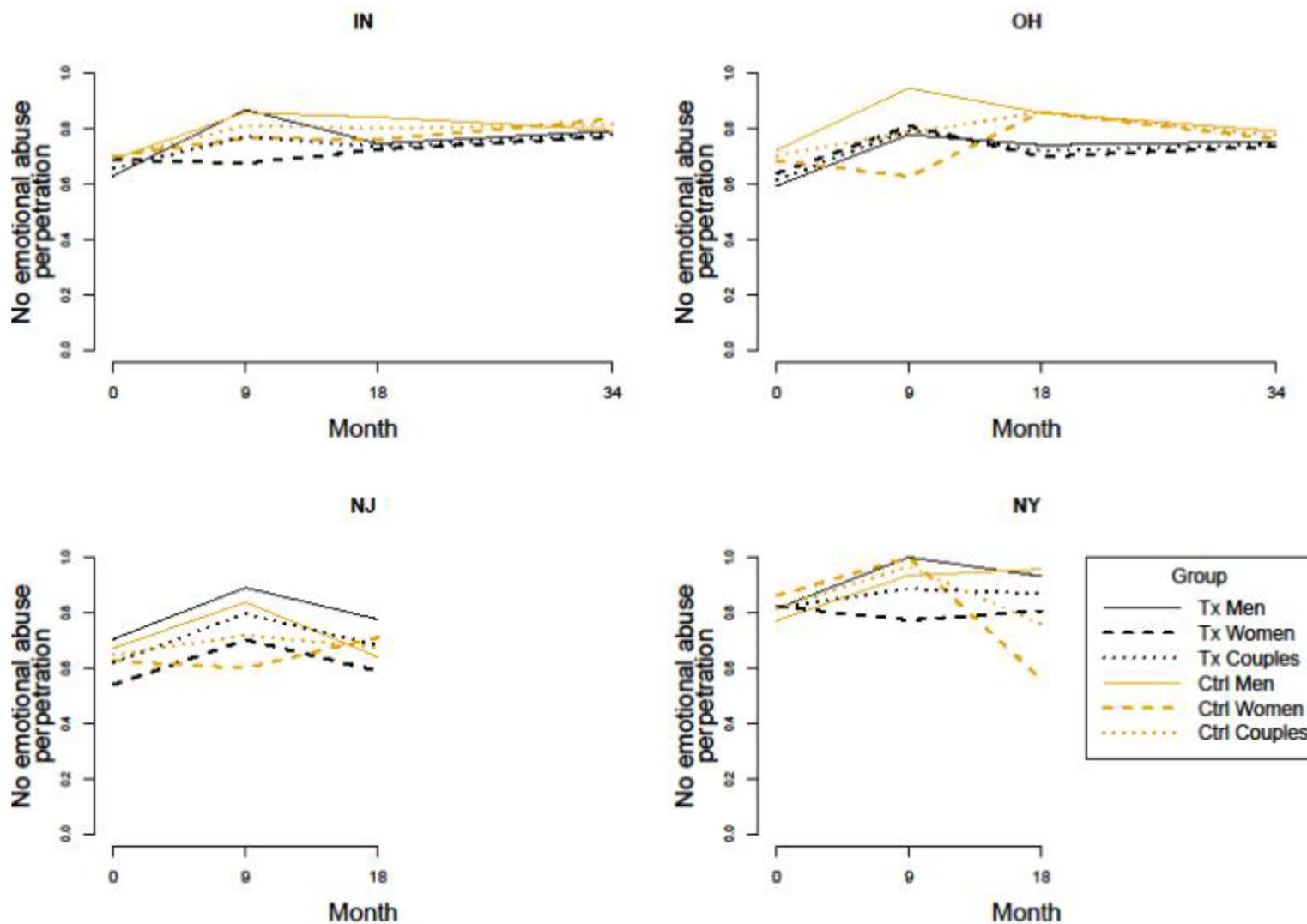


Exhibit C-26. Trajectories for Partner Violence (No Emotional Abuse Victimization) based on Latent Growth Curve Models, by Site and Group

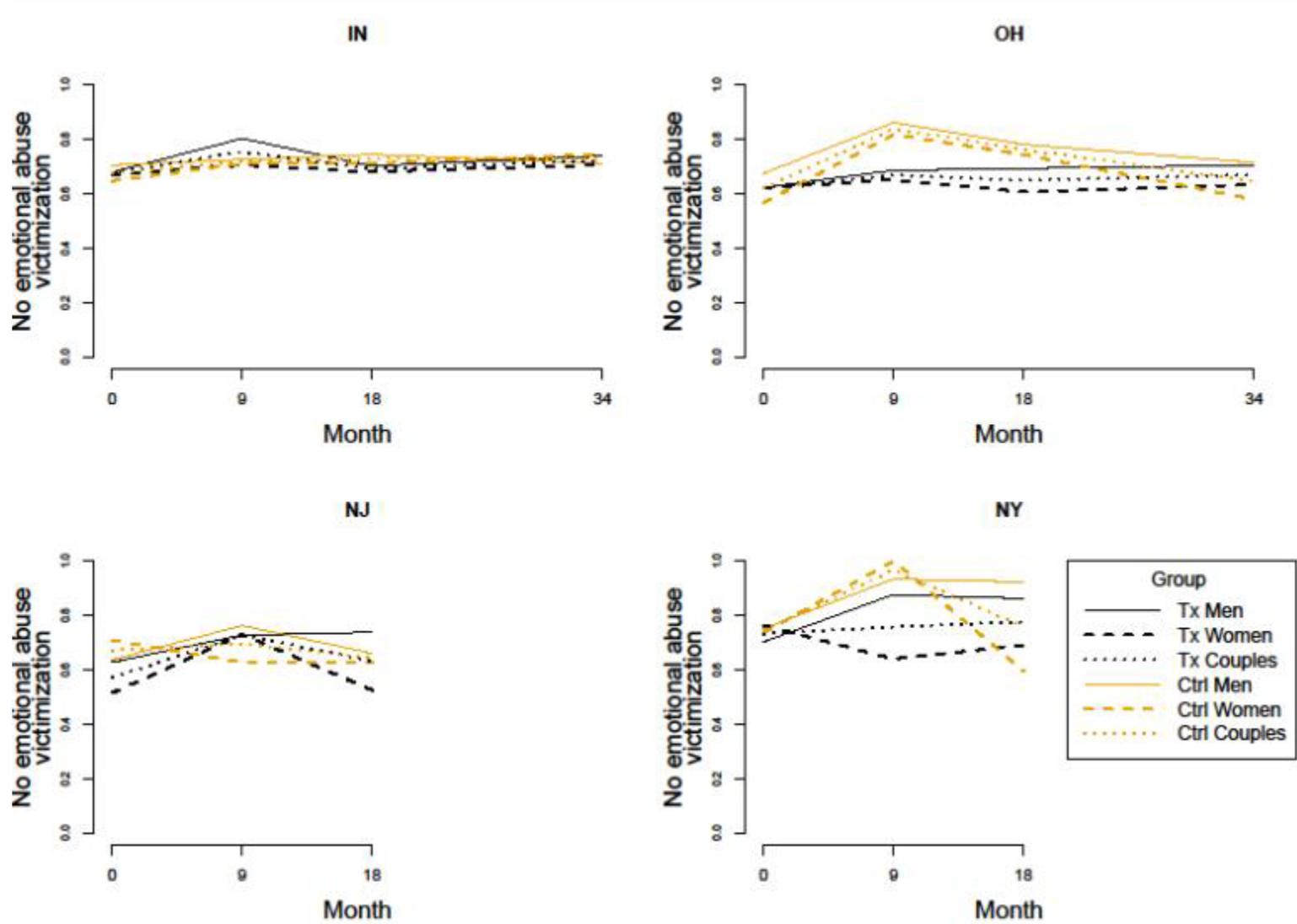


Exhibit C-27. Trajectories for Partner Violence (No Severe Physical Abuse Perpetration) based on Latent Growth Curve Models, by Site and Group

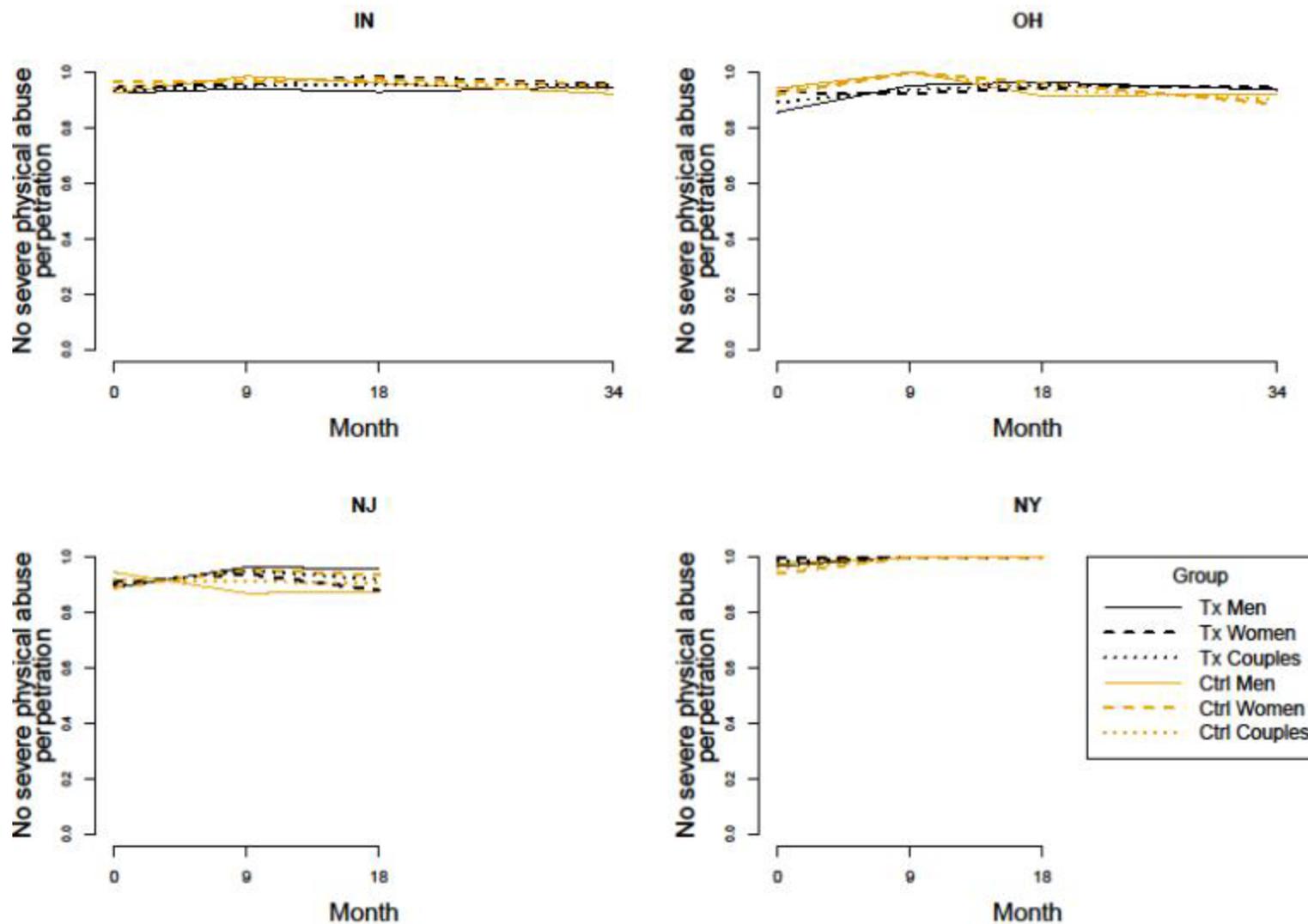


Exhibit C-28. Trajectories for Partner Violence (No Severe Physical Abuse Victimization) based on Latent Growth Curve Models, by Site and Group

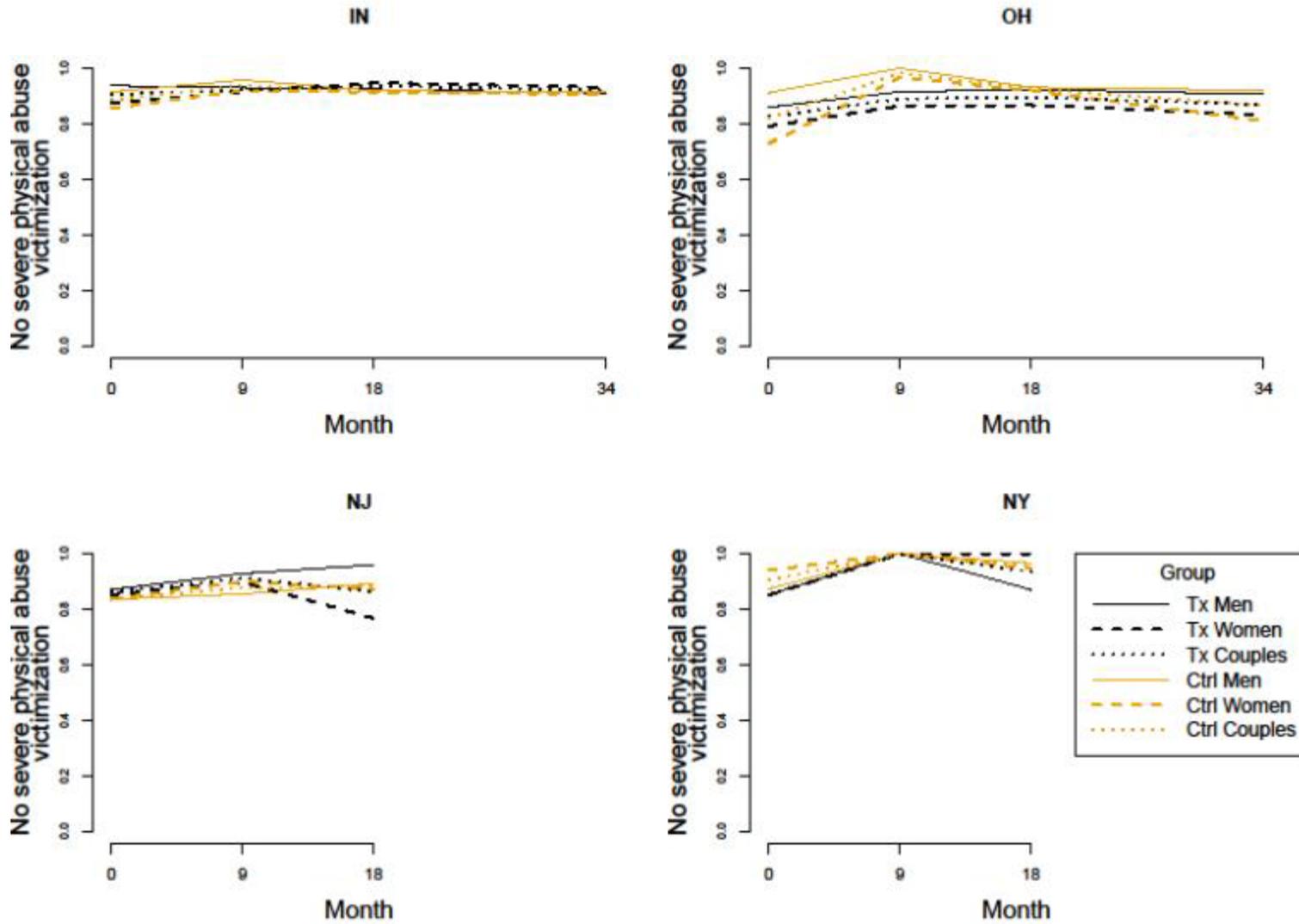


Exhibit C-29. Trajectories for Partner Violence (No Frequent Emotional Abuse Perpetration) based on Latent Growth Curve Models, by Site and Group

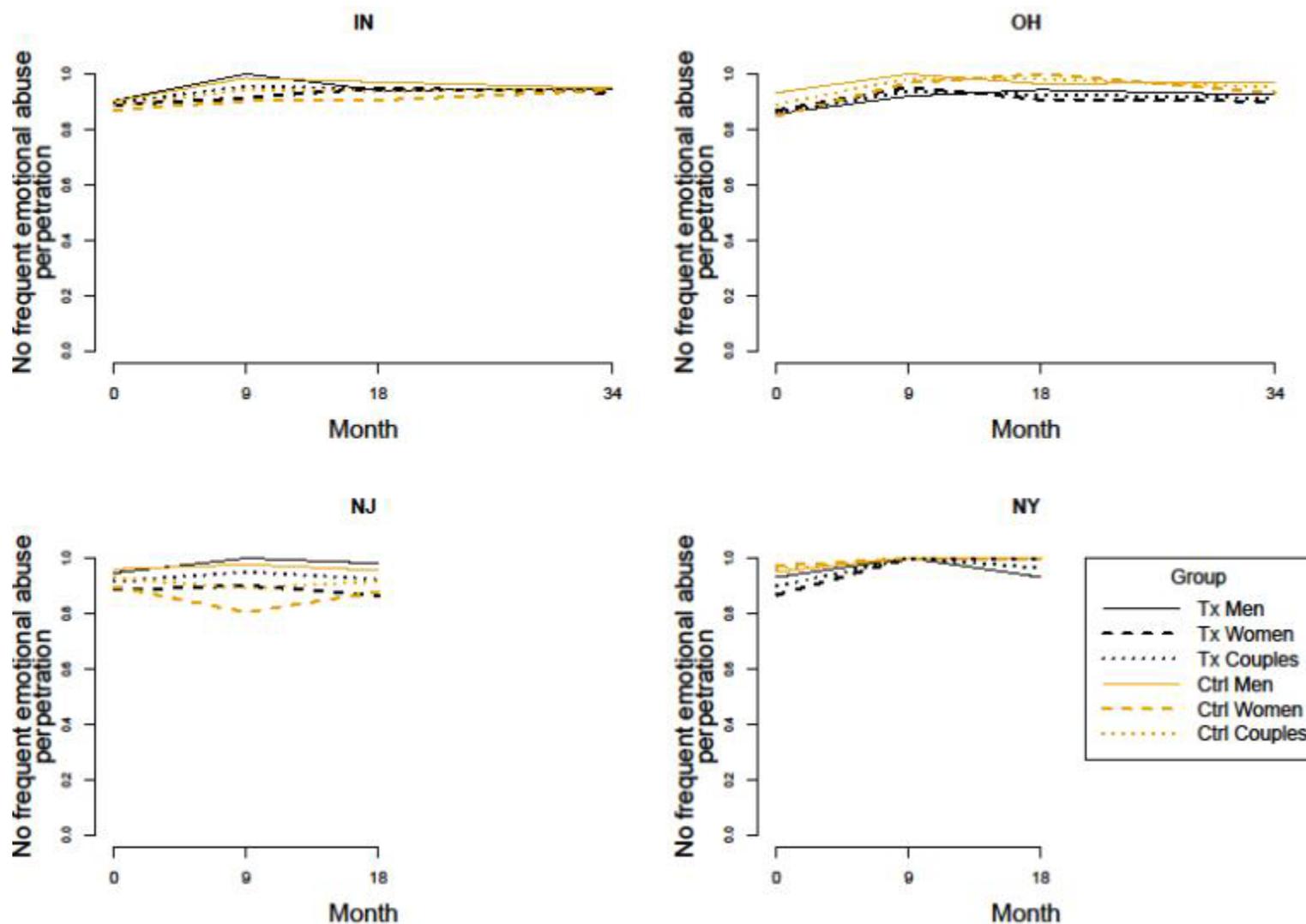


Exhibit C-30. Trajectories for Partner Violence (No Frequent Emotional Abuse Victimization) based on Latent Growth Curve Models, by Site and Group

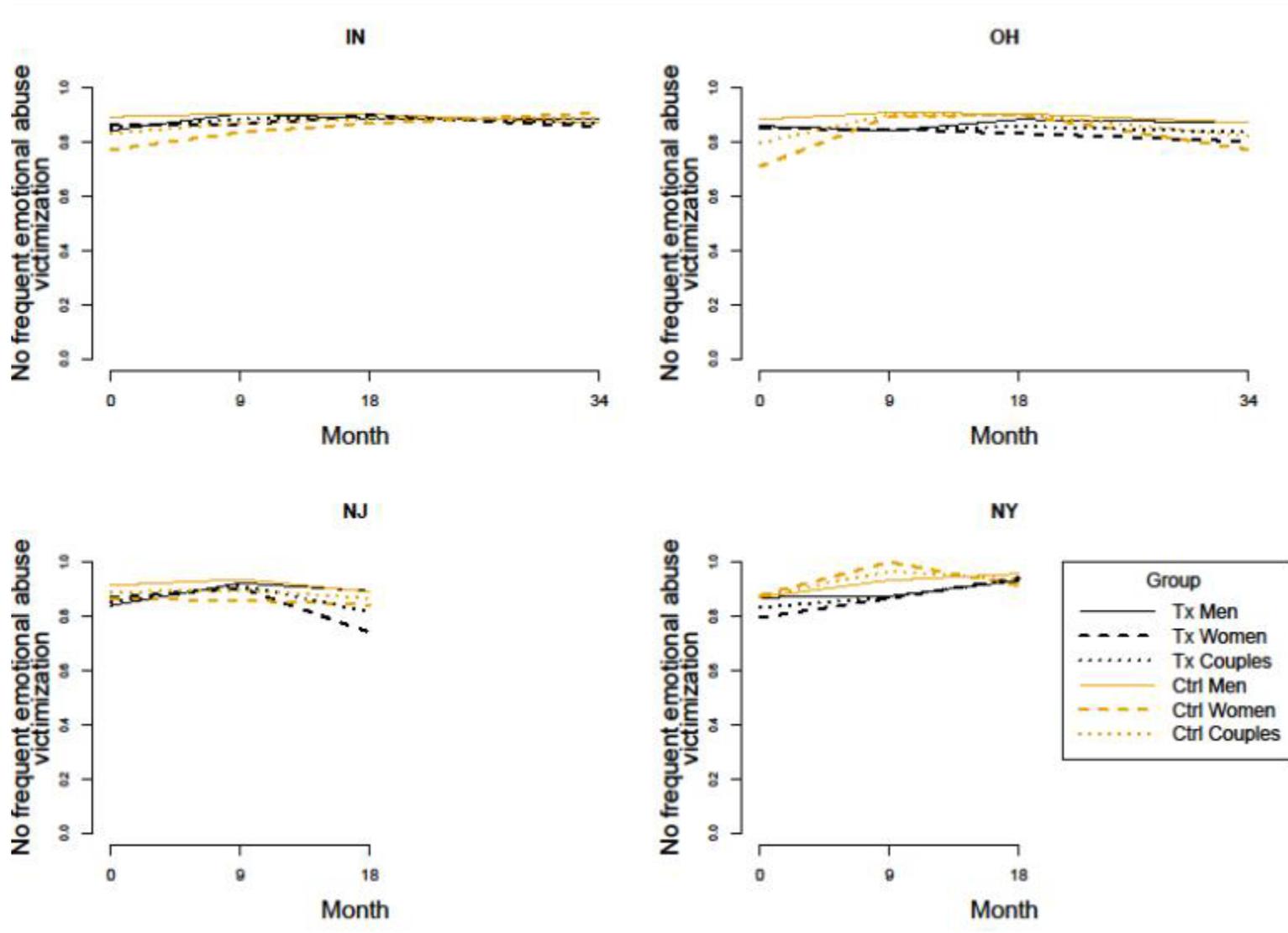


Exhibit C-31. Trajectories for Partner Violence (No Frequent Physical Abuse Perpetration) based on Latent Growth Curve Models, by Site and Group

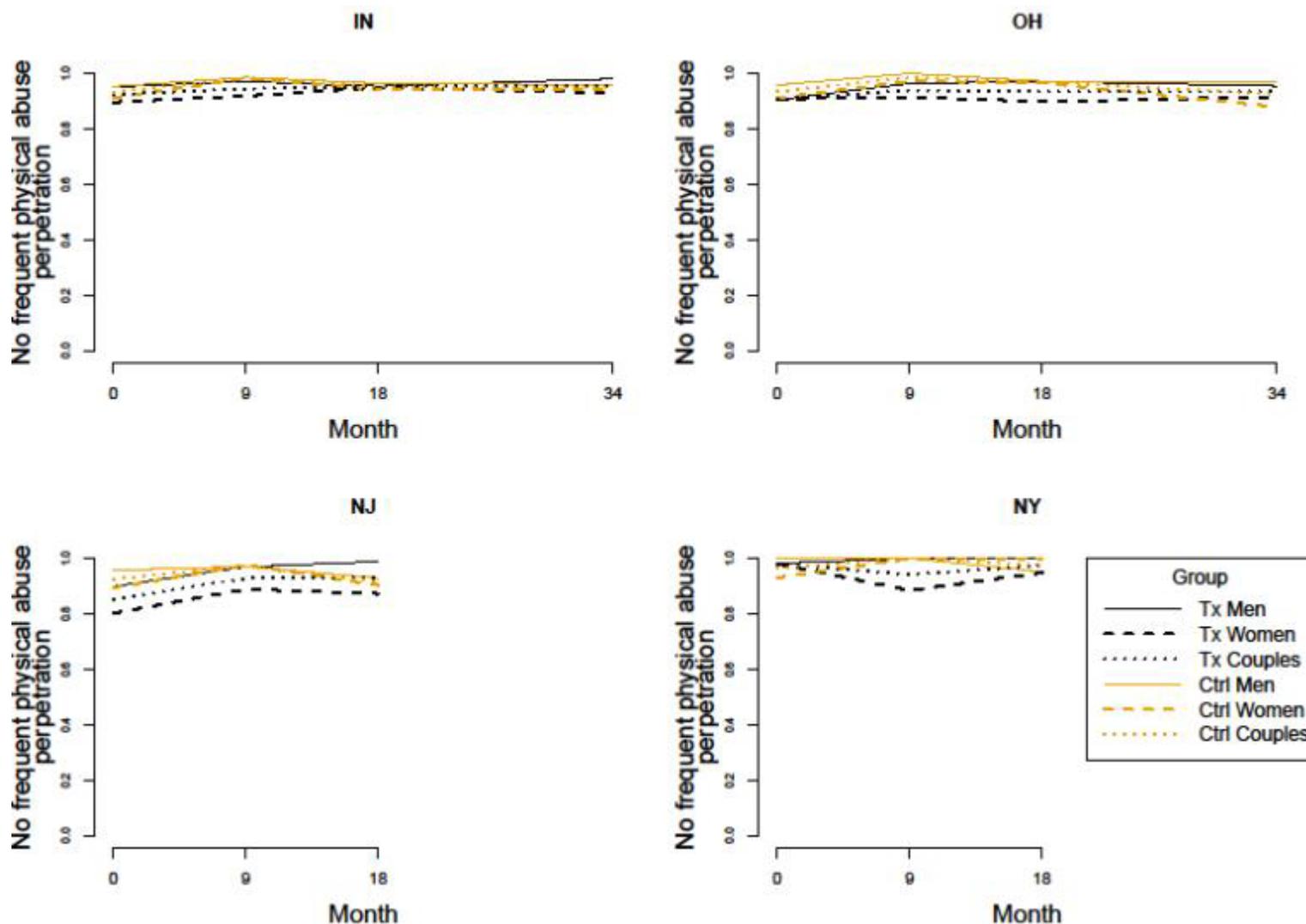
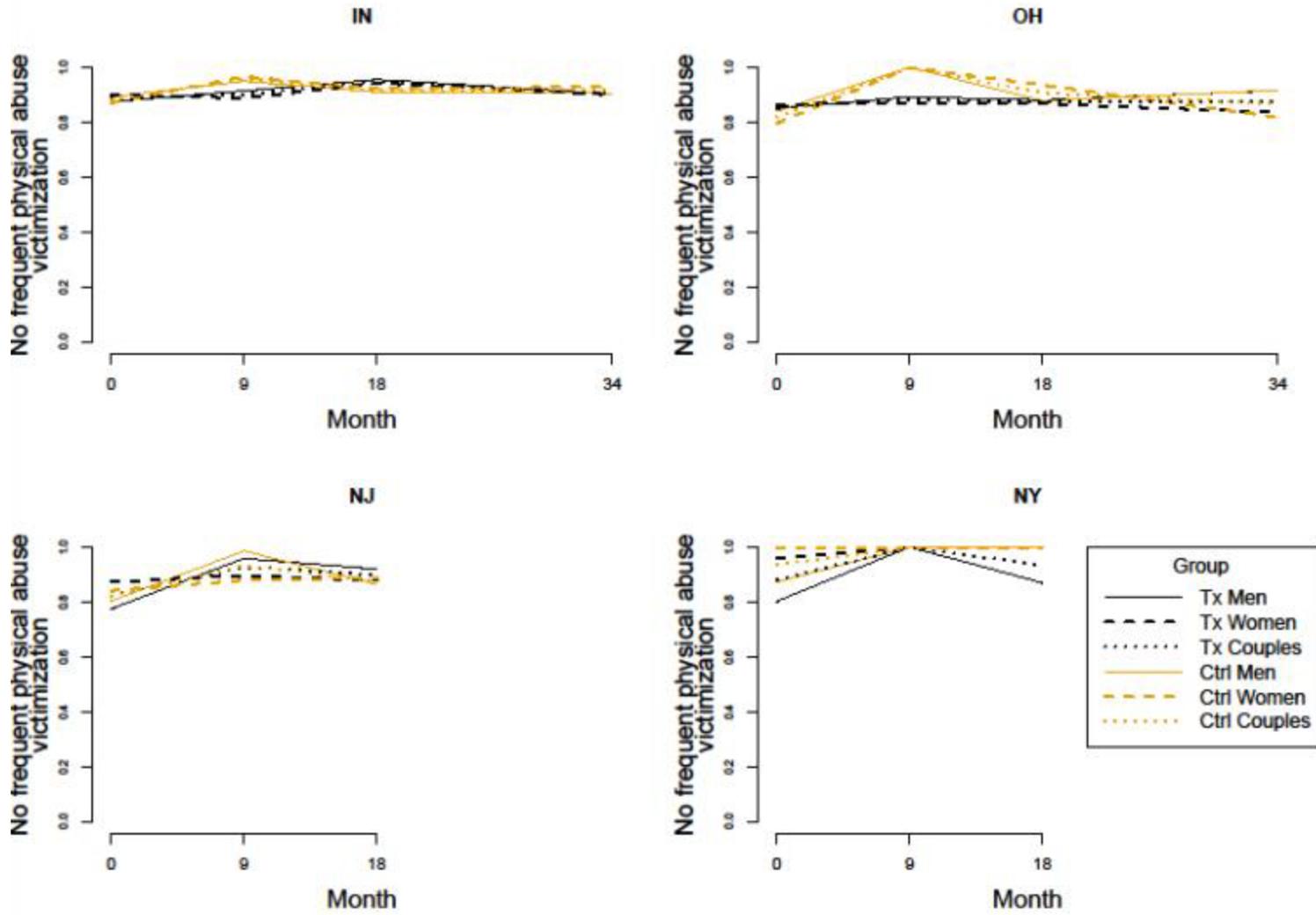


Exhibit C-32. Trajectories for Partner Violence (No Frequent Physical Abuse Victimization) based on Latent Growth Curve Models, by Site and Group



**Exhibit C-33. Treatment-Comparison (T-C) Differences in Incarceration-Specific, Intimate Relationship Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Any phone calls between partners	+++	0.197	n.s.	0.007	n.s.	-0.029	n.s.	0.014	n.s.	-0.015	-	-0.1	n.s.	-0.044	n.s.	-0.001
Frequency of phone calls between partners	+++	0.215	n.s.	0.003	n.s.	-0.028	n.s.	-0.059	NoC	NoC	NoC	NoC	n.s.	-0.032	n.s.	-0.032
Any personal visits between partners	+++	0.303	n.s.	-0.004	n.s.	-0.023	n.s.	0.018	++	0.137	n.s.	-0.076	+	0.133	n.s.	-0.045
Frequency of personal visits between partners	+++	0.286	--	-0.084	n.s.	0.012	n.s.	-0.027	NoC	NoC	NoC	NoC	++	0.185	n.s.	-0.101
Sample sizes	630	630	630	630	661	661	661	661	283	283	283	283	195	195	195	195

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit C-34. Trajectories for In-Prison Contact (Any Phone Calls Between Partners) based on Latent Growth Curve Models, by Site and Group

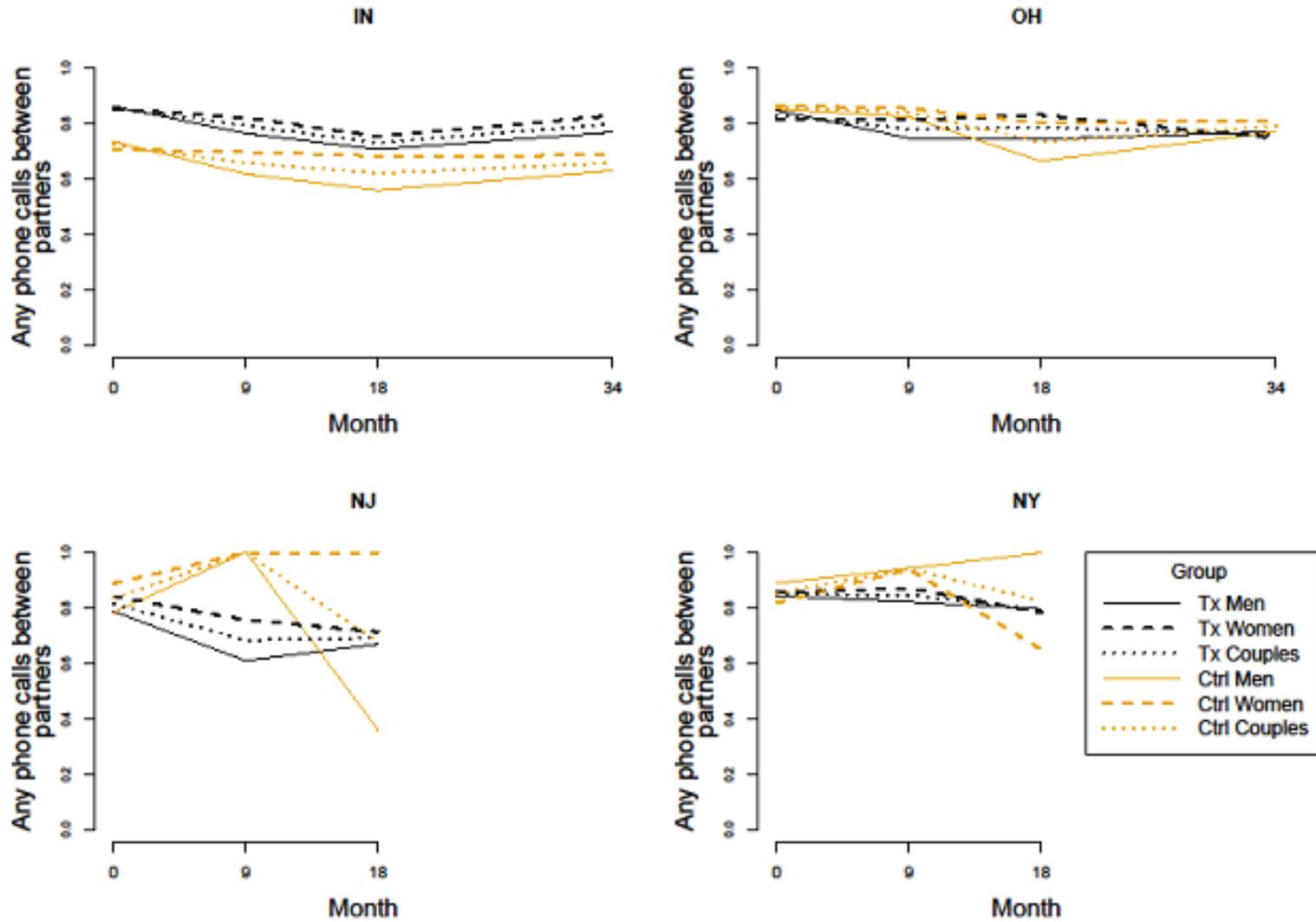


Exhibit C-35. Trajectories for In-Prison Contact (Frequency of Phone Calls between Partners) based on Latent Growth Curve Models, by Site and Group

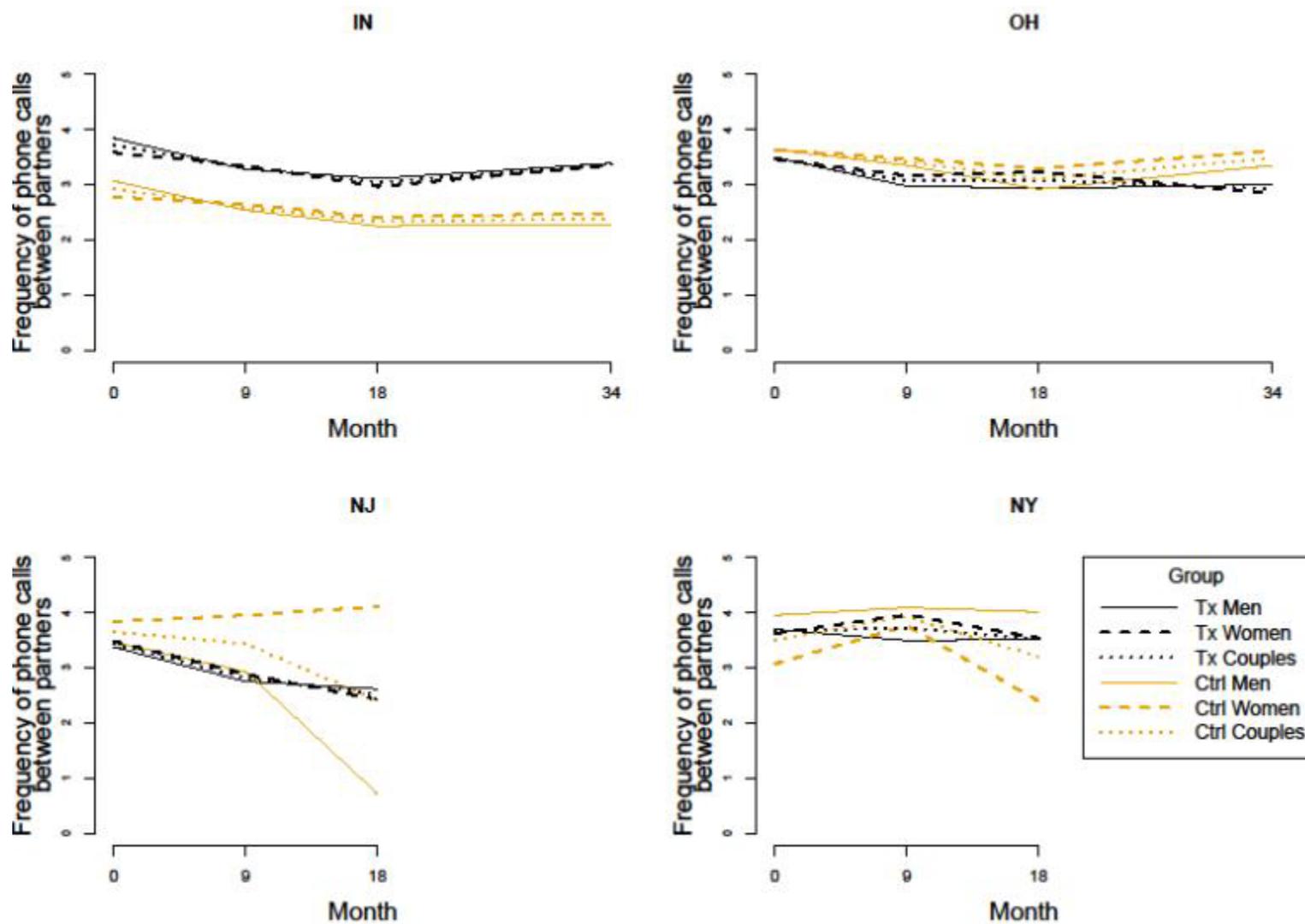


Exhibit C-36. Trajectories for In-Prison Contact (Any Personal Visits between Partners) based on Latent Growth Curve Models, by Site and Group

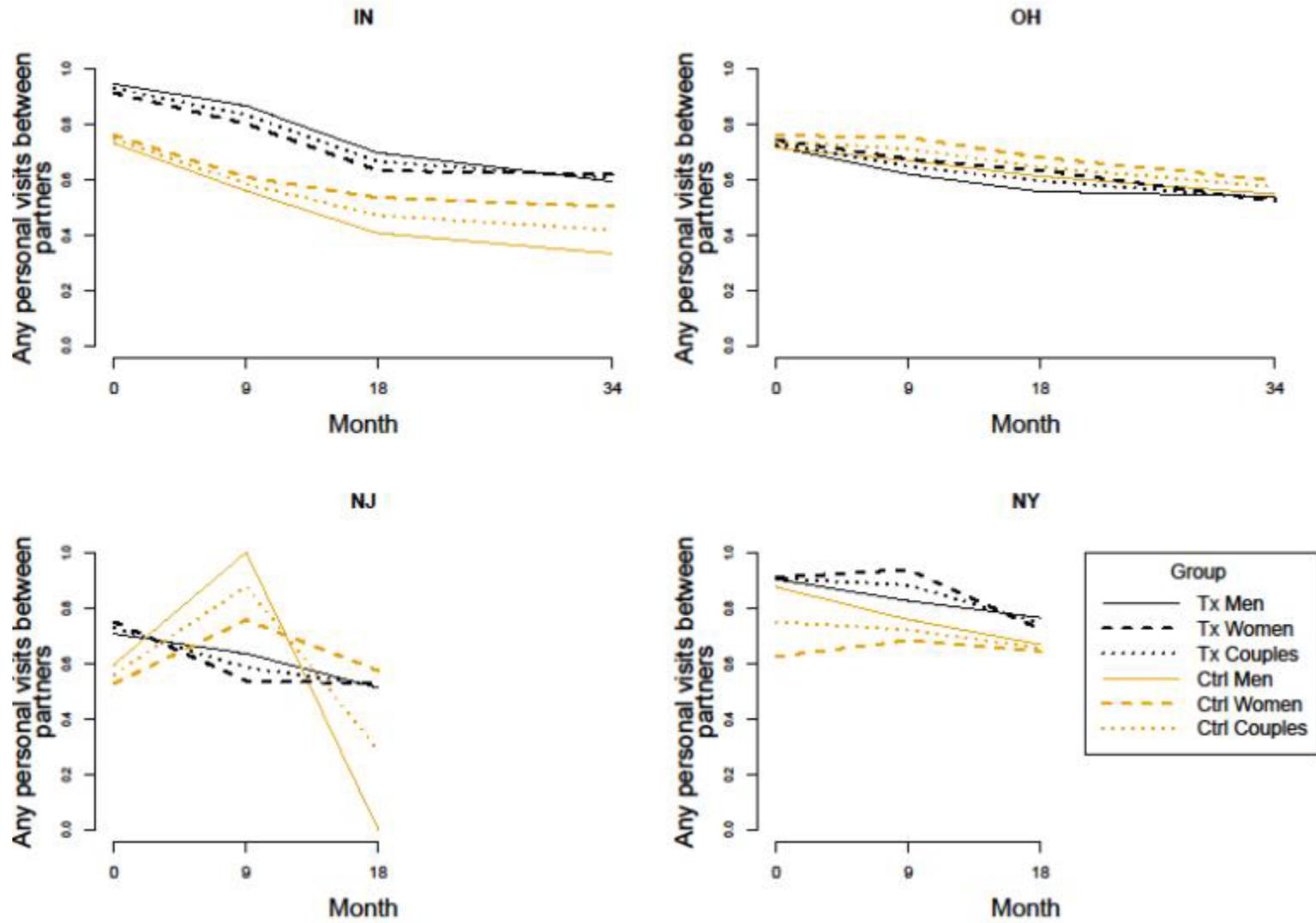
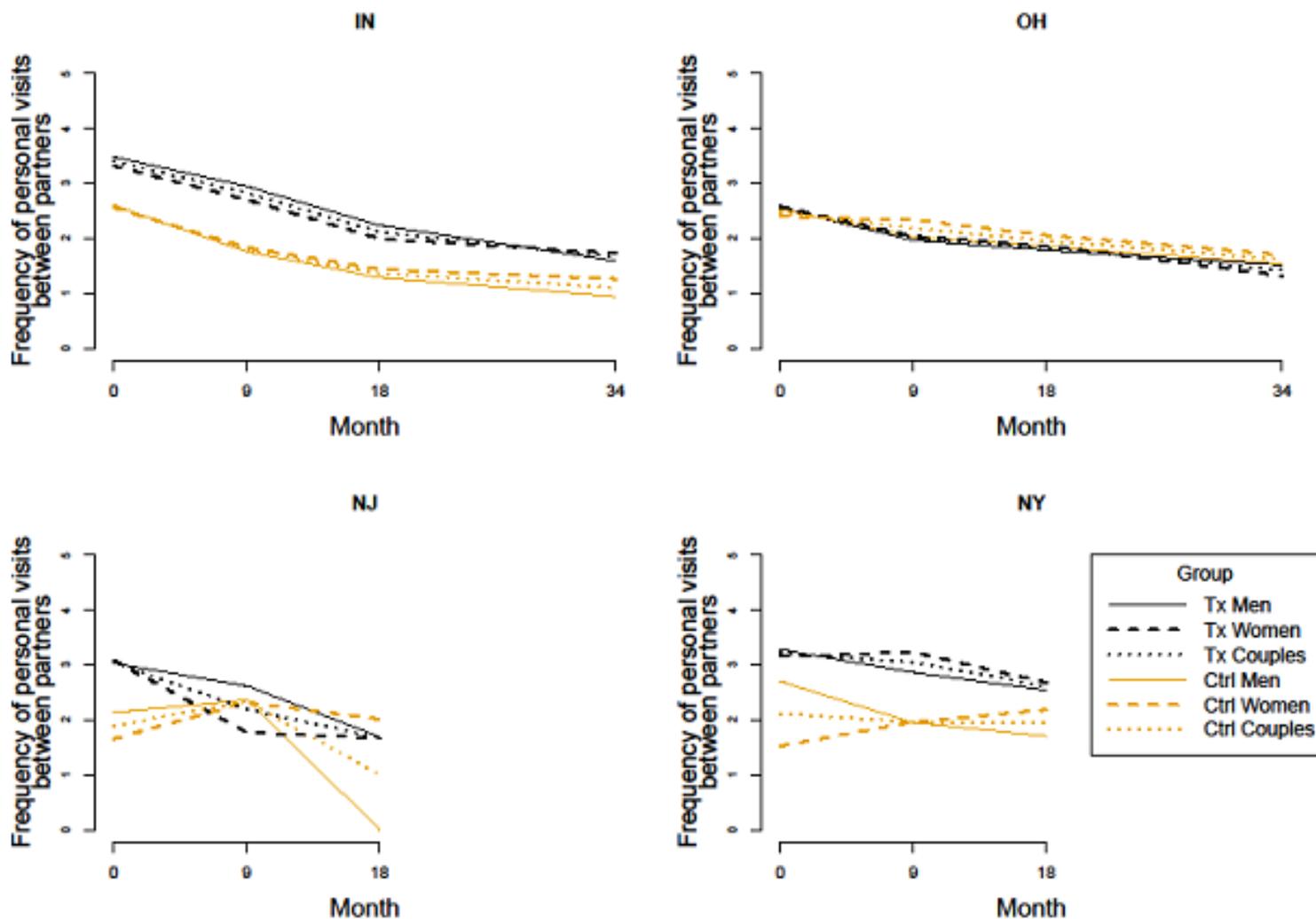


Exhibit C-37. Trajectories for In-Prison Contact (Frequency of Personal Visits between Partners) based on Latent Growth Curve Models, by Site and Group



## **Sensitivity Analysis: Exploring the Effects of Community Exposure**

As described in **Appendix A**, a sensitivity analysis was conducted with both analytic approaches to see whether differences in the male partner's incarceration trajectory affected the findings. This section presents summary results for the sensitivity analyses.

### ***Treatment-Comparison Differences by Wave***

The sensitivity analysis conducted for the differences in weighted means approach measured the interaction between community exposure and treatment within the sites to determine if there were differences in the effect of treatment for couples whose male partner had any community exposure time during the reference period and couples whose male partner had been incarcerated for the entire reference period. This analysis was conducted for variables that were measured for all couples (regardless of the male partner's community exposure). Results for the total male sample are shown in Exhibit C-38 and results for the total female sample are shown in Exhibit C-39. The effects of community exposure can be determined by comparing the significant treatment effects observed among the total samples of men (based on the findings summarized in Exhibit C-2) and women (based on the findings summarized in Exhibit C-5) and those evident for the subset with and without any community exposure (based on the findings summarized in Exhibit C-38 and C-39).

In general, the treatment effects for intimate relationship quality outcomes that are relevant to all couples did not depend on whether the male partner had spent any time in the community during the follow-up period. For men, some treatment effects were more likely to be observed among men who remained incarcerated during the follow-up period. For example, in Indiana, a small number of the treatment effects that were observed among the total sample of men were, in the sensitivity analysis, only significant for couples in which the male partner remained incarcerated (this was typically the case for the 9- and 18-month outcomes). Similarly, for women, a few positive treatment effects observed for the total sample of women in Indiana were, in the sensitivity analysis, only significant for the women whose partners remained incarcerated (and several new treatment effects were evident for this subset of women in the sensitivity analysis). However, the opposite pattern also occurred, as some treatment effects that were found among the total sample of men were, in the sensitivity analysis, only significant for couples in which the male partner had at least some community exposure.

### ***Differences in Treatment-Comparison Couple Trajectories over Time***

For the latent growth curve models, the sensitivity analysis entailed including community exposure as an independent variable in the models and examining whether 1) community exposure was significantly associated with the outcome (and the direction of the relationship) and 2) whether the inclusion of community exposure affected the treatment effects previously reported. **Exhibit C-40** shows summary indicators of the significance of the relationship between community exposure and the outcomes at each time point, by site. **Exhibit C-41**

shows summary indicators of the treatment effects when controlling for community exposure in the latent growth curve models run for the outcomes.

The treatment effects for intimate relationship status and quality outcomes among couples generally did not depend on whether the male partner had spent any time in the community during the follow-up period. Controlling for community exposure did influence some of the treatment effects observed for certain outcomes, but not in a consistent direction.

**Exhibit C-38. Treatment-Comparison Differences in Intimate Relationship Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site and Community Exposure**

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Difference	Sig.	Difference	Sig.												
Relationship status (romantically involved)																
9M	0.217	+++	0.056	n.s.	-0.056	n.s.	-0.002	n.s.	*	*	-0.118	n.s.	-0.017	n.s.	*	*
18M	0.13	++	0.19	+++	0.019	n.s.	-0.1	n.s.	*	*	-0.138	n.s.	0.068	n.s.	0.102	n.s.
34M	0.194	++	0.133	++	0.006	n.s.	-0.041	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Communication Skills																
9M	0.151	n.s.	0.217	n.s.	-0.161	n.s.	-0.067	n.s.	*	*	-1.095	---	0.089	n.s.	*	*
18M	0.241	n.s.	-0.408	n.s.	0.714	++	-0.879	--	*	*	-0.303	n.s.	0.416	n.s.	0.425	n.s.
34M	0.146	n.s.	0.093	n.s.	0.317	n.s.	-0.398	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Healthy Relationship beliefs																
9M	0.588	++	0.078	n.s.	-0.959	---	-0.569	n.s.	*	*	0.048	n.s.	0.233	n.s.	*	*
18M	0.02	n.s.	0.176	n.s.	0.27	n.s.	-0.014	n.s.	*	*	0.25	n.s.	0.421	n.s.	0.66	n.s.
34M	0.042	n.s.	0.315	n.s.	-0.191	n.s.	-0.543	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Conflict resolution skills																
9M	0.319	n.s.	-0.045	n.s.	-0.599	-	0.103	n.s.	*	*	0.081	n.s.	0.659	n.s.	*	*
18M	0.219	n.s.	-0.421	n.s.	0.454	n.s.	-1.004	--	*	*	0.173	n.s.	0.741	n.s.	0.452	n.s.
34M	0.017	n.s.	0.072	n.s.	0.406	n.s.	-1.043	---	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Happiness with relationship																
9M	1.561	+++	-0.052	n.s.	0.125	n.s.	0.191	n.s.	*	*	-1.343	--	0.642	n.s.	*	*
18M	1.057	+++	1.069	++	0.404	n.s.	-1.009	n.s.	*	*	-0.071	n.s.	0.141	n.s.	0.264	n.s.
34M	0.29	n.s.	0.507	n.s.	-0.025	n.s.	-0.166	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Relationship exclusive																
9M	0.016	n.s.	0.147	++	-0.013	n.s.	-0.052	n.s.	*	*	0.012	n.s.	-0.016	n.s.	*	*
18M	0.07	++	0.115	++	-0.026	n.s.	-0.045	n.s.	*	*	-0.007	n.s.	0.134	n.s.	0.077	n.s.
34M	-0.011	n.s.	0.075	n.s.	-0.041	n.s.	-0.032	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fidelity																
9M	0.102	++	0.075	n.s.	-0.01	n.s.	-0.137	n.s.	*	*	0.025	n.s.	0.165	n.s.	*	*
18M	0.144	++	0.046	n.s.	0.112	n.s.	-0.099	n.s.	*	*	-0.06	n.s.	0.392	+++	0.174	n.s.
34M	0.13	n.s.	0.055	n.s.	0.111	n.s.	-0.059	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dyadic Adjustment																
9M	3.002	+++	0.47	n.s.	-0.845	n.s.	-0.27	n.s.	*	*	-2.288	n.s.	1.046	n.s.	*	*
18M	2.66	+++	1.434	n.s.	1.375	n.s.	-2.665	--	*	*	-1.197	n.s.	0.972	n.s.	1.34	n.s.

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Difference	Sig.	Difference	Sig.	Difference	Sig.	Difference	Sig.	Difference	Sig.	Difference	Sig.	Difference	Sig.	Difference	Sig.
34M	1.469	n.s.	2.12	+++	-1.243	n.s.	-1.355	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bonding																
9M	1.074	+++	0.299	n.s.	-0.545	--	-0.224	n.s.	*	*	-0.433	n.s.	0.976	n.s.	*	*
18M	0.891	+++	0.333	n.s.	-0.272	n.s.	-1.546	---	*	*	-0.129	n.s.	1.28	+	1.405	n.s.
34M	0.505	n.s.	0.873	+++	-0.766	n.s.	-0.279	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Support																
9M	0.573	+++	0.095	n.s.	-0.346	-	-0.828	--	*	*	-0.279	n.s.	0.58	n.s.	*	*
18M	0.6	+++	0.138	n.s.	0.178	n.s.	-0.662	--	*	*	-0.516	n.s.	0.38	n.s.	0.644	n.s.
34M	0.315	n.s.	0.568	++	-0.404	n.s.	-0.245	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Attitudes toward marriage (for unmarried respondents)																
9M	0.093	n.s.	-0.114	n.s.	0.005	n.s.	-0.384	n.s.	*	*	-0.089	n.s.	-0.029	n.s.	*	*
18M	0.144	n.s.	0.058	n.s.	0.069	n.s.	-0.038	n.s.	*	*	-0.094	n.s.	-0.504	n.s.	0.475	n.s.
34M	-0.109	n.s.	-0.099	n.s.	0.023	n.s.	-0.031	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Attitudes toward marriage (for married respondents)																
9M	0.36	++	0.016	n.s.	-0.186	n.s.	0.146	n.s.	*	*	0.018	n.s.	0.231	n.s.	*	*
18M	0.319	++	0.107	n.s.	-0.361	n.s.	-0.362	n.s.	*	*	-0.703	---	0.084	n.s.	0.898	n.s.
34M	0.069	n.s.	0.327	++	-0.483	n.s.	-0.314	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample sizes																
9M	453 (T=182 C=271)	453 (T=182 C=271)	139 (T=67 C=72)	139 (T=67 C=72)	395 (T=285 C=110)	395 (T=285 C=110)	121 (T=102 C=19)	121 (T=102 C=19)	29 (T=23 C=6)	29 (T=23 C=6)	146 (T=85 C=61)	146 (T=85 C=61)	129 (T=94 C=35)	129 (T=94 C=35)	16 (T=8 C=8)	16 (T=8 C=8)
18M	312 (T=131 C=181)	312 (T=131 C=181)	252 (T=111 C=141)	252 (T=111 C=141)	297 (T=208 C=89)	297 (T=208 C=89)	205 (T=153 C=52)	205 (T=153 C=52)	14 (T=10 C=4)	14 (T=10 C=4)	158 (T=97 C=61)	158 (T=97 C=61)	103 (T=83 C=20)	103 (T=83 C=20)	32 (T=15 C=17)	32 (T=15 C=17)
34M	168 (T=67 C=101)	168 (T=67 C=101)	371 (T=162 C=209)	371 (T=162 C=209)	215 (T=144 C=71)	215 (T=144 C=71)	279 (T=215 C=64)	279 (T=215 C=64)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

\* Indicates insufficient sample size for comparisons. N/a = not applicable.  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-39. Treatment-Comparison Differences in Intimate Relationship Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site and Community Exposure**

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Difference	Sig.	Difference	Sig.												
Relationship status (romantically involved)																
9M	0.122	++	0.021	n.s.	0.028	n.s.	0.051	n.s.	-0.013	n.s.	0.044	n.s.	-0.014	n.s.	*	*
18M	0.129	++	0.197	+++	0.126	+	-0.068	n.s.	*	*	-0.119	n.s.	-0.073	n.s.	0.173	n.s.
34M	0.138	+	0.153	++	-0.113	n.s.	0.012	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Communication Skills																
9M	0.244	n.s.	0.201	n.s.	0.445	n.s.	-0.131	n.s.	-0.993	n.s.	-0.079	n.s.	0.205	n.s.	*	*
18M	0.281	n.s.	-0.121	n.s.	-0.084	n.s.	-0.384	n.s.	*	*	-0.059	n.s.	0.509	n.s.	1.474	++
34M	0.616	+	0.248	n.s.	0.816	++	-0.177	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Healthy Relationship beliefs																
9M	1.124	+++	0.624	n.s.	0.358	n.s.	-1.476	--	-0.96	n.s.	0.642	n.s.	1.01	+	*	*
18M	0.82	++	0.697	+	0.308	n.s.	0.292	n.s.	*	*	0.898	+	0.226	n.s.	-1.195	n.s.
34M	0.712	+	0.499	n.s.	-0.083	n.s.	-0.249	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Conflict resolution skills																
9M	0.534	+	0.253	n.s.	0.141	n.s.	-0.668	n.s.	-2.837	---	0.839	n.s.	-0.548	n.s.	*	*
18M	0.657	n.s.	0.569	n.s.	0.02	n.s.	-1.502	---	*	*	-0.41	n.s.	0.424	n.s.	-0.348	n.s.
34M	0.247	n.s.	0.093	n.s.	0.194	n.s.	0.195	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Happiness with relationship																
9M	0.862	+++	0.084	n.s.	-0.192	n.s.	-0.331	n.s.	-2.821	--	0.116	n.s.	0.193	n.s.	*	*
18M	0.87	++	-0.214	n.s.	0.763	n.s.	-0.414	n.s.	*	*	-0.673	n.s.	0.511	n.s.	0.747	n.s.
34M	0.79	n.s.	0.497	n.s.	-0.337	n.s.	-0.531	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Relationship exclusive																
9M	0.132	+++	-0.043	n.s.	0.044	n.s.	0.154	n.s.	-0.076	n.s.	-0.081	n.s.	0.003	n.s.	*	*
18M	0.068	n.s.	0.124	+++	-0.041	n.s.	0.002	n.s.	*	*	-0.017	n.s.	-0.051	n.s.	0.028	n.s.
34M	0.142	+	0.057	n.s.	-0.102	n.s.	0.048	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fidelity																
9M	-0.051	n.s.	-0.115	n.s.	-0.034	n.s.	-0.098	n.s.	-0.061	n.s.	-0.051	n.s.	-0.145	n.s.	*	*
18M	-0.045	n.s.	-0.063	n.s.	-0.116	n.s.	-0.035	n.s.	*	*	-0.093	n.s.	-0.045	n.s.	0.315	n.s.
34M	0.034	n.s.	0.026	n.s.	0.138	n.s.	0.082	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dyadic Adjustment																
9M	2.724	+++	0.253	n.s.	0.116	n.s.	-1.786	n.s.	-5.006	-	0.656	n.s.	0.571	n.s.	*	*
18M	2.825	+++	0.908	n.s.	1.091	n.s.	-1.489	n.s.	*	*	-2.938	--	1.293	n.s.	1.956	n.s.

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.	Differ-ence	Sig.
34M	2.323	++	2.454	+++	-1.389	n.s.	-1.022	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bonding																
9M	1.065	+++	-0.131	n.s.	0.015	n.s.	-0.918	n.s.	-1.267	n.s.	0.144	n.s.	0.31	n.s.	*	*
18M	0.837	++	0.363	n.s.	0.218	n.s.	-1.068	--	*	*	-1.138	-	0.627	n.s.	0.671	n.s.
34M	1.194	++	1.046	+++	-0.554	n.s.	-0.122	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Support																
9M	0.643	+++	-0.272	n.s.	-0.056	n.s.	-1.127	---	-1.51	---	0.228	n.s.	-0.04	n.s.	*	*
18M	0.696	+++	0.303	n.s.	0.1	n.s.	-1.045	---		*	-0.576	n.s.	0.256	n.s.	0.765	n.s.
34M	0.496	n.s.	0.571	++	-0.393	n.s.	-0.15	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Attitudes toward marriage (for unmarried respondents)																
9M	0.131	n.s.	-0.12	n.s.	0.111	n.s.	-0.756	---	-0.483	n.s.	-0.011	n.s.	-0.243	n.s.	*	*
18M	0.014	n.s.	-0.025	n.s.	0.274	n.s.	-0.465	---	*	*	-0.131	n.s.	0.023	n.s.	-0.534	n.s.
34M	-0.166	n.s.	-0.045	n.s.	0.054	n.s.	0.03	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Attitudes toward marriage (for married respondents)																
9M	0.467	+++	0.456	+	0.248	n.s.	1.16	+++	-0.152	n.s.	-0.374	n.s.	-0.167	n.s.	*	*
18M	0.758	+++	0.026	n.s.	-0.114	n.s.	-0.021	n.s.	*	*	-0.295	n.s.	0.065	n.s.	-0.31	n.s.
34M	0.482	n.s.	0.271	n.s.	-0.519	-	-0.242	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample sizes																
9M	417 (T=185 C=232)	417 (T=185 C=232)	120 (T=62 C=58)	120 (T=62 C=58)	363 (T=261 C=102)	363 (T=261 C=102)	107 (T=87 C=20)	107 (T=87 C=20)	35 (T=24 C=11)	35 (T=24 C=11)	127 (T=77 C=50)	127 (T=77 C=50)	91 (T=66 C=25)	91 (T=66 C=25)	13 (T=7 C=6)	13 (T=7 C=6)
18M	311 (T=130 C=181)	311 (T=130 C=181)	233 (T=113 C=120)	233 (T=113 C=120)	301 (T=218 C=83)	301 (T=218 C=83)	186 (T=144 C=42)	186 (T=144 C=42)	24 (T=16 C=8)	24 (T=16 C=8)	153 (T=89 C=64)	153 (T=89 C=64)	81 (T=60 C=21)	81 (T=60 C=21)	27 (T=15 C=12)	27 (T=15 C=12)
34M	176 (T=73 C=103)	176 (T=73 C=103)	347 (T=163 C=184)	347 (T=163 C=184)	221 (T=156 C=65)	221 (T=156 C=65)	266 (T=207 C=59)	266 (T=207 C=59)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

\* Indicates insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-40. Effects of Community Exposure on Intimate Relationship Outcomes for Couples, based on Latent Growth Curve Model**

	Indiana						Ohio						New Jersey				New York			
	9M		18M		34M		9M		18M		34M		9M		18M		9M		18M	
	Effect Size	Sig.																		
Relationship status	0.110	+++	0.049	n.s.	0.024	n.s.	0.287	+++	0.040	n.s.	0.110	+++	-0.130	--	-0.231	---	2.913	n.s.	-0.050	n.s.
Communication skills	-0.040	n.s.	-0.078	--	-0.040	n.s.	0.005	n.s.	0.072	+	0.068	+	0.077	n.s.	0.077	n.s.	-1.040	n.s.	-0.284	---
Healthy relationship beliefs	0.000	n.s.	0.003	n.s.	0.073	+	0.028	n.s.	-0.023	n.s.	0.027	n.s.	-0.130	--	-0.116	--	-0.009	n.s.	-0.159	--
Conflict resolution skills	-0.053	n.s.	-0.020	n.s.	0.063	n.s.	-0.014	n.s.	0.014	n.s.	-0.006	n.s.	-0.164	---	-0.187	---	-1.387	n.s.	-0.169	--
Happiness with relationship (0-10)	0.003	n.s.	0.065	+	0.123	+++	-0.019	n.s.	0.012	n.s.	0.034	n.s.	0.080	n.s.	0.091	n.s.	0.089	n.s.	-0.168	--
Relationship exclusive	-0.033	n.s.	-0.094	--	-0.010	n.s.	0.016	n.s.	-0.010	n.s.	-0.015	n.s.	0.052	n.s.	-0.001	n.s.	-0.874	n.s.	0.006	n.s.
Fidelity	0.007	n.s.	0.011	n.s.	0.007	n.s.	0.082	++	0.067	+	0.052	n.s.	0.131	++	0.091	n.s.	0.187	n.s.	0.049	n.s.
Dyadic Adjustment	-0.037	n.s.	0.036	n.s.	0.177	+++	-0.051	n.s.	-0.023	n.s.	0.021	n.s.	-0.044	n.s.	0.001	n.s.	-0.970	n.s.	-0.110	n.s.
Bonding	-0.070	-	-0.023	n.s.	0.137	+++	-0.084	--	-0.079	--	-0.068	-	-0.005	n.s.	0.051	n.s.	-1.820	n.s.	-0.203	---
Support	-0.044	n.s.	-0.022	n.s.	0.105	+++	0.040	n.s.	0.004	n.s.	0.016	n.s.	0.083	n.s.	0.114	++	-1.147	n.s.	-0.214	---
Attitudes toward marriage (married respondents)	-0.027	n.s.	-0.034	n.s.	-0.024	n.s.	-0.027	n.s.	-0.004	n.s.	0.010	n.s.	-0.048	n.s.	-0.066	n.s.	-0.714	n.s.	0.000	n.s.
Attitudes toward marriage (unmarried respondents)	NoC	NoC																		
Sample sizes	688	688	688	688	688	688	686	686	686	686	686	686	309	309	309	309	201	201	201	201

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-41. Treatment-Comparison (T-C) Differences in Intimate Relationship Outcomes at Baseline (Intercept) and Change over time (Slope) based on Latent Growth Curve Model, Controlling for Community Exposure**

Outcome	Indiana					Ohio					New Jersey					New York				
	Intercept		Slope			Intercept		Slope			Intercept		Slope			Intercept		Slope		
	T-C Intercept	Sig.	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig.	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig.	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig.	T-C Slope	Sig.	Effect Size
Relationship status	0.636	++	0.548	+++	0.106	0.222	n.s.	-0.249	-	-0.065	-0.405	--	-0.352	n.s.	-0.058	-0.108	n.s.	0.202	n.s.	0.054
Communication skills	-0.032	n.s.	0.068	n.s.	0.027	-0.479	---	0.369	+++	0.104	-0.55	--	1.073	n.s.	0.089	0.366	n.s.	-0.502	-	-0.118
Healthy relationship beliefs	0.589	+++	-0.104	n.s.	-0.045	-0.244	n.s.	0.032	n.s.	0.010	0.119	n.s.	-0.945	-	-0.096	0.589	n.s.	-0.512	n.s.	-0.100
Conflict resolution skills	0.069	n.s.	0.112	n.s.	0.037	-0.537	---	0.129	n.s.	0.039	-0.489	-	-0.389	n.s.	-0.038	0.184	n.s.	-0.543	n.s.	-0.088
Happiness with relationship (0-10)	0.774	+++	0.232	n.s.	0.060	-0.118	n.s.	0.108	n.s.	0.019	-0.338	n.s.	0.83	n.s.	0.034	0.477	n.s.	-0.763	--	-0.140
Relationship exclusive	0.345	n.s.	0.178	n.s.	0.039	0.005	n.s.	-0.097	n.s.	-0.028	0.03	n.s.	0.107	n.s.	0.020	0.424	n.s.	0.82	n.s.	0.021
Fidelity	0.139	n.s.	0.055	n.s.	0.014	-0.159	n.s.	0.084	n.s.	0.041	-0.023	n.s.	-0.097	n.s.	-0.036	0.109	n.s.	0.425	n.s.	0.074
Dyadic Adjustment	1.601	+++	0.73	++	0.095	-0.449	n.s.	-0.262	n.s.	-0.021	-0.888	-	-1.38	n.s.	-0.043	0.268	n.s.	0.061	n.s.	0.004
Bonding	0.37	+++	0.312	+++	0.115	-0.23	n.s.	-0.275	--	-0.091	-0.312	--	0.542	n.s.	0.054	0.291	n.s.	0.002	n.s.	0.000
Support	0.177	n.s.	0.242	+++	0.128	-0.194	+++	-0.032	n.s.	-0.012	-0.121	+++	0.416	n.s.	0.056	0.152	n.s.	0.028	n.s.	0.009
Attitudes toward marriage (married respondents)	0.21	n.s.	0.071	n.s.	0.056	0.002	++	-0.17	-	-0.064	0.033	n.s.	-0.186	n.s.	-0.066	NoC	NoC	NoC	NoC	NoC
Attitudes toward marriage (unmarried respondents)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Sample sizes	688	688	688	688	688	686	686	686	686	686	309	309	309	309	309	201	201	201	201	201

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

## **Factor Analysis Results for Intimate Relationship Quality Domain**

This section shows the factor analysis results for the five factors related to intimate relationship status and quality (see **Appendix A** for a description of the factor analysis methodology).

Results for the total male sample, based on the comparison of weighted means approach, are shown in **Exhibits C-42** through **C-46**. Results for the total female sample, based on the comparison of weighted means approach, are shown in **Exhibits C-47** through **C-51**. Results for couples, based on the latent growth curve models, are shown in **Exhibits C-52** through **C-56**.

In Indiana, positive treatment effects were found for men in three of the five factors within the intimate relationship quality domain: General Intimate Relationship Quality (all three follow-up waves), In-Prison Partner Contact (9- and 18-month waves), and Cohabitation and Partner Support (18- and 34-month waves). For women, positive treatment effects were found for three of the five intimate relationship factors: General Intimate Relationship Quality (all three follow-up waves), In-Prison Partner Contact (9-month wave), and Cohabitation and Partner Support (34-month wave). For couples, a positive treatment effect was found for one of the five intimate relationship quality factors (General Intimate Relationship Quality)

In Ohio, negative effects were found for men for two intimate relationship quality factors at the 9-month follow-up: General Intimate Relationship Quality and In-Prison Partner Contact. For women, negative effects were found for two intimate relationship quality factors: Healthy Relationship Beliefs (34 months) and Partner Violence (9- and 18-month waves). No treatment effects were found for any factors for couples.

In New Jersey, a positive treatment effect was evident for men for the Partner Violence factor (9-month follow-up wave) and a negative treatment effect was evident for the Cohabitation and Partner Support factor (18-month follow-up wave). No effects were significant for any factors for women and couples.

In New York, the only significant treatment effects was a negative effect found for couples for In-Prison Partner Contact.

**Exhibit C-42. Treatment-Comparison Differences in General Intimate Relationship Quality Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	+++	0.36	-	-0.24	n.s.	-0.14	n.s.	0.09
18M	++	0.26	n.s.	-0.12	n.s.	-0.2	n.s.	0.34
34M	++	0.31	n.s.	-0.15	n/a		n/a	
Sample sizes								
9M	563	563	473	473	159	159	138	138
9M	(T=249, C=343)	(T=249, C=343)	(T=387, C=129)	(T=387, C=129)	(T=108, C=67)	(T=108, C=67)	(T=102, C=43)	(T=102, C=43)
18M	538	538	455	455	158	158	130	130
18M	(T=242, C=321)	(T=242, C=321)	(T=361, C=141)	(T=361, C=141)	(T=107, C=65)	(T=107, C=65)	(T=98, C=37)	(T=98, C=37)
34M	514	514	449	449	n/a	n/a	n/a	n/a
34M	(T=229, C=310)	(T=229, C=310)	(T=359, C=134)	(T=359, C=134)	n/a	n/a	n/a	n/a

n/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-43. Treatment-Comparison Differences in Healthy Relationship Beliefs Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.17	n.s.	-0.32	n.s.	0.38	n.s.	-0.04
18M	n.s.	0.03	n.s.	0.06	n.s.	0.03	n.s.	0.22
34M	n.s.	0.09	n.s.	-0.13	n/a		n/a	
Sample sizes								
9M	592	592	513	513	174	174	143	143
9M	(T=249, C=343)	(T=249, C=343)	(T=384, C=129)	(T=384, C=129)	(T=107, C=67)	(T=107, C=67)	(T=101, C=43)	(T=101, C=43)
18M	564	564	501	501	172	172	134	134
18M	(T=242, C=322)	(T=242, C=322)	(T=360, C=141)	(T=360, C=141)	(T=107, C=65)	(T=107, C=65)	(T=98, C=37)	(T=98, C=37)
34M	539	539	494	494	n/a	n/a	n/a	n/a
34M	(T=229, C=310)	(T=229, C=310)	(T=359, C=135)	(T=359, C=135)	n/a	n/a	n/a	n/a

n/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-44. Treatment-Comparison Differences in In-Prison Partner Contact (Subsample with No Community Exposure) Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	+++	0.61	---	-0.36			n.s.	0.04
18M	+++	0.64	n.s.	-0.02			n.s.	-0.84
34M	n.s.	0.9	n.s.	0.01	n/a		n/a	
Sample sizes								
9M	424	424	358	358	26	26	123	123
9M	(T=180, C=248)	(T=180, C=248)	(T=258, C=103)	(T=258, C=103)	(T=20, C=6)	(T=20, C=6)	(T=90, C=34)	(T=90, C=34)
18M	284	284	259	259	8	8	97	97
18M	(T=126, C=162)	(T=126, C=162)	(T=180, C=82)	(T=180, C=82)	(T=6, C=2)	(T=6, C=2)	(T=79, C=20)	(T=79, C=20)
34M	145	145	182	182	n/a	n/a	n/a	n/a
34M	(T=63, C=85)	(T=63, C=85)	(T=123, C=63)	(T=123, C=63)	n/a	n/a	n/a	n/a

n/a Not applicable

n.s. No statistically significant impact.

+++ / +++ / + Statistically significant positive impact at the .01/.05/.10 level.

--- / -- / - Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-45. Treatment-Comparison Differences in Partner Violence (Subsample with Community Exposure) Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	-0.2	n.s.	-0.91	+++	0.77		
18M	n.s.	-0.13	n.s.	0.11	n.s.	0.36		
34M	n.s.	-0.02	n.s.	-0.12	n/a		n/a	
Sample sizes								
9M	118	118	107	107	115	115	10	10
9M	(T=56, C=62)	(T=56, C=62)	(T=93, C=14)	(T=93, C=14)	(T=108, C=67)	(T=108, C=67)	(T=4, C=6)	(T=4, C=6)
18M	210	210	179	179	121	121	20	20
18M	(T=94, C=116)	(T=94, C=116)	(T=134, C=45)	(T=134, C=45)	(T=67, C=54)	(T=67, C=54)	(T=7, C=13)	(T=7, C=13)
34M	302	302	236	236	n/a	n/a	n/a	n/a
34M	(T=136, C=166)	(T=136, C=166)	(T=180, C=56)	(T=180, C=56)	n/a	n/a	n/a	n/a

n/a Not applicable

n.s. No statistically significant impact.

+++ / ++ / + Statistically significant positive impact at the .01 / .05 / .10 level.

--- / -- / - Statistically significant negative impact at the .01 / .05 / .10 level.

**Exhibit C-46. Treatment-Comparison Differences in Cohabitation and Partner Support  
(Subsample with Community Exposure) Factor for Total Male Sample at Nine,  
18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.36	n.s.	-1.01	n.s.	-0.26		
18M	++	0.39	n.s.	-0.42	-	-0.4	n.s.	0.42
34M	+++	0.52	n.s.	0.21	n/a		n/a	
Sample sizes								
9M	139	139	121	121	145	145	16	16
9M	(T=67, C=72)	(T=67, C=72)	(T=102, C=19)	(T=102, C=19)	(T=84, C=61)	(T=84, C=61)	(T=8, C=8)	(T=8, C=8)
18M	251	251	205	205	157	157	32	32
18M	(T=111, C=140)	(T=111, C=140)	(T=153, C=52)	(T=153, C=52)	(T=96, C=61)	(T=96, C=61)	(T=15, C=17)	(T=15, C=17)
34M	369	369	277	277	n/a	n/a	n/a	n/a
34M	(T=161, C=208)	(T=161, C=208)	(T=214, C=63)	(T=214, C=63)	n/a	n/a	n/a	n/a

n/a Not applicable

n.s. No statistically significant impact.

+++ / ++ / + Statistically significant positive impact at the .01 / .05 / .10 level.

--- / -- / - Statistically significant negative impact at the .01 / .05 / .10 level.

**Exhibit C-47. Treatment-Comparison Differences in General Intimate Relationship Quality Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	+++	0.34	n.s.	-0.03	n.s.	-0.13	n.s.	0.32
18M	++	0.3	n.s.	-0.06	n.s.	-0.33	n.s.	0.34
34M	+++	0.34	n.s.	-0.11	n/a		n/a	
Sample sizes								
9M	519	519	439	439	139	139	93	93
9M	(T=245, C=274)	(T=245, C=274)	(T=323, C=116)	(T=323, C=116)	(T=87, C=52)	(T=87, C=52)	(T=63, C=30)	(T=63, C=30)
18M	518	518	447	447	146	146	92	92
18M	(T=239, C=279)	(T=239, C=279)	(T=331, C=116)	(T=331, C=116)	(T=89, C=57)	(T=89, C=57)	(T=62, C=30)	(T=62, C=30)
34M	497	497	445	445	n/a	n/a	n/a	n/a
34M	(T=231, C=266)	(T=231, C=266)	(T=331, C=114)	(T=331, C=114)	n/a	n/a	n/a	n/a

N/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-48. Treatment-Comparison Differences in Healthy Relationship Beliefs Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.33	n.s.	-0.07	n.s.	0.06	n.s.	0.16
18M	n.s.	0.24	n.s.	0.04	n.s.	0.49	n.s.	0.16
34M	n.s.	0.14	-	-0.18	n/a		n/a	
Sample sizes								
9M	519	519	437	437	139	139	93	93
9M	(T=245, C=274)	(T=245, C=274)	(T=322, C=115)	(T=322, C=115)	(T=87, C=52)	(T=87, C=52)	(T=63, C=30)	(T=63, C=30)
18M	519	519	448	448	146	146	92	92
18M	(T=239, C=280)	(T=239, C=280)	(T=332, C=116)	(T=332, C=116)	(T=89, C=57)	(T=89, C=57)	(T=62, C=30)	(T=62, C=30)
34M	504	504	445	445	n/a	n/a	n/a	n/a
34M	(T=234, C=270)	(T=234, C=270)	(T=332, C=113)	(T=332, C=113)	n/a	n/a	n/a	n/a

N/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-49. Treatment-Comparison Differences in In-Prison Partner Contact (Subsample with no Community Exposure) Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	+++	0.47	n.s.	-0.19	n.s.	-2.57	n.s.	0.39
18M	n.s.	0.27	n.s.	0.11			n.s.	0.21
34M	n.s.	0.6	n.s.	-0.19	n/a		n/a	
Sample sizes								
9M	388	388	314	314	31	31	76	76
9M	(T=182, C=206)	(T=182, C=206)	(T=226, C=88)	(T=226, C=88)	(T=20, C=11)	(T=20, C=11)	(T=55, C=21)	(T=55, C=21)
18M	276	276	252	252	13	13	62	62
18M	(T=124, C=152)	(T=124, C=152)	(T=179, C=73)	(T=179, C=73)	(T=8, C=5)	(T=8, C=5)	(T=47, C=15)	(T=47, C=15)
34M	151	151	180	180	n/a	n/a	n/a	n/a
34M	(T=67, C=84)	(T=67, C=84)	(T=124, C=56)	(T=124, C=56)	n/a	n/a	n/a	n/a

n/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-50. Treatment-Comparison Differences in Partner Violence (Subsample with Community Exposure) Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	-0.19	--	-1.26	n.s.	-0.1		
18M	n.s.	0.05	--	-0.95	n.s.	-0.45		
34M	n.s.	-0.2	n.s.	0.33	n/a		n/a	
Sample sizes								
9M	99	99	76	76	84	84	11	11
9M	(T=54, C=45)	(T=54, C=45)	(T=62, C=14)	(T=62, C=14)	(T=45, C=39)	(T=45, C=39)	(T=5, C=6)	(T=5, C=6)
18M	179	179	137	137	99	99	19	19
18M	(T=94, C=85)	(T=94, C=85)	(T=109, C=28)	(T=109, C=28)	(T=54, C=45)	(T=54, C=45)	(T=9, C=10)	(T=9, C=10)
34M	252	252	197	197	n/a	n/a	n/a	n/a
34M	(T=126, C=126)	(T=126, C=126)	(T=156, C=41)	(T=156, C=41)	n/a	n/a	n/a	n/a

N/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-51. Treatment-Comparison Differences in Partner Cohabitation and Support (Subsample with Community Exposure) Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.15	n.s.	-0.58	n.s.	-0.14		
18M	n.s.	0.2	n.s.	0.27	n.s.	-0.29	n.s.	0.36
34M	++	0.38	n.s.	0.12	n/a		n/a	
Sample sizes								
9M	117	117	96	96	107	107	13	13
9M	(T=62, C=55)	(T=62, C=55)	(T=78, C=18)	(T=78, C=18)	(T=66, C=41)	(T=66, C=41)	(T=6, C=7)	(T=6, C=7)
18M	222	222	168	168	125	125	26	26
18M	(T=111, C=111)	(T=111, C=111)	(T=132, C=36)	(T=132, C=36)	(T=76, C=49)	(T=76, C=49)	(T=13, C=13)	(T=13, C=13)
34M	329	329	241	241	n/a	n/a	n/a	n/a
34M	(T=160, C=169)	(T=160, C=169)	(T=189, C=52)	(T=189, C=52)	n/a	n/a	n/a	n/a

N/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-52. Treatment-Comparison (T-C) Differences in General Intimate Relationship Quality Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	+++	0.166	n.s.	-0.035	--	-0.136	n.s.	0.054
T-C Slopes	+	0.068	n.s.	-0.026	n.s.	0.003	n.s.	0.072
Sample sizes	686	686	686	686	305	305	200	200

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-53. Treatment-Comparison (T-C) Differences in Healthy Relationship Beliefs Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	+++	0.137	n.s.	-0.041	n.s.	0.011	n.s.	0.056
T-C Slopes	n.s.	-0.048	n.s.	0.014	n.s.	0.028	n.s.	-0.066
Sample sizes	686	686	688	688	309	309	201	201

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-54. Treatment-Comparison (T-C) Differences in In-Prison Partner Contact (Subsample with No Community Exposure) Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	+++	0.31	n.s.	-0.017	n.s.	NoC	+	0.135
T-C Slopes	n.s.	0.052	n.s.	-0.013	n.s.	NoC	---	-0.257
Sample sizes	661	661	630	630	283	283	195	195

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-55. Treatment-Comparison (T-C) Differences in Partner Violence (Subsample with Community Exposure) Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	n.s.	-0.006	n.s.	-0.054	n.s.	0.027	n.s.	NoC
T-C Slopes	n.s.	-0.007	n.s.	0.017	n.s.	0.008	n.s.	NoC
Sample sizes	642	642	643	643	289	289	N/A	N/A

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

N/A Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-56. Treatment-Comparison (T-C) Differences in Partner Cohabitation and Support (Subsample with Community Exposure) Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	n.s.	0.07	n.s.	-0.057	n.s.	NoC	n.s.	NoC
T-C Slopes	n.s.	0.043	n.s.	0.067	n.s.	NoC	n.s.	NoC
Sample sizes	441	441	343	343	N/A	N/A	N/A	N/A

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

N/A Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

## Adjustments for Multiple Comparisons for Intimate Relationship Quality Domain

As described in **Appendix A**, multiple comparison adjustment was performed for both analytic approaches to see if significant outcomes remained after adjusting for the number of tests. This section presents the results of the adjustments.

After adjusting the significance levels to account for multiple comparisons, many of the findings in the Indiana sample remained significant. Virtually all of the positive treatment effects found in the couple-based models remained significant after the multiple comparisons adjustment (e.g., relationship status, exclusivity, bonding, support, attitudes toward marriage among married respondents, and coresidence after the male partner's release), and most of the

positive effects found for the total male sample were significant. Treatment men continued to be significantly more likely than comparison men to report being in an intimate relationship with their survey partners at all three follow-up waves, reside with their partners after release, have no other partners, report greater happiness in their relationships, report higher levels of bonding and emotional support, and have telephone and in-person contact (and a greater frequency of both types of contact) with partners (for men who remained incarcerated). However, the treatment effects observed for dyadic adjustment, attitudes toward marriage, emotional support provided to and received from partners after release disappeared and a few findings that were significant for multiple follow-up waves became only significant for one. In addition, the results were less promising for women. Among the total female sample, all of the positive treatment effects disappeared when adjusting for multiple comparisons.

In the other sites, the few positive treatment effects that were found in the intimate relationship quality domain for men, women, and couples were generally no longer significant after the multiple comparisons adjustment.

Therefore, the general pattern of significant positive treatment effects on intimate relationship outcomes in Indiana—particularly for couples and men—and lack of effects in the other sites remained evident after adjusting statistically for multiple comparisons.

## **Site-Specific Detailed Findings for All Intimate Relationship Quality Outcomes**

This section of the report presents the detailed, site-specific findings for all analyses summarized in **Chapter 5** and this appendix.

### *Treatment-Comparison Differences by Wave*

#### *Total Male Sample*

Detailed results for all treatment-comparison differences by wave among the male sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The Indiana detailed male findings are shown in **Exhibit C-57**. Findings for Ohio men are shown in **Exhibits C-58**. The New Jersey male findings are shown in **Exhibit C-59**, and the findings for the New York male sample are shown in **Exhibits C-60**.

**Exhibit C-57. Treatment and Comparison Means and Effect Sizes for Intimate Relationship Status and Quality Outcomes for Indiana Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	592	249	343	0.80	0.62	+++	0.18	0.94
18M Follow-up	563	242	321	0.68	0.53	+++	0.16	0.66
34M Follow-up	539	229	310	0.57	0.42	+++	0.15	0.61
Communication skills								
9M Follow-up	586	247	339	7.65	7.49	n.s.	0.16	0.07
18M Follow-up	553	238	315	7.36	7.40	n.s.	-0.03	-0.01
34M Follow-up	515	224	291	7.35	7.25	n.s.	0.1	0.04
Healthy relationship beliefs								
9M Follow-up	592	249	343	16.67	16.21	n.s.	0.46	0.17
18M Follow-up	564	242	322	16.34	16.25	n.s.	0.09	0.03
34M Follow-up	539	229	310	16.36	16.12	n.s.	0.23	0.09
Conflict resolution skills								
9M Follow-up	586	247	339	8.05	7.83	n.s.	0.22	0.08
18M Follow-up	554	239	315	7.63	7.68	n.s.	-0.05	-0.02
34M Follow-up	517	225	292	7.72	7.68	n.s.	0.04	0.02
Happiness with relationship								
9M Follow-up	562	246	316	6.93	5.76	+++	1.17	0.39
18M Follow-up	534	237	297	6.56	5.50	+++	1.06	0.33
34M Follow-up	499	221	278	5.88	5.45	n.s.	0.44	0.14
Relationship exclusive								
9M Follow-up	591	249	342	0.94	0.89	+	0.04	0.6
18M Follow-up	564	242	322	0.89	0.80	+++	0.09	0.73
34M Follow-up	539	229	310	0.76	0.72	n.s.	0.05	0.24
Fidelity								
9M Follow-up	559	244	315	0.59	0.50	n.s.	0.1	0.15
18M Follow-up	527	233	294	0.60	0.50	n.s.	0.1	0.23
34M Follow-up	501	223	278	0.63	0.56	n.s.	0.08	0.24
Dyadic Adjustment								
9M Follow-up	562	246	316	19.67	17.30	++	2.37	0.34
18M Follow-up	537	239	298	18.14	16.01	++	2.13	0.3
34M Follow-up	502	223	279	17.15	15.23	+	1.93	0.28
Bonding								
9M Follow-up	558	243	315	7.38	6.51	+++	0.87	0.37
18M Follow-up	532	236	296	6.70	6.05	+++	0.65	0.24
34M Follow-up	494	223	271	6.64	5.88	+++	0.76	0.28
Support								
9M Follow-up	560	246	314	4.54	4.09	+++	0.45	0.28
18M Follow-up	530	236	294	4.18	3.78	++	0.4	0.21
34M Follow-up	495	222	273	4.17	3.68	++	0.49	0.26

*The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts*

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	446	168	278	2.42	2.39	n.s.	0.03	0.03
18M Follow-up	401	162	239	2.37	2.27	+	0.1	0.12
34M Follow-up	375	140	235	2.23	2.33	n.s.	-0.1	-0.13
Attitudes toward marriage (for married respondents)								
9M Follow-up	158	83	75	2.80	2.52	n.s.	0.28	0.62
18M Follow-up	156	79	77	2.75	2.50	++	0.25	0.59
34M Follow-up	150	85	65	2.78	2.50	++	0.28	0.67
<b>Reentry-Specific Outcomes</b>								
Coresidence								
9M Follow-up	139	67	72	0.52	0.62	n.s.	-0.1	-0.46
18M Follow-up	251	111	140	0.70	0.48	+++	0.21	0.97
34M Follow-up	369	161	208	0.61	0.45	+++	0.16	0.77
Emotional support provided to partner								
9M Follow-up	133	65	68	5.20	4.76	++	0.43	0.71
18M Follow-up	118	50	68	4.54	4.34	n.s.	0.2	0.25
34M Follow-up	111	54	57	4.64	3.82	++	0.82	1.03
Emotional support received from partner								
9M Follow-up	135	67	68	4.49	4.36	n.s.	0.13	0.17
18M Follow-up	118	49	69	4.25	3.52	+	0.73	0.74
34M Follow-up	111	54	57	4.43	3.31	++	1.12	1.29
No physical abuse: perpetration								
9M Follow-up	135	66	69	0.85	0.86	n.s.	-0.01	0.07
18M Follow-up	241	110	131	0.76	0.75	n.s.	0.01	-0.01
34M Follow-up	349	159	190	0.74	0.75	n.s.	-0.01	-0.22
No physical abuse: victimization								
9M Follow-up	135	66	69	0.79	0.72	n.s.	0.06	0.35
18M Follow-up	241	110	131	0.74	0.66	n.s.	0.08	0.43
34M Follow-up	349	159	190	0.71	0.68	n.s.	0.03	0.07
No emotional abuse: perpetration								
9M Follow-up	135	66	69	0.87	0.86	n.s.	0.01	0.21
18M Follow-up	242	111	131	0.76	0.85	n.s.	-0.09	-0.54
34M Follow-up	352	159	193	0.81	0.80	n.s.	0.01	0.19
No emotional abuse: victimization								
9M Follow-up	135	66	69	0.81	0.72	n.s.	0.09	0.39
18M Follow-up	242	111	131	0.70	0.74	n.s.	-0.04	-0.15
34M Follow-up	350	159	191	0.74	0.72	n.s.	0.02	0.04
No severe physical or sexual abuse: perpetration								
9M Follow-up	135	66	69	0.94	0.99	n.s.	-0.05	-1.69
18M Follow-up	241	110	131	0.93	0.95	n.s.	-0.02	-0.74
34M Follow-up	350	159	191	0.95	0.93	n.s.	0.03	0.26

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
No severe physical or sexual abuse: victimization								
9M Follow-up	135	66	69	0.93	0.96	n.s.	-0.03	-0.58
18M Follow-up	241	110	131	0.93	0.93	n.s.	0	-0.35
34M Follow-up	350	159	191	0.91	0.92	n.s.	-0.01	-0.68
No frequent emotional abuse: perpetration								
9M Follow-up	135	66	69	1.00	0.99	n.s.	0.01	9.75
18M Follow-up	242	111	131	0.95	0.97	n.s.	-0.03	-0.71
34M Follow-up	350	159	191	0.95	0.96	n.s.	0	-0.33
No frequent emotional abuse: victimization								
9M Follow-up	135	66	69	0.90	0.91	n.s.	0	0.09
18M Follow-up	242	111	131	0.88	0.90	n.s.	-0.02	-0.21
34M Follow-up	350	159	191	0.89	0.88	n.s.	0.01	0.23
No frequent physical abuse: perpetration								
9M Follow-up	135	66	69	0.97	0.99	n.s.	-0.02	-0.86
18M Follow-up	241	110	131	0.96	0.97	n.s.	-0.01	-0.38
34M Follow-up	349	159	190	0.98	0.96	n.s.	0.02	1.08
No frequent physical abuse: victimization								
9M Follow-up	135	66	69	0.92	0.95	n.s.	-0.04	-0.5
18M Follow-up	241	110	131	0.96	0.91	n.s.	0.05	0.99
34M Follow-up	349	159	190	0.90	0.91	n.s.	0	0.23
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	428	180	248	0.77	0.61	++	0.16	0.6
18M Follow-up	288	126	162	0.69	0.54	++	0.15	0.64
34M Follow-up	148	63	85	0.74	0.60	+	0.14	0.67
Frequency of phone calls between partners								
9M Follow-up	428	180	248	3.28	2.48	++	0.8	0.42
18M Follow-up	288	126	162	3.06	2.19	++	0.87	0.53
34M Follow-up	148	63	85	3.27	2.15	++	1.12	1.02
Any personal visits between partners								
9M Follow-up	421	180	241	0.86	0.55	+++	0.32	1.22
18M Follow-up	284	126	158	0.68	0.41	+++	0.28	0.89
34M Follow-up	147	63	84	0.58	0.33	+	0.25	0.68
Frequency of personal visits between partners								
9M Follow-up	421	180	241	2.94	1.72	+++	1.22	0.79
18M Follow-up	284	126	158	2.20	1.31	++	0.89	0.71
34M Follow-up	147	63	84	1.56	0.88	n.s.	0.68	0.91

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-58. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for Ohio Male Sample at Nine, 18, and 34 Months**

Outcome	N		Mean			P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	516	387	129	0.66	0.70	n.s.	-0.05	-0.37
18M Follow-up	502	361	141	0.52	0.55	n.s.	-0.03	-0.12
34M Follow-up	493	359	134	0.42	0.44	n.s.	-0.02	-0.06
Communication skills								
9M Follow-up	509	380	129	7.26	7.44	n.s.	-0.18	-0.07
18M Follow-up	489	351	138	7.17	7.12	n.s.	0.05	0.02
34M Follow-up	474	350	124	7.01	7.12	n.s.	-0.11	-0.05
Healthy relationship beliefs								
9M Follow-up	513	384	129	16.10	17.00	n.s.	-0.9	-0.32
18M Follow-up	501	360	141	16.20	16.04	n.s.	0.16	0.06
34M Follow-up	494	359	135	15.96	16.35	n.s.	-0.39	-0.13
Conflict resolution skills								
9M Follow-up	509	380	129	7.55	8.05	n.s.	-0.5	-0.19
18M Follow-up	490	352	138	7.40	7.55	n.s.	-0.15	-0.06
34M Follow-up	475	350	125	7.14	7.55	n.s.	-0.41	-0.18
Happiness with relationship								
9M Follow-up	471	352	119	6.07	5.88	n.s.	0.19	0.07
18M Follow-up	452	324	128	5.54	5.75	n.s.	-0.2	-0.06
34M Follow-up	447	329	118	5.21	5.30	n.s.	-0.08	-0.03
Relationship exclusive								
9M Follow-up	515	386	129	0.86	0.89	n.s.	-0.03	-0.28
18M Follow-up	500	359	141	0.81	0.84	n.s.	-0.03	-0.23
34M Follow-up	495	360	135	0.71	0.76	n.s.	-0.05	-0.26
Fidelity								
9M Follow-up	466	348	118	0.42	0.44	n.s.	-0.02	-0.09
18M Follow-up	450	322	128	0.48	0.46	n.s.	0.02	0.12
34M Follow-up	441	324	117	0.47	0.45	n.s.	0.02	0.21
Dyadic Adjustment								
9M Follow-up	470	351	119	17.25	18.09	n.s.	-0.84	-0.16
18M Follow-up	453	325	128	15.61	15.96	n.s.	-0.35	-0.05
34M Follow-up	447	329	118	14.25	15.59	n.s.	-1.34	-0.2
Bonding								
9M Follow-up	469	350	119	6.55	7.11	--	-0.56	-0.3
18M Follow-up	450	322	128	5.77	6.57	--	-0.81	-0.32
34M Follow-up	440	323	117	5.48	6.00	n.s.	-0.52	-0.21
Support								
9M Follow-up	468	349	119	3.99	4.44	--	-0.45	-0.34
18M Follow-up	452	324	128	3.77	3.95	n.s.	-0.18	-0.1
34M Follow-up	440	323	117	3.56	3.87	n.s.	-0.31	-0.17

Outcome	N		Mean			P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	420	324	96	2.28	2.38	n.s.	-0.1	-0.13
18M Follow-up	349	258	91	2.13	2.10	n.s.	0.03	0.03
34M Follow-up	331	254	77	2.14	2.15	n.s.	-0.01	-0.01
Attitudes toward marriage (for married respondents)								
9M Follow-up	127	84	43	2.42	2.58	--	-0.16	-0.42
18M Follow-up	138	91	47	2.09	2.45	-	-0.36	-0.78
34M Follow-up	144	97	47	2.10	2.42	n.s.	-0.31	-0.73
<b>Reentry-Specific Outcomes</b>								
Coresidence								
9M Follow-up	121	102	19	0.56	0.51	n.s.	0.05	0.27
18M Follow-up	205	153	52	0.54	0.56	n.s.	-0.03	-0.06
34M Follow-up	277	214	63	0.50	0.52	n.s.	-0.02	0
Emotional support provided to partner								
9M Follow-up	115	99	16	4.48	5.12	-	-0.64	-1.55
18M Follow-up	76	51	25	4.02	4.79	n.s.	-0.78	-1.25
34M Follow-up	71	57	14	4.33	3.42	n.s.	0.91	1.39
Emotional support received from partner								
9M Follow-up	115	99	16	3.90	4.48	n.s.	-0.57	-0.94
18M Follow-up	76	51	25	3.37	4.01	n.s.	-0.64	-0.85
34M Follow-up	72	58	14	3.92	2.71	n.s.	1.21	1.4
No physical abuse: perpetration								
9M Follow-up	116	100	16	0.73	0.85	n.s.	-0.12	-0.15
18M Follow-up	193	144	49	0.72	0.67	n.s.	0.05	0.48
34M Follow-up	260	201	59	0.66	0.78	n.s.	-0.11	-0.53
No physical abuse: victimization								
9M Follow-up	116	100	16	0.77	0.64	n.s.	0.13	0.9
18M Follow-up	193	144	49	0.65	0.63	n.s.	0.02	0.21
34M Follow-up	260	201	59	0.67	0.67	n.s.	0	-0.15
No emotional abuse: perpetration								
9M Follow-up	116	100	16	0.78	0.94	n.s.	-0.16	-1.17
18M Follow-up	194	145	49	0.73	0.82	n.s.	-0.1	-0.4
34M Follow-up	261	202	59	0.77	0.78	n.s.	-0.02	0.05
No emotional abuse: victimization								
9M Follow-up	116	100	16	0.68	0.85	n.s.	-0.17	-0.52
18M Follow-up	194	145	49	0.69	0.75	n.s.	-0.06	-0.16
34M Follow-up	261	202	59	0.72	0.71	n.s.	0.01	0.05
No severe physical or sexual abuse: perpetration								
9M Follow-up	116	100	16	0.95	1.00	n.s.	-0.05	-10.79
18M Follow-up	193	144	49	0.97	0.89	++	0.08	2.53
34M Follow-up	260	201	59	0.94	0.92	n.s.	0.02	0.38

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Outcome	N		Mean			P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
No severe physical or sexual abuse: victimization								
9M Follow-up	116	100	16	0.92	1.00	n.s.	-0.08	-10.98
18M Follow-up	193	144	49	0.93	0.94	n.s.	-0.01	0.08
34M Follow-up	260	201	59	0.91	0.92	n.s.	-0.01	-0.14
No frequent emotional abuse: perpetration								
9M Follow-up	116	100	16	0.92	1.00	n.s.	-0.08	-11.53
18M Follow-up	194	145	49	0.95	0.94	n.s.	0.01	0.13
34M Follow-up	261	202	59	0.93	0.97	n.s.	-0.05	-1.01
No frequent emotional abuse: victimization								
9M Follow-up	116	100	16	0.85	0.89	n.s.	-0.04	-0.13
18M Follow-up	194	145	49	0.88	0.86	n.s.	0.03	0.37
34M Follow-up	261	202	59	0.88	0.86	n.s.	0.02	0.3
No frequent physical abuse: perpetration								
9M Follow-up	116	100	16	0.96	1.00	n.s.	-0.04	-10
18M Follow-up	193	144	49	0.97	0.96	n.s.	0.01	0.43
34M Follow-up	260	201	59	0.96	0.97	n.s.	-0.01	-0.09
No frequent physical abuse: victimization								
9M Follow-up	116	100	16	0.90	1.00	---	-0.1	-11.92
18M Follow-up	193	144	49	0.88	0.84	n.s.	0.05	0.73
34M Follow-up	260	201	59	0.92	0.92	n.s.	0	-0.1
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	361	258	103	0.75	0.84	-	-0.08	-0.7
18M Follow-up	261	179	82	0.74	0.66	n.s.	0.09	0.35
34M Follow-up	187	124	63	0.75	0.77	n.s.	-0.02	-0.08
Frequency of phone calls between partners								
9M Follow-up	361	258	103	3.00	3.35	--	-0.35	-0.21
18M Follow-up	261	179	82	2.95	2.87	n.s.	0.08	0.04
34M Follow-up	187	124	63	2.86	3.30	n.s.	-0.44	-0.34
Any personal visits between partners								
9M Follow-up	352	252	100	0.62	0.68	n.s.	-0.06	-0.48
18M Follow-up	259	178	81	0.55	0.58	n.s.	-0.04	0.03
34M Follow-up	182	121	61	0.51	0.52	n.s.	-0.01	0.12
Frequency of personal visits between partners								
9M Follow-up	352	252	100	1.98	2.06	n.s.	-0.08	-0.06
18M Follow-up	259	178	81	1.77	1.77	n.s.	0	0
34M Follow-up	182	121	61	1.42	1.48	n.s.	-0.06	-0.05

n.s. No statistically significant impact.  
 +++/++/ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-59. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for New Jersey Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	175	108	67	0.71	0.82	-	-0.11	-0.81
18M Follow-up	172	107	65	0.47	0.62	n.s.	-0.14	-0.59
Communication skills								
9M Follow-up	174	107	67	7.57	8.43	--	-0.85	-0.51
18M Follow-up	168	103	65	7.60	7.68	n.s.	-0.09	-0.03
Healthy relationship beliefs								
9M Follow-up	174	107	67	16.03	16.04	n.s.	-0.01	0
18M Follow-up	172	107	65	15.86	15.76	n.s.	0.1	0.03
Conflict resolution skills								
9M Follow-up	174	107	67	8.16	7.86	n.s.	0.3	0.1
18M Follow-up	168	103	65	7.62	7.44	n.s.	0.18	0.06
Happiness with relationship								
9M Follow-up	159	93	66	6.05	7.05	n.s.	-1	-0.38
18M Follow-up	153	90	63	5.73	6.02	n.s.	-0.29	-0.08
Relationship exclusive								
9M Follow-up	175	108	67	0.82	0.80	n.s.	0.02	0.15
18M Follow-up	173	108	65	0.72	0.73	n.s.	-0.01	0
Fidelity								
9M Follow-up	158	92	66	0.55	0.55	n.s.	0	-0.2
18M Follow-up	154	90	64	0.63	0.66	n.s.	-0.03	-0.25
Dyadic Adjustment								
9M Follow-up	159	93	66	17.63	19.26	n.s.	-1.63	-0.27
18M Follow-up	153	89	64	16.64	17.79	n.s.	-1.16	-0.16
Bonding								
9M Follow-up	159	93	66	6.69	7.07	n.s.	-0.38	-0.18
18M Follow-up	152	89	63	6.27	6.59	n.s.	-0.32	-0.12
Support								
9M Follow-up	159	93	66	4.39	4.63	n.s.	-0.24	-0.16
18M Follow-up	152	89	63	3.98	4.55	-	-0.57	-0.35
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	145	94	51	2.26	2.35	n.s.	-0.09	-0.11
18M Follow-up	124	76	48	2.42	2.52	n.s.	-0.11	-0.18
Attitudes toward marriage (for married respondents)								
9M Follow-up	36	18	18	2.53	2.49	n.s.	0.04	0.09
18M Follow-up	43	26	17	2.22	2.93	-	-0.71	-6.25
<b>Reentry-Specific Outcomes</b>								
Co-residence								
9M Follow-up	145	84	61	0.52	0.74	-	-0.21	-0.98
18M Follow-up	157	96	61	0.50	0.64	n.s.	-0.14	-0.41
Emotional support provided to partner								
9M Follow-up	133	73	60	4.82	5.00	n.s.	-0.18	-0.16
18M Follow-up	13	11	2	*	*	*	*	*

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Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Emotional support received from partner								
9M Follow-up	133	73	60	4.52	4.86	n.s.	-0.34	-0.22
18M Follow-up	13	11	2	*	*	*	*	*
No physical abuse: perpetration								
9M Follow-up	132	72	60	0.64	0.63	n.s.	0.01	0.19
18M Follow-up	141	81	60	0.69	0.66	n.s.	0.03	0.09
No physical abuse: victimization								
9M Follow-up	132	72	60	0.74	0.62	n.s.	0.12	0.57
18M Follow-up	141	81	60	0.70	0.54	n.s.	0.16	0.66
No emotional abuse: perpetration								
9M Follow-up	132	72	60	0.88	0.83	n.s.	0.05	0.69
18M Follow-up	141	81	60	0.76	0.62	+	0.14	0.93
No emotional abuse: victimization								
9M Follow-up	132	72	60	0.72	0.76	n.s.	-0.03	-0.02
18M Follow-up	141	81	60	0.70	0.67	n.s.	0.03	0.33
No severe physical or sexual abuse: perpetration								
9M Follow-up	132	72	60	0.97	0.85	++	0.12	3.1
18M Follow-up	141	81	60	0.97	0.84	++	0.12	2.08
No severe physical or sexual abuse: victimization								
9M Follow-up	132	72	60	0.92	0.84	n.s.	0.08	0.7
18M Follow-up	141	81	60	0.97	0.89	n.s.	0.08	2.04
No frequent emotional abuse: perpetration								
9M Follow-up	132	72	60	1.00	0.98	n.s.	0.02	10.63
18M Follow-up	141	81	60	0.99	0.95	n.s.	0.03	1.09
No frequent emotional abuse: victimization								
9M Follow-up	132	72	60	0.91	0.93	n.s.	-0.01	0.01
18M Follow-up	141	81	60	0.91	0.89	n.s.	0.02	0.36
No frequent physical abuse: perpetration								
9M Follow-up	132	72	60	0.98	0.96	n.s.	0.02	9.72
18M Follow-up	141	81	60	0.99	0.90	n.s.	0.1	23.12
No frequent physical abuse: victimization								
9M Follow-up	132	72	60	0.96	0.97	n.s.	-0.01	-11.07
18M Follow-up	141	81	60	0.92	0.88	n.s.	0.04	0.36
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	26	20	6	*	*	*	*	*
18M Follow-up	8	6	2	*	*	*	*	*
Frequency of phone calls between partners								
9M Follow-up	26	20	6	*	*	*	*	*
18M Follow-up	8	6	2	*	*	*	*	*
Any personal visits between partners								
9M Follow-up	26	20	6	*	*	*	*	*
18M Follow-up	8	6	2	*	*	*	*	*

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Frequency of personal visits between partners								
9M Follow-up	26	20	6	*	*	*	*	*
18M Follow-up	8	6	2	*	*	*	*	*

\* Indicates insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### Exhibit C-60. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for New York Male Sample at Nine, 18, and 34 Months

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	145	102	43	0.783	0.823	n.s.	-0.04	-0.26
18M Follow-up	135	98	37	0.81	0.73	n.s.	0.08	0.46
Communication skills								
9M Follow-up	143	100	43	8.59	8.40	n.s.	0.19	0.1
18M Follow-up	133	97	36	7.79	7.38	n.s.	0.41	0.18
Healthy relationship beliefs								
9M Follow-up	144	101	43	17.10	17.31	n.s.	-0.21	-0.07
18M Follow-up	135	98	37	17.16	16.61	n.s.	0.55	0.19
Conflict resolution skills								
9M Follow-up	143	100	43	8.80	8.51	n.s.	0.29	0.09
18M Follow-up	132	96	36	8.36	7.75	n.s.	0.61	0.18
Happiness with relationship								
9M Follow-up	139	98	41	7.01	6.76	n.s.	0.25	0.09
18M Follow-up	131	96	35	6.61	6.52	n.s.	0.09	0.03
Relationship exclusive								
9M Follow-up	145	102	43	0.93	0.96	n.s.	-0.03	-0.8
18M Follow-up	135	98	37	0.96	0.82	+	0.14	1.7
Fidelity								
9M Follow-up	139	98	41	0.72	0.62	n.s.	0.09	0.27
18M Follow-up	129	95	34	0.75	0.48	+	0.27	1.08
Dyadic Adjustment								
9M Follow-up	138	97	41	20.58	20.14	n.s.	0.44	0.09
18M Follow-up	131	96	35	18.70	17.25	n.s.	1.46	0.2
Bonding								
9M Follow-up	138	97	41	7.31	6.77	n.s.	0.53	0.21
18M Follow-up	130	96	34	7.22	5.99	n.s.	1.23	0.44
Support								
9M Follow-up	137	96	41	4.69	4.36	n.s.	0.33	0.2
18M Follow-up	131	96	35	4.32	3.83	n.s.	0.49	0.27

The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	61	38	23	2.40	2.52	---	-0.11	-0.24
18M Follow-up	46	29	17	2.12	2.19	n.s.	-0.07	-0.1
Attitudes toward marriage (for married respondents)								
9M Follow-up	88	66	22	2.59	2.52	n.s.	0.07	0.11
18M Follow-up	86	67	19	2.51	2.09	+++	0.42	0.51
<b>Reentry-Specific Outcomes</b>								
Co-residence								
9M Follow-up	16	8	8	*	*	*	*	*
18M Follow-up	32	15	17	0.71	0.59	n.s.	0.11	0.87
Emotional support provided to partner								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	18	8	10	*	*	*	*	*
Emotional support received from partner								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	18	8	10	*	*	*	*	*
No physical abuse: perpetration								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	1.00	0.67	n.s.	0.33	11.2
No physical abuse: victimization								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.84	0.85	n.s.	-0.01	0.58
No emotional abuse: perpetration								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.94	0.95	n.s.	-0.01	0.25
No emotional abuse: victimization								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.89	0.90	n.s.	-0.01	0.49
No severe physical or sexual abuse: perpetration								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	1.00	1.00	n.s.	0	0.58
No severe physical or sexual abuse: victimization								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.90	0.95	n.s.	-0.05	-0.96
No frequent emotional abuse: perpetration								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.94	1.00	n.s.	-0.06	-10.29

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
No frequent emotional abuse: victimization								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.95	0.95	n.s.	0	0.32
No frequent physical abuse: perpetration								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	1.00	0.97	n.s.	0.04	9.46
No frequent physical abuse: victimization								
9M Follow-up	15	8	7	*	*	*	*	*
18M Follow-up	31	15	16	0.90	1.00	n.s.	-0.1	-11.74
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	123	89	34	0.828	0.941	n.s.	-0.11	-1.01
18M Follow-up	99	79	20	0.773	1	---	-0.23	-12.51
Frequency of phone calls between partners								
9M Follow-up	123	89	34	3.49	4.112	n.s.	-0.62	-0.47
18M Follow-up	99	79	20	3.387	3.98	n.s.	-0.59	-0.58
Any personal visits between partners								
9M Follow-up	123	89	34	0.825	0.751	n.s.	0.07	0.51
18M Follow-up	99	79	20	0.743	0.597	n.s.	0.15	0.71
Frequency of personal visits between partners								
9M Follow-up	123	89	34	2.869	1.978	n.s.	0.89	0.55
18M Follow-up	99	79	20	2.418	1.413	n.s.	1	0.83

\* Indicates insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### **Total Female Sample**

Detailed results for all treatment-comparison differences by wave among the female sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The Indiana detailed female findings are shown in **Exhibit C-61**.

Findings for Ohio women are shown in **Exhibit C-62**. The New Jersey female findings are shown in **Exhibit C-63**, and the findings for the New York female sample are shown in **Exhibit C-64**.

**Exhibit C-61. Treatment and Comparison Means and Effect Sizes for Relationship status and Quality Outcomes for Indiana Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	519	245	274	0.75	0.65	n.s.	0.1	0.31
18M Follow-up	518	239	279	0.66	0.50	+++	0.16	0.56
34M Follow-up	497	231	266	0.56	0.42	++	0.15	0.48
Communication skills								
9M Follow-up	516	244	272	7.81	7.52	+	0.29	0.13
18M Follow-up	505	233	272	7.30	7.16	n.s.	0.14	0.06
34M Follow-up	471	221	250	7.48	7.10	n.s.	0.38	0.16
Healthy relationship beliefs								
9M Follow-up	519	245	274	17.31	16.36	n.s.	0.96	0.33
18M Follow-up	519	239	280	16.93	16.26	n.s.	0.67	0.24
34M Follow-up	504	234	270	16.77	16.42	n.s.	0.35	0.13
Conflict resolution skills								
9M Follow-up	514	244	270	8.37	7.83	+	0.54	0.17
18M Follow-up	506	233	273	8.16	7.48	+	0.68	0.19
34M Follow-up	476	223	253	7.68	7.57	n.s.	0.1	0.03
Happiness with relationship								
9M Follow-up	501	243	258	6.55	5.70	++	0.84	0.28
18M Follow-up	489	231	258	6.24	5.73	n.s.	0.51	0.16
34M Follow-up	461	222	239	5.80	5.23	n.s.	0.57	0.18
Relationship exclusive								
9M Follow-up	519	245	274	0.83	0.75	n.s.	0.09	0.37
18M Follow-up	519	239	280	0.78	0.68	n.s.	0.1	0.37
34M Follow-up	503	234	269	0.73	0.63	n.s.	0.1	0.36
Fidelity								
9M Follow-up	500	242	258	0.607	0.683	n.s.	-0.08	-0.27
18M Follow-up	491	231	260	0.628	0.672	n.s.	-0.04	-0.15
34M Follow-up	467	223	244	0.69	0.652	n.s.	0.04	0.3
Dyadic Adjustment								
9M Follow-up	503	244	259	18.732	16.463	++	2.27	0.33
18M Follow-up	493	232	261	17.498	15.264	+	2.23	0.3
34M Follow-up	471	223	248	16.339	13.825	++	2.51	0.33
Bonding								
9M Follow-up	500	243	257	7.03	6.224	+	0.81	0.3
18M Follow-up	481	227	254	6.491	5.698	n.s.	0.79	0.28
34M Follow-up	450	215	235	6.115	4.964	+++	1.15	0.38
Support								
9M Follow-up	500	243	257	4.509	4.103	++	0.41	0.24
18M Follow-up	483	228	255	4.246	3.68	+++	0.57	0.29
34M Follow-up	448	216	232	3.941	3.393	++	0.55	0.27
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	405	173	232	2.496	2.428	n.s.	0.07	0.09
18M Follow-up	354	151	203	2.421	2.42	n.s.	0	0
34M Follow-up	324	139	185	2.297	2.411	--	-0.11	-0.15

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Attitudes toward marriage (for married respondents)								
9M Follow-up	136	77	59	2.798	2.322	++	0.48	0.98
18M Follow-up	157	84	73	2.539	2.107	++	0.43	0.67
34M Follow-up	156	84	72	2.52	2.16	n.s.	0.36	0.58
<b>Reentry-Specific Outcomes</b>								
Coresidence								
9M Follow-up	117	62	55	0.62	0.689	n.s.	-0.07	-0.18
18M Follow-up	222	111	111	0.65	0.60	n.s.	0.06	0.17
34M Follow-up	329	160	169	0.64	0.46	+++	0.19	0.75
Emotional support provided to partner								
9M Follow-up	114	62	52	5.17	4.95	n.s.	0.22	0.36
18M Follow-up	102	47	55	4.83	4.47	n.s.	0.36	0.53
34M Follow-up	95	46	49	4.52	4.07	n.s.	0.46	0.57
Emotional support received from partner								
9M Follow-up	114	62	52	3.94	3.89	n.s.	0.04	0.05
18M Follow-up	100	46	54	3.96	3.61	n.s.	0.35	0.38
34M Follow-up	96	46	50	3.69	3.26	n.s.	0.43	0.48
No physical abuse: perpetration								
9M Follow-up	114	62	52	0.75	0.72	n.s.	0.03	0.1
18M Follow-up	212	107	105	0.67	0.74	n.s.	-0.06	-0.17
34M Follow-up	309	152	157	0.65	0.69	n.s.	-0.04	-0.24
No physical abuse: victimization								
9M Follow-up	114	62	52	0.77	0.76	n.s.	0	-0.01
18M Follow-up	212	107	105	0.73	0.79	n.s.	-0.06	-0.16
34M Follow-up	309	152	157	0.71	0.78	n.s.	-0.07	-0.37
No emotional abuse: perpetration								
9M Follow-up	114	62	52	0.67	0.76	n.s.	-0.09	-0.35
18M Follow-up	213	107	106	0.73	0.75	n.s.	-0.02	0.02
34M Follow-up	312	153	159	0.76	0.83	n.s.	-0.07	-0.35
No emotional abuse: victimization								
9M Follow-up	114	62	52	0.70	0.70	n.s.	0	-0.11
18M Follow-up	214	108	106	0.68	0.70	n.s.	-0.02	-0.04
34M Follow-up	311	153	158	0.72	0.74	n.s.	-0.01	-0.12
No severe physical or sexual abuse: perpetration								
9M Follow-up	114	62	52	0.96	0.97	n.s.	0	-0.04
18M Follow-up	213	108	105	0.99	0.98	n.s.	0.01	1.75
34M Follow-up	309	152	157	0.96	0.96	n.s.	0	0.23
No severe physical or sexual abuse: victimization								
9M Follow-up	114	62	52	0.91	0.93	n.s.	-0.02	-0.49
18M Follow-up	213	108	105	0.95	0.93	n.s.	0.02	0.84
34M Follow-up	309	152	157	0.93	0.91	n.s.	0.02	0.05
No frequent emotional abuse: perpetration								
9M Follow-up	114	62	52	0.91	0.90	n.s.	0.01	0.28
18M Follow-up	213	107	106	0.95	0.90	n.s.	0.06	0.93
34M Follow-up	312	153	159	0.93	0.94	n.s.	-0.01	-0.37

The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>No frequent emotional abuse: victimization</b>								
9M Follow-up	114	62	52	0.86	0.83	n.s.	0.04	-0.06
18M Follow-up	214	108	106	0.90	0.87	n.s.	0.03	0.39
34M Follow-up	311	153	158	0.86	0.92	-	-0.06	-0.8
<b>No frequent physical abuse: perpetration</b>								
9M Follow-up	114	62	52	0.92	0.98	n.s.	-0.06	-1.6
18M Follow-up	212	107	105	0.95	0.94	n.s.	0.01	0.37
34M Follow-up	309	152	157	0.93	0.95	n.s.	-0.02	-0.46
<b>No frequent physical abuse: victimization</b>								
9M Follow-up	114	62	52	0.88	0.96	n.s.	-0.08	-1.75
18M Follow-up	212	107	105	0.94	0.92	n.s.	0.02	0.57
34M Follow-up	309	152	157	0.90	0.94	-	-0.04	-0.86
<b>Incarceration-Specific Outcomes</b>								
<b>Any phone calls between partners</b>								
9M Follow-up	389	182	207	0.82	0.70	n.s.	0.12	0.43
18M Follow-up	277	124	153	0.74	0.69	n.s.	0.05	-0.03
34M Follow-up	152	67	85	0.83	0.67	n.s.	0.16	0.52
<b>Frequency of phone calls between partners</b>								
9M Follow-up	389	182	207	3.32	2.66	n.s.	0.66	0.36
18M Follow-up	277	124	153	2.90	2.41	n.s.	0.48	0.32
34M Follow-up	152	67	85	3.31	2.44	n.s.	0.86	0.73
<b>Any personal visits between partners</b>								
9M Follow-up	384	182	202	0.81	0.61	++	0.19	0.65
18M Follow-up	271	124	147	0.63	0.55	n.s.	0.08	0.1
34M Follow-up	150	67	83	0.62	0.50	n.s.	0.12	0.15
<b>Frequency of personal visits between partners</b>								
9M Follow-up	384	182	202	2.72	1.83	++	0.89	0.57
18M Follow-up	271	124	147	2.00	1.42	n.s.	0.57	0.49
34M Follow-up	150	67	83	1.75	1.29	n.s.	0.45	0.51

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-62. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for Ohio Female Sample at Nine, 18, and 34 Months**

Outcome	N		Mean			p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat				
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	439	323	116	0.70	0.65	n.s.	0.05	0.17
18M Follow-up	447	331	116	0.57	0.52	n.s.	0.06	0.13
34M Follow-up	445	331	114	0.46	0.49	n.s.	-0.03	-0.25
Communication skills								
9M Follow-up	435	320	115	7.60	7.44	n.s.	0.15	0.07
18M Follow-up	443	328	115	7.18	7.43	n.s.	-0.25	-0.11
34M Follow-up	433	323	110	7.19	7.05	n.s.	0.14	0.06
Healthy relationship beliefs								
9M Follow-up	438	322	116	16.56	16.75	n.s.	-0.2	-0.07
18M Follow-up	448	332	116	16.43	16.34	n.s.	0.09	0.04
34M Follow-up	446	332	114	16.20	16.64	-	-0.45	-0.17
Conflict resolution skills								
9M Follow-up	436	321	115	7.89	8.22	n.s.	-0.33	-0.1
18M Follow-up	445	330	115	7.42	7.84	n.s.	-0.43	-0.14
34M Follow-up	435	324	111	6.99	7.13	n.s.	-0.13	-0.04
Happiness with relationship								
9M Follow-up	406	300	106	5.90	6.12	n.s.	-0.22	-0.08
18M Follow-up	415	309	106	5.65	5.28	n.s.	0.37	0.12
34M Follow-up	402	300	102	5.33	5.74	n.s.	-0.41	-0.13
Relationship exclusive								
9M Follow-up	439	323	116	0.79	0.74	n.s.	0.06	0.36
18M Follow-up	447	331	116	0.72	0.71	n.s.	0	0.02
34M Follow-up	445	332	113	0.67	0.66	n.s.	0.02	0.08
Fidelity								
9M Follow-up	403	298	105	0.56	0.60	n.s.	-0.04	-0.22
18M Follow-up	408	303	105	0.52	0.61	n.s.	-0.09	-0.3
34M Follow-up	400	299	101	0.58	0.48	n.s.	0.09	0.44
Dyadic Adjustment								
9M Follow-up	407	301	106	17.33	17.74	n.s.	-0.41	-0.06
18M Follow-up	415	309	106	15.65	15.35	n.s.	0.31	0.05
34M Follow-up	408	306	102	14.20	15.36	n.s.	-1.16	-0.17
Bonding								
9M Follow-up	407	301	106	6.56	6.79	n.s.	-0.23	-0.09
18M Follow-up	414	308	106	5.86	6.03	n.s.	-0.17	-0.07
34M Follow-up	399	298	101	5.44	5.71	n.s.	-0.27	-0.09
Support								
9M Follow-up	407	301	106	4.22	4.56	-	-0.34	-0.22
18M Follow-up	415	309	106	3.78	4.05	n.s.	-0.28	-0.15
34M Follow-up	406	304	102	3.66	3.91	n.s.	-0.25	-0.13
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	353	264	89	2.25	2.32	-	-0.07	-0.08
18M Follow-up	323	247	76	2.36	2.31	n.s.	0.05	0.06
34M Follow-up	319	247	72	2.41	2.45	n.s.	-0.05	-0.06

The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts

Outcome	N		Mean			p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat				
Attitudes toward marriage (for married respondents)								
9M Follow-up	106	69	37	2.49	2.21	n.s.	0.28	0.64
18M Follow-up	120	81	39	2.37	2.45	n.s.	-0.08	-0.2
34M Follow-up	119	80	39	2.08	2.42	n.s.	-0.34	-0.74
<b>Reentry-Specific Outcomes</b>								
Coreidence								
9M Follow-up	96	78	18	0.57	0.58	n.s.	-0.01	0.03
18M Follow-up	168	132	36	0.56	0.44	n.s.	0.11	0.4
34M Follow-up	241	189	52	0.52	0.56	n.s.	-0.04	-0.12
Emotional support provided to partner								
9M Follow-up	94	77	17	4.73	5.00	n.s.	-0.27	-0.46
18M Follow-up	66	49	17	4.67	4.54	n.s.	0.13	0.21
34M Follow-up	63	51	12	4.50	4.67	n.s.	-0.18	-0.39
Emotional support received from partner								
9M Follow-up	94	77	17	3.56	4.15	n.s.	-0.59	-0.74
18M Follow-up	66	49	17	3.97	3.69	n.s.	0.28	0.46
34M Follow-up	63	51	12	3.45	2.09	+	1.36	2.45
No physical abuse: perpetration								
9M Follow-up	92	76	16	0.67	0.64	n.s.	0.03	0.02
18M Follow-up	159	127	32	0.61	0.81	-	-0.2	-1.14
34M Follow-up	227	180	47	0.62	0.66	n.s.	-0.04	0.17
No physical abuse: victimization								
9M Follow-up	92	76	16	0.63	0.85	n.s.	-0.21	-1.24
18M Follow-up	159	127	32	0.70	0.74	n.s.	-0.04	-0.07
34M Follow-up	227	180	47	0.66	0.65	n.s.	0.01	0.36
No emotional abuse: perpetration								
9M Follow-up	92	76	16	0.79	0.71	n.s.	0.08	0.29
18M Follow-up	160	128	32	0.71	0.91	--	-0.2	-1.67
34M Follow-up	226	179	47	0.76	0.73	n.s.	0.02	0.41
No emotional abuse: victimization								
9M Follow-up	92	76	16	0.64	0.80	-	-0.17	-1.18
18M Follow-up	160	128	32	0.59	0.73	n.s.	-0.14	-0.48
34M Follow-up	228	181	47	0.68	0.56	n.s.	0.12	0.74
No severe physical or sexual abuse: perpetration								
9M Follow-up	92	76	16	0.92	1.00	n.s.	-0.08	-12.62
18M Follow-up	159	127	32	0.94	0.96	n.s.	-0.02	-0.58
34M Follow-up	226	179	47	0.96	0.88	+	0.08	1.13
No severe physical or sexual abuse: victimization								
9M Follow-up	92	76	16	0.85	0.96	-	-0.11	-1.95
18M Follow-up	159	127	32	0.87	0.91	n.s.	-0.04	-0.73
34M Follow-up	226	179	47	0.86	0.79	n.s.	0.07	0.73
No frequent emotional abuse: perpetration								
9M Follow-up	92	76	16	0.95	0.96	n.s.	-0.01	-0.28
18M Follow-up	160	128	32	0.91	1.00	---	-0.09	-12.77
34M Follow-up	226	179	47	0.91	0.93	n.s.	-0.01	0.08

Outcome	N		Mean			p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat				
No frequent emotional abuse: victimization								
9M Follow-up	92	76	16	0.83	0.88	n.s.	-0.05	-1.29
18M Follow-up	160	128	32	0.83	0.89	n.s.	-0.06	-0.6
34M Follow-up	227	180	47	0.82	0.74	n.s.	0.08	0.15
No frequent physical abuse: perpetration								
9M Follow-up	92	76	16	0.91	0.97	n.s.	-0.06	-1.44
18M Follow-up	159	127	32	0.90	0.96	n.s.	-0.07	-1.1
34M Follow-up	227	180	47	0.92	0.89	n.s.	0.03	0.6
No frequent physical abuse: victimization								
9M Follow-up	92	76	16	0.86	1.00	---	-0.15	-12.72
18M Follow-up	159	127	32	0.87	0.93	n.s.	-0.06	-0.91
34M Follow-up	227	180	47	0.84	0.79	n.s.	0.05	0.58
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	315	226	89	0.82	0.87	n.s.	-0.05	-0.43
18M Follow-up	252	179	73	0.81	0.79	n.s.	0.02	0.27
34M Follow-up	181	124	57	0.74	0.81	n.s.	-0.07	-0.33
Frequency of phone calls between partners								
9M Follow-up	315	226	89	3.17	3.53	-	-0.36	-0.23
18M Follow-up	252	179	73	3.14	3.16	n.s.	-0.01	-0.01
34M Follow-up	181	124	57	2.77	3.61	-	-0.84	-0.64
Any personal visits between partners								
9M Follow-up	312	224	88	0.68	0.76	n.s.	-0.08	-0.48
18M Follow-up	251	179	72	0.63	0.66	n.s.	-0.03	0.28
34M Follow-up	178	122	56	0.54	0.60	n.s.	-0.07	-0.26
Frequency of personal visits between partners								
9M Follow-up	312	224	88	2.06	2.36	--	-0.3	-0.2
18M Follow-up	251	179	72	1.86	1.98	n.s.	-0.12	-0.09
34M Follow-up	178	122	56	1.35	1.73	n.s.	-0.38	-0.35

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-63. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for New Jersey Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	139	87	52	0.74	0.78	n.s.	-0.04	-0.16
18M Follow-up	146	89	57	0.55	0.59	n.s.	-0.04	-0.05
Communication skills								
9M Follow-up	138	86	52	7.13	7.66	n.s.	-0.53	-0.26
18M Follow-up	144	89	55	6.97	7.26	n.s.	-0.3	-0.14
Healthy relationship beliefs								
9M Follow-up	139	87	52	15.87	15.71	n.s.	0.16	0.06
18M Follow-up	146	89	57	16.47	15.36	n.s.	1.11	0.49
Conflict resolution skills								
9M Follow-up	138	86	52	7.48	7.31	n.s.	0.16	0.05
18M Follow-up	144	89	55	6.82	7.33	n.s.	-0.5	-0.15
Happiness with relationship								
9M Follow-up	133	81	52	6.05	6.47	n.s.	-0.42	-0.13
18M Follow-up	139	84	55	5.25	5.85	n.s.	-0.6	-0.18
Relationship exclusive								
9M Follow-up	139	87	52	0.86	0.92	n.s.	-0.05	-0.46
18M Follow-up	146	89	57	0.82	0.84	n.s.	-0.02	-0.16
Fidelity								
9M Follow-up	132	80	52	0.68	0.72	n.s.	-0.04	0.23
18M Follow-up	138	83	55	0.76	0.81	n.s.	-0.05	0.04
Dyadic Adjustment								
9M Follow-up	133	81	52	16.95	17.58	n.s.	-0.63	-0.08
18M Follow-up	140	85	55	14.32	16.57	n.s.	-2.25	-0.3
Bonding								
9M Follow-up	133	81	52	6.31	6.52	n.s.	-0.21	-0.09
18M Follow-up	139	84	55	5.12	6.37	n.s.	-1.25	-0.43
Support								
9M Follow-up	133	81	52	4.13	4.56	n.s.	-0.42	-0.26
18M Follow-up	140	84	56	3.44	4.24	n.s.	-0.8	-0.41
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	110	71	39	2.21	2.23	n.s.	-0.03	-0.03
18M Follow-up	100	65	35	2.44	2.38	n.s.	0.06	0.08
Attitudes toward marriage (for married respondents)								
9M Follow-up	32	16	16	2.48	2.64	n.s.	-0.17	-0.48
18M Follow-up	43	22	21	1.63	1.98	n.s.	-0.35	-0.44
<b>Reentry-Specific Outcomes</b>								
Coresidence								
9M Follow-up	107	66	41	0.59	0.81	-	-0.23	-1.02
18M Follow-up	125	76	49	0.55	0.62	n.s.	-0.07	-0.25

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Emotional support provided to partner								
9M Follow-up	102	61	41	4.95	5.07	n.s.	-0.12	-0.11
18M Follow-up	15	12	3	*	*	*	*	*
Emotional support received from partner								
9M Follow-up	102	61	41	4.17	4.09	n.s.	0.08	0.05
18M Follow-up	15	12	3	*	*	*	*	*
No physical abuse: perpetration								
9M Follow-up	102	61	41	0.59	0.69	n.s.	-0.1	-0.67
18M Follow-up	119	70	49	0.51	0.51	n.s.	0.01	-0.08
No physical abuse: victimization								
9M Follow-up	102	61	41	0.77	0.81	n.s.	-0.05	-0.46
18M Follow-up	120	71	49	0.64	0.67	n.s.	-0.03	-0.23
No emotional abuse: perpetration								
9M Follow-up	102	61	41	0.70	0.52	+	0.18	0.99
18M Follow-up	120	71	49	0.58	0.76	n.s.	-0.17	-0.5
No emotional abuse: victimization								
9M Follow-up	102	61	41	0.73	0.56	n.s.	0.17	0.73
18M Follow-up	120	71	49	0.51	0.67	n.s.	-0.16	-0.44
No severe physical or sexual abuse: perpetration								
9M Follow-up	102	61	41	0.96	0.98	n.s.	-0.02	-1.73
18M Follow-up	120	71	49	0.86	0.96	n.s.	-0.1	-1.37
No severe physical or sexual abuse: victimization								
9M Follow-up	102	61	41	0.90	0.90	n.s.	0.01	-0.29
18M Follow-up	120	71	49	0.77	0.92	-	-0.15	-1.14
No frequent emotional abuse: perpetration								
9M Follow-up	102	61	41	0.91	0.72	+++	0.19	1.93
18M Follow-up	120	71	49	0.87	0.87	n.s.	0	0.02
No frequent emotional abuse: victimization								
9M Follow-up	102	61	41	0.89	0.87	n.s.	0.03	-0.07
18M Follow-up	120	71	49	0.77	0.86	-	-0.1	-1.13
No frequent physical abuse: perpetration								
9M Follow-up	102	61	41	0.90	0.97	n.s.	-0.07	-1.68
18M Follow-up	119	70	49	0.89	0.94	n.s.	-0.05	-0.63
No frequent physical abuse: victimization								
9M Follow-up	102	61	41	0.90	0.89	n.s.	0.01	-0.36
18M Follow-up	120	71	49	0.89	0.92	n.s.	-0.03	-0.38

*The Multi-site Family Study on Incarceration, Parenting and Partnering: Program Impacts*

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	26	20	11	0.739	1	n.s.	-0.26	-12.11
18M Follow-up	8	8	5	*	*	*	*	*
Frequency of phone calls between partners								
9M Follow-up	26	20	11	2.688	3.641	n.s.	-0.95	-1.3
18M Follow-up	8	8	5	*	*	*	*	*
Any personal visits between partners								
9M Follow-up	26	20	11	0.509	0.779	---	-0.27	-11.24
18M Follow-up	8	8	5	*	*	*	*	*
Frequency of personal visits between partners								
9M Follow-up	26	20	11	1.613	2.178	n.s.	-0.57	-0.6
18M Follow-up	8	8	5	*	*	*	*	*

\* Indicates insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-64. Treatment and Comparison Means and Effect Sizes for Intimate Relationship status and Quality Outcomes for New York Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Relationship status (romantically involved)								
9M Follow-up	93	63	30	0.843	0.842	n.s.	0	-0.01
18M Follow-up	92	62	30	0.81	0.78	n.s.	0.03	0.22
Communication skills								
9M Follow-up	93	63	30	8.29	7.78	n.s.	0.51	0.25
18M Follow-up	92	62	30	8.21	7.28	n.s.	0.94	0.47
Healthy relationship beliefs								
9M Follow-up	93	63	30	16.53	16.14	n.s.	0.39	0.16
18M Follow-up	92	62	30	16.69	16.23	n.s.	0.46	0.16
Conflict resolution skills								
9M Follow-up	93	63	30	8.90	8.50	n.s.	0.4	0.17
18M Follow-up	92	62	30	8.41	8.12	n.s.	0.29	0.15
Happiness with relationship								
9M Follow-up	88	61	27	7.51	6.75	n.s.	0.76	0.25
18M Follow-up	88	60	28	6.84	6.06	n.s.	0.78	0.28
Relationship exclusive								
9M Follow-up	93	63	30	0.93	0.85	n.s.	0.08	1.58
18M Follow-up	92	62	30	0.87	0.87	n.s.	0.01	0.33
Fidelity								
9M Follow-up	88	61	27	0.75	0.85	n.s.	-0.11	-0.69
18M Follow-up	88	60	28	0.80	0.74	n.s.	0.06	0.77
Dyadic Adjustment								
9M Follow-up	88	61	27	21.36	19.08	n.s.	2.28	0.35
18M Follow-up	88	60	28	19.07	17.05	n.s.	2.02	0.31
Bonding								
9M Follow-up	88	61	27	7.63	6.91	n.s.	0.72	0.32
18M Follow-up	88	60	28	7.03	6.22	n.s.	0.81	0.33
Support								
9M Follow-up	88	61	27	5.05	4.73	n.s.	0.31	0.23
18M Follow-up	88	60	28	4.59	3.88	n.s.	0.71	0.41
Attitudes toward marriage (for unmarried respondents)								
9M Follow-up	41	24	17	2.15	2.37	n.s.	-0.22	-0.32
18M Follow-up	33	17	16	2.11	2.36	n.s.	-0.25	-0.38
Attitudes toward marriage (for married respondents)								
9M Follow-up	60	44	16	2.63	2.69	n.s.	-0.06	-0.1
18M Follow-up	59	45	14	2.55	2.46	n.s.	0.09	0.13
<b>Reentry-Specific Outcomes</b>								
Coreidence								
9M Follow-up	13	6	7	*	*	*	*	*
18M Follow-up	26	13	13	0.77	0.57	n.s.	0.2	0.69
Emotional support provided to partner								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	13	7	6	*	*	*	*	*

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Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Emotional support received from partner								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	13	7	6	*	*	*	*	*
No physical abuse: perpetration								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.95	0.68	n.s.	0.27	2.46
No physical abuse: victimization								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.88	0.87	n.s.	0.01	-0.21
No emotional abuse: perpetration								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.73	0.61	n.s.	0.12	1.8
No emotional abuse: victimization								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.61	0.64	n.s.	-0.04	-0.29
No severe physical or sexual abuse: perpetration								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	1.00	1.00	n.s.	0	-0.21
No severe physical or sexual abuse: victimization								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	1.00	0.95	n.s.	0.05	9.2
No frequent emotional abuse: perpetration								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	1.00	1.00	n.s.	0	-16.27
No frequent emotional abuse: victimization								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.94	0.92	n.s.	0.01	-0.58
No frequent physical abuse: perpetration								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	0.95	1.00	n.s.	-0.05	-16.27
No frequent physical abuse: victimization								
9M Follow-up	12	6	6	*	*	*	*	*
18M Follow-up	24	13	11	1.00	1.00	n.s.	0	-16.27
<b>Incarceration-Specific Outcomes</b>								
Any phone calls between partners								
9M Follow-up	76	55	21	0.86	0.92	n.s.	-0.06	-1.23
18M Follow-up	63	47	16	0.76	0.77	n.s.	-0.01	-0.27
Frequency of phone calls between partners								
9M Follow-up	76	55	21	3.95	3.37	n.s.	0.58	0.35
18M Follow-up	63	47	16	3.40	2.57	n.s.	0.83	0.46
Any personal visits between partners								
9M Follow-up	76	55	21	0.98	0.58	++	0.4	2.94
18M Follow-up	63	47	16	0.71	0.46	n.s.	0.25	0.48

Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Frequency of personal visits between partners								
9M Follow-up	76	55	21	3.31	1.36	++	1.96	1.33
18M Follow-up	63	47	16	2.56	1.08	n.s.	1.48	1.31

\* Indicates insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### *Differences in Treatment-Comparison Trajectories over Time*

Detailed results for all latent growth curve findings summarized in **Chapter 5** and in this appendix are presented for each site in **Exhibits C-65** through **C-68**. Each exhibit shows the mean intercepts and slopes for the couples in in each group (treatment and comparison), along with the difference in slope, p value for the significance test, and effect sizes for each estimate.

**Exhibit C-65. Treatment-Comparison Differences in All Intimate Relationship status and Quality Outcomes for Baseline (Intercept) and Change over time (Slope) for Indiana Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
<b>Outcomes Relevant to All Study Couples</b>											
Relationship status (romantically involved)	686	340	346	2.93	2.51	++	-0.6	0.8	-1.4	+++	0.176
Communication skills	686	281	405	7.58	7.58	n.s.	-0.05	0.04	-0.1	n.s.	0.03
Healthy relationship beliefs	686	281	405	17.18	16.63	+++	-0.14	-0.06	-0.08	n.s.	-0.049
Conflict resolution skills	686	281	405	8.5	8.34	n.s.	-0.23	-0.04	-0.19	n.s.	-0.027
Happiness with relationship	664	279	385	7.21	6.41	+++	-0.44	-0.07	-0.37	n.s.	-0.039
Relationship exclusive	686	340	346	2.02	1.69	+++	-0.04	0.14	-0.18	++	0.079
Fidelity	664	330	334	0.79	0.65	n.s.	0.14	0.05	0.09	n.s.	0.052
Dyadic Adjustment	665	279	386	20.79	19	+++	-1.38	0.09	-1.47	n.s.	0.025
Bonding	664	279	385	7.53	7.13	+++	-0.44	0.14	-0.58	++	0.089
Support	664	279	385	4.78	4.57	+++	-0.23	0.1	-0.34	+++	0.106
Attitudes toward marriage (for unmarried respondents)	578	221	357	2.65	2.49	+++	-0.09	-0.06	-0.03	---	-0.109
Attitudes toward marriage (for married respondents)	266	124	142	2.7	2.52	++	-0.05	0.08	-0.14	++	0.121
<b>Reentry-Specific Outcomes</b>											
Coresidence	686	340	346	1.07	1.31	n.s.	0.52	1.52	-1.01	+++	0.154
Emotional support provided to partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Emotional support received from partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No physical abuse: perpetration	642	317	325	0.73	0.69	n.s.	0.11	-0.05	0.16	n.s.	-0.021
No physical abuse: victimization	642	317	325	1.15	0.89	+	0.12	-0.13	0.25	n.s.	-0.062
No emotional abuse: perpetration	642	317	325	0.82	1.06	n.s.	0.25	0	0.25	n.s.	0.001
No emotional abuse: victimization	642	317	325	0.88	0.88	n.s.	0.08	-0.02	0.1	n.s.	-0.009
No severe physical or sexual abuse: perpetration	642	317	325	3.53	3.61	n.s.	0.28	0.14	0.13	n.s.	0.053
No severe physical or sexual abuse: victimization	642	317	325	3.2	2.88	n.s.	-0.07	-0.04	-0.03	n.s.	-0.013
No frequent emotional abuse: perpetration	642	317	325	2.57	2.52	n.s.	0.45	0	0.45	n.s.	0

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
No frequent emotional abuse: victimization	642	317	325	1.9	1.78	n.s.	0.25	-0.08	0.33	n.s.	-0.05
No frequent physical abuse: perpetration	642	317	325	2.91	3.13	n.s.	0.19	0.14	0.05	+++	0.614
No frequent physical abuse: victimization	642	317	325	3.25	3.14	n.s.	0	-0.05	0.04	n.s.	-0.017
<b>Incarceration-Specific Outcomes</b>											
Any phone calls between partners	661	329	332	3.5	1.92	+++	-0.13	0.03	-0.17	n.s.	0.007
Frequency of phone calls between partners	661	279	382	3.57	2.74	+++	-0.14	0	-0.15	n.s.	0.003
Any personal visits between partners	661	329	332	5.24	2.15	+++	-1.37	-0.03	-1.34	n.s.	-0.004
Frequency of personal visits between partners	661	279	382	3.25	2.21	+++	-0.47	-0.15	-0.32	--	-0.084

NoC            The LGC model did not converge, usually due to too few time points or insufficient sample size.  
n.s.            No statistically significant impact.  
+++/++/+     Statistically significant positive impact at the .01/.05/.10 level.  
---/--/-      Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-66. Treatment-Comparison Differences in All Intimate Relationship status and Quality Outcomes for Baseline (Intercept) and Change over time (Slope) for Ohio Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
<b>Outcomes Relevant to All Study Couples</b>											
Relationship status (romantically involved)	688	344	344	1.95	1.93	n.s.	-1.05	-0.15	-0.9	n.s.	-0.031
Communication skills	688	506	182	7.27	7.65	--	-0.02	0.13	-0.14	++	0.086
Healthy relationship beliefs	688	506	182	16.59	16.81	n.s.	-0.08	0.02	-0.1	n.s.	0.015
Conflict resolution skills	688	506	182	7.75	8.26	---	-0.16	0.05	-0.22	n.s.	0.029
Happiness with relationship	639	469	170	6.28	6.33	n.s.	-0.34	-0.04	-0.3	n.s.	-0.019
Relationship exclusive	688	344	344	1.19	1.07	n.s.	0.02	-0.14	0.16	n.s.	-0.054
Fidelity	639	318	321	0.22	0.4	n.s.	0.14	0.09	0.05	+++	0.146
Dyadic Adjustment	639	469	170	18.44	18.83	n.s.	-1.35	-0.22	-1.14	n.s.	-0.043
Bonding	639	469	170	6.98	7.27	-	-0.52	-0.07	-0.45	n.s.	-0.037
Support	639	469	170	4.43	4.67	--	-0.25	-0.02	-0.23	n.s.	-0.011
Attitudes toward marriage (for unmarried respondents)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Attitudes toward marriage (for married respondents)	250	165	85	2.47	2.55	n.s.	-0.17	-0.12	-0.05	--	-0.155
<b>Reentry-Specific Outcomes</b>											
Coresidence	688	344	344	1.15	0.82	n.s.	-0.52	-0.06	-0.46	n.s.	-0.007
Emotional support provided to partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Emotional support received from partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No physical abuse: perpetration	643	323	320	0.33	0.46	n.s.	0.13	-0.16	0.29	---	-0.117
No physical abuse: victimization	643	323	320	0.4	0.73	-	0.19	0.07	0.12	+	0.074
No emotional abuse: perpetration	643	323	320	0.69	1.23	---	0.14	-0.05	0.19	---	-0.463
No emotional abuse: victimization	643	323	320	0.4	0.57	--	0.12	0.03	0.09	n.s.	0.039
No severe physical or sexual abuse: perpetration	643	323	320	2.58	3.31	---	0.42	0.46	-0.04	+++	0.125
No severe physical or sexual abuse: victimization	642	322	320	1.69	1.96	n.s.	0.18	0.11	0.06	n.s.	0.043
No frequent emotional abuse: perpetration	643	323	320	1.56	1.61	---	0.69	-0.38	1.07	--	-0.077

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
No frequent emotional abuse: victimization	643	323	320	2.14	1.92	n.s.	-0.05	-0.09	0.04	n.s.	-0.049
No frequent physical abuse: perpetration	643	323	320	2.37	3.06	-	0.16	0.19	-0.03	n.s.	0.06
No frequent physical abuse: victimization	643	323	320	2.21	2.1	n.s.	0.15	-0.04	0.19	n.s.	-0.012
<b>Incarceration-Specific Outcomes</b>											
Any phone calls between partners	630	316	314	3.29	3.61	n.s.	-0.28	0.07	-0.34	n.s.	0.014
Frequency of phone calls between partners	630	464	166	3.31	3.44	n.s.	-0.18	-0.11	-0.07	n.s.	-0.059
Any personal visits between partners	630	316	314	2.69	3.07	n.s.	-0.77	0.08	-0.85	n.s.	0.018
Frequency of personal visits between partners	630	464	166	2.33	2.27	n.s.	-0.28	-0.04	-0.24	n.s.	-0.027

NoC            The LGC model did not converge, usually due to too few time points or insufficient sample size.  
n.s.            No statistically significant impact.  
+++///+      Statistically significant positive impact at the .01/.05/.10 level.  
---// -        Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-67. Treatment-Comparison Differences in All Intimate Relationship status and Quality Outcomes for Baseline (Intercept) and Change over time (Slope) for New Jersey Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
<b>Outcomes Relevant to All Study Couples</b>											
Relationship status (romantically involved)	309	158	151	3.45	4.34	n.s.	-1.86	-0.06	-1.8	n.s.	-0.006
Communication skills	309	183	126	7.56	8.13	---	-0.27	0.24	-0.51	n.s.	0.076
Healthy relationship beliefs	309	183	126	16.34	16.27	n.s.	-0.12	0.07	-0.2	n.s.	0.025
Conflict resolution skills	309	183	126	7.86	8.3	-	-0.45	0.37	-0.82	+	0.103
Happiness with relationship	285	160	125	6.73	7.12	n.s.	-0.79	0	-0.8	n.s.	0.001
Relationship exclusive	309	158	151	1.42	1.61	n.s.	0.75	0.24	0.51	n.s.	0.028
Fidelity	284	142	142	0.46	0.48	n.s.	0.46	-0.12	0.58	n.s.	-0.065
Dyadic Adjustment	285	160	125	18.96	19.75	n.s.	-2.47	-0.44	-2.02	n.s.	-0.058
Bonding	285	160	125	7.28	7.5	n.s.	-1.01	-0.12	-0.89	n.s.	-0.034
Support	285	160	125	4.8	4.89	n.s.	-0.63	-0.2	-0.43	n.s.	-0.085
Attitudes toward marriage (for unmarried respondents)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Attitudes toward marriage (for married respondents)	80	44	36	2.21	2.16	n.s.	-0.29	-0.31	0.02	---	-0.283
<b>Reentry-Specific Outcomes</b>											
Coresidence	309	158	151	0.62	0.91	-	-0.42	-0.3	-0.12	n.s.	-0.031
Emotional support provided to partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Emotional support received from partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No physical abuse: perpetration	289	146	143	-0.08	0.14	n.s.	0.18	0.05	0.13	n.s.	0.013
No physical abuse: victimization	289	146	143	0.46	0.29	n.s.	0.34	0.18	0.17	+	0.107
No emotional abuse: perpetration	289	146	143	0.34	0.32	n.s.	0.25	0.03	0.21	n.s.	0.016
No emotional abuse: victimization	289	146	143	0.54	0.89	-	0.1	0.14	-0.04	n.s.	0.039
No severe physical or sexual abuse: perpetration	289	146	143	2.4	2.49	n.s.	0.34	0.32	0.02	+++	0.521
No severe physical or sexual abuse: victimization	289	146	143	2.47	1.88	n.s.	0.1	-0.14	0.24	n.s.	-0.024
No frequent emotional abuse: perpetration	289	146	143	2.35	2.62	n.s.	0.56	0.31	0.24	n.s.	0.036

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
No frequent emotional abuse: victimization	289	146	143	2.11	2.56	n.s.	0.3	0.04	0.27	n.s.	0.007
No frequent physical abuse: perpetration	289	146	143	1.71	2.63	-	0.82	0.72	0.1	+	0.113
No frequent physical abuse: victimization	289	146	143	2.03	1.95	n.s.	0.7	0.2	0.5	n.s.	0.006
<b>Incarceration-Specific Outcomes</b>											
Any phone calls between partners	283	141	142	4.71	4.95	n.s.	-1.9	-3.93	2.03	-	-0.1
Frequency of phone calls between partners	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Any personal visits between partners	283	141	142	2.01	0.33	++	-0.99	-1.49	0.49	n.s.	-0.076
Frequency of personal visits between partners	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit C-68. Treatment-Comparison Differences in All Intimate Relationship status and Quality Outcomes for Baseline (Intercept) and Change over time (Slope) for New York Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
<b>Outcomes Relevant to All Study Couples</b>											
Relationship status (romantically involved)	201	108	93	4.38	4.49	n.s.	-1.06	0.21	-1.27	n.s.	0.004
Communication skills	201	138	63	7.98	7.81	n.s.	0.01	0.04	-0.04	n.s.	0.013
Healthy relationship beliefs	201	138	63	16.89	16.34	n.s.	0.01	-0.29	0.3	n.s.	-0.071
Conflict resolution skills	201	138	63	8.69	8.58	n.s.	-0.13	0.13	-0.26	n.s.	0.031
Happiness with relationship	195	135	60	7.55	7.27	n.s.	-0.49	-0.03	-0.46	n.s.	-0.007
Relationship exclusive	201	108	93	3.12	3.22	n.s.	1.33	1.21	0.12	n.s.	0.094
Fidelity	195	105	90	2.06	1.89	n.s.	0.09	0.3	-0.22	n.s.	0.067
Dyadic Adjustment	195	135	60	20.97	20.78	n.s.	-1.21	0.29	-1.5	n.s.	0.034
Bonding	195	135	60	7.62	7.35	n.s.	-0.18	0.44	-0.62	n.s.	0.089
Support	195	135	60	5.06	4.97	n.s.	-0.19	0.23	-0.42	n.s.	0.096
Attitudes toward marriage (for unmarried respondents)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Attitudes toward marriage (for married respondents)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
<b>Reentry-Specific Outcomes</b>											
Coresidence	201	108	93	-1.36	-1.14	n.s.	2.07	1.53	0.54	n.s.	0.054
Emotional support provided to partner	189	131	58	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Emotional support received from partner	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No physical abuse: perpetration	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No physical abuse: victimization	143	73	70	1.6	2.19	n.s.	3.62	0.42	3.2	n.s.	0.017
No emotional abuse: perpetration	143	73	70	1.9	1.77	n.s.	0.18	0.25	-0.07	+++	1.399
No emotional abuse: victimization	143	73	70	1.36	1.52	n.s.	0.09	0	0.1	n.s.	0
No severe physical or sexual abuse: perpetration	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No severe physical or sexual abuse: victimization	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No frequent emotional abuse: perpetration	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	T-C	Comp	p- Value	Effect Size
No frequent emotional abuse: victimization	143	73	70	3.66	4.09	n.s.	0	-0.02	0.02	n.s.	-0.001
No frequent physical abuse: perpetration	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
No frequent physical abuse: victimization	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
<b>Incarceration-Specific Outcomes</b>											
Any phone calls between partners	195	105	90	3.09	3.93	n.s.	-0.91	-0.02	-0.9	n.s.	-0.001
Frequency of phone calls between partners	195	135	60	3.35	3.49	n.s.	-0.19	-0.1	-0.09	n.s.	-0.032
Any personal visits between partners	195	105	90	3.85	2.24	+	-0.91	-0.69	-0.22	n.s.	-0.045
Frequency of personal visits between partners	195	135	60	3.1	2.27	+++	-0.36	-0.31	-0.04	n.s.	-0.101

NoC            The LGC model did not converge, usually due to too few time points or insufficient sample size.  
n.s.            No statistically significant impact.  
+++/++/+     Statistically significant positive impact at the .01/.05/.10 level.  
---/--/-      Statistically significant negative impact at the .01/.05/.10 level.



# Appendix D. Detailed Results for Parenting and Coparenting Outcomes

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This appendix contains statistical findings and supporting details not presented in **Chapter 6**, including

- a description of the measurement of all parenting and coparenting outcomes (pp. D1-D3);
- the summary findings for all parenting and coparenting outcomes based on both the treatment-comparison differences by wave approach and the latent growth curve approach (pp. D3-D30);
- the summary findings for the sensitivity analyses conducted (using both statistical approaches) to explore whether the impact findings were different for couples in which the male partner remained incarcerated during the follow up period than couples in which the male partner had at least some community exposure (pp. D31-D37);
- the factor analysis results for the parenting and coparenting domain (pp. D38-D42);
- the results of the adjustments for multiple comparisons within the parenting and coparenting domain (pp. D43); and
- the site-specific detailed findings for all parenting and coparenting outcomes, based on both statistical approaches (pp. D44-D63).

## Description of Parenting and Coparenting Outcomes

**Exhibit D-1** describes the measurement of all parenting and coparenting outcomes that were analyzed in the impact study. The first set of outcomes are not dependent on the male partner's incarceration status (although they may have different meanings for couples based on this consideration) whereas the remaining outcomes were only measured if the male partner had had any community exposure during the follow-up period (reentry-specific outcomes) or if the male partner had been incarcerated the entire follow-up period (incarceration-specific outcomes).

**Exhibit D-1. Parenting and Coparenting Outcomes**

Outcome	Description
<b>Outcomes Relevant to All Study Couples</b>	
Parent-child relationship quality	Respondent's rating of his/her current relationship with the focal child (poor, fair, good, excellent)
Self-rating as parent	Respondent's rating of how good a parent he/she is to the focal child (not very good, good, very good, excellent)
Decisions about focal child made jointly <sup>a</sup>	Dichotomous indicator reflecting that the respondent reports that most major decisions about the focal child (such as child care and health care) have been made by the study couple together (as opposed to by either member individually or someone else involved in raising the child) during the reference period
Parental warmth	Score ranging from 0-12 based on 4 scale items assessing the frequency (never, sometimes, usually, always) with which the respondent hugs/shows physical affection with the focal child, tells the child that he/she loves him/her, communicates with the child about things he/she is interested in, and praises the focal child when he/she communicates with him/her
Partner fulfills parenting responsibilities	Frequency with which respondent reports that the study couple can count on one another to follow through on parenting responsibilities (never, rarely, sometimes, often)
<b>Reentry-Specific Outcomes</b>	
Father-focal child coresidence	Dichotomous indicator reflecting that the respondent reports that father has lived with focal child at any point during the reference period
Father coresidence with any of his children ( <i>males only</i> )	Dichotomous indicator reflecting that the father reports that he has lived with at least one of his children at any point during the reference period
Father financially supported focal child	Dichotomous indicator reflecting that the respondent reports that father has provided any financial support to the focal during the reference period
Frequency of nonresidential father-child interaction ( <i>males only</i> )	Frequency with which nonresidential father reports that has seen the focal child during the reference period (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times a week)
Frequency of father's activities with focal child ( <i>males only</i> )	Frequency with which the father reports that he has done an activity with the focal child during the reference period, such as eating meals, going shopping, helping with homework, or doing something fun with the child (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times a week)

Outcome	Description
Frequency of family-oriented activities with focal child	Frequency with which the respondent reports that the study couple and focal child has done family-oriented activities together during the reference period, such as recreational activities, eating meals, or going to church (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times a week)
Frequency of enjoying time together as a family	Frequency with which the respondent reports that the study couple and focal child have enjoyed being together as a family during the reference period (never, only a couple of times, every couple of months, about once a month, a couple of times a month, one or more times a week)
<b>Incarceration-Specific Outcomes</b>	
Father receives any personal visits from focal child	Dichotomous indicator reflecting that the respondent reports that the father currently receives personal visits from the focal child
Father has any phone calls with focal child	Dichotomous indicator reflecting that the respondent reports that the father currently talks on the phone to the focal child
Father receives any mail from focal child	Dichotomous indicator reflecting that the respondent reports that the father currently receives mail to the focal child
Father sends mail to focal child	Dichotomous indicator reflecting that the respondent reports that the father currently sends mail to the focal child

<sup>a</sup> This outcome was only measured for study couples for whom the female partner coparented the focal child in some way.

## Summary Findings

### *Treatment-Comparison Differences by Wave*

#### *Total Male Sample*

*Outcomes Relevant to All Couples.* Summary findings for treatment-comparison differences by wave (based on data weighted to adjust for selection and attrition bias) among the total male sample for parenting and coparenting outcomes that are not dependent on incarceration status are shown in **Exhibit D-2**.

*Reentry-Specific Outcomes.* Summary findings for treatment-comparison differences on outcomes only relevant to couples in which the male partner had any community exposure during the follow-up period are shown in **Exhibit D-3**.

*Incarceration-Specific Outcomes.* Summary indicators of the results of the comparisons for parenting and coparenting outcomes only relevant to couples in which the male partner remained incarcerated during the follow-up period are shown in **Exhibit D-4**.

**Exhibit D-2. Treatment-Comparison Differences in Parenting and Coparenting Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Parent-child relationship quality								
9M	n.s.	0.12	n.s.	0.12	n.s.	-0.10	n.s.	-0.26
18M	+	0.25	n.s.	-0.10	n.s.	0.07	n.s.	0.00
34M	n.s.	0.13	n.s.	-0.04	n/a		n/a	
Self-rating as a parent								
9M	n.s.	0.05	n.s.	0.00	n.s.	0.23	n.s.	-0.19
18M	n.s.	-0.01	n.s.	-0.12	n.s.	0.05	n.s.	0.33
34M	n.s.	0.09	n.s.	0.02	n/a		n/a	
Decisions about focal child made jointly								
9M	+	0.42	n.s.	0.12	n.s.	-0.25	n.s.	-0.64
18M	n.s.	0.28	n.s.	-0.28	n.s.	-0.61	n.s.	0.21
34M	+	0.42	n.s.	0.30	n/a		n/a	
Parental warmth								
9M	n.s.	-0.05	++	0.28	n.s.	-0.19	n.s.	-0.09
18M	n.s.	0.10	n.s.	-0.32	n.s.	-0.27	n.s.	0.18
34M	n.s.	-0.10	n.s.	-0.11	n/a		n/a	
Partner fulfills parenting responsibilities								
9M	n.s.	0.21	n.s.	0.09	-	-0.38	n.s.	-0.32
18M	n.s.	-0.21	n.s.	-0.18	n.s.	0.10	n.s.	-0.43
34M	+++	0.36	n.s.	-0.09	n/a		n/a	
Sample sizes								
9M	470 (T=188, C=282)	470 (T=188, C=282)	455 (T=353, C=102)	455 (T=353, C=102)	151 (T=98, C=53)	151 (T=98, C=53)	100 (T=64, C=36)	100 (T=64, C=36)
18M	447 (T=183, C=264)	447 (T=183, C=264)	439 (T=330, C=109)	439 (T=330, C=109)	150 (T=97, C=53)	150 (T=97, C=53)	93 (T=62, C=31)	93 (T=62, C=31)
34M	422 (T=175, C=247)	422 (T=175, C=247)	440 (T=335, C=105)	440 (T=335, C=105)	n/a	n/a	n/a	n/a

n/a Not applicable  
n.s. No statistically significant impact.  
+++ / ++ / + Statistically significant positive impact at the .01 / .05 / .10 level.  
--- / -- / - Statistically significant negative impact at the .01 / .05 / .10 level.

**Exhibit D-3. Treatment-Comparison Differences in Reentry-Specific, Parenting Outcomes for Released Men: Coresidence with Children, Financial Support, and Family Involvement**

Outcomes	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Father-focal child coresidence								
9M	n.s.	-0.26	n.s.	-0.09	n.s.	-0.42	*	*
18M	n.s.	0.36	n.s.	0.12	n.s.	-0.31	*	*
34M	n.s.	0.37	n.s.	-0.14	n/a	*	n/a	*
Father coresidence with any of his children								
9M	-	-0.76	n.s.	0.31	--	-1.1	*	*
18M	n.s.	0.51	n.s.	0.49	n.s.	-0.02	n.s.	2.52
34M	n.s.	0.07	n.s.	0.47	n/a		n/a	*
Father financially supported focal child								
9M	n.s.	-0.73	n.s.	-0.58	n.s.	0.48	*	*
18M	++	0.9	n.s.	0.55	n.s.	0.37	*	*
34M	+	0.69	n.s.	0.34	n/a	*	n/a	*
Frequency of nonresidential father-child interaction <sup>a</sup>								
9M	n.s.	-0.3	*	*	n.s.	-0.64	*	*
18M	n.s.	0.38	n.s.	0.65	n.s.	0.49	*	*
34M	+	0.59	n.s.	0.81	n/a	*	n/a	*
Frequency of father's activities with focal child								
9M	n.s.	-0.62	*	*	n.s.	-0.26	*	*
18M	+	0.39	n.s.	-0.24	n.s.	-0.04	*	*
34M	+	0.42	n.s.	-0.17	n/a		n/a	*
Frequency of family oriented activities with focal child								
9M	n.s.	-0.63	n.s.	-0.17	n.s.	-0.35	*	*
18M	++	0.43	n.s.	-0.32	n.s.	0.12	*	*
34M	++	0.41	n.s.	-0.39	n/a	*	n/a	*
Frequency of enjoying time together as a family								
9M	n.s.	-0.63	n.s.	0.36	n.s.	-0.29	*	*
18M	++	0.53	n.s.	-0.39	n.s.	-0.06	*	*
34M	+	0.39	n.s.	-0.2	n/a	*	n/a	*
Sample sizes								
9M	119 (T=56, C=63)	119 (T=56, C=63)	114 (T=98, C=16)	114 (T=98, C=16)	129 (T=79, C=50)	129 (T=79, C=50)	14 (T=6, C=8)	14 (T=6, C=8)
18M	211 (T=89, C=122)	211 (T=89, C=122)	193 (T=150, C=43)	193 (T=150, C=43)	144 (T=92, C=52)	144 (T=92, C=52)	25 (T=10, C=15)	25 (T=10, C=15)
34M	316 (T=132, C=184)	316 (T=132, C=184)	263 (T=209, C=54)	263 (T=209, C=54)	n/a	n/a	n/a	n/a

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

++/+/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-4. Treatment-Comparison Differences in Incarceration-Specific, Parenting Outcomes for Incarcerated Men: In-prison Contact with Child**

Outcomes	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Father receives any personal visits from focal child								
9M	n.s.	0.03	n.s.	-0.28	*	*	n.s.	0.23
18M	+++	0.94	n.s.	0.05	*	*	n.s.	-0.86
34M	n.s.	0.4	n.s.	0.35	n/a	*	n/a	*
Father has any phone calls with focal child								
9M	n.s.	-0.16	n.s.	-0.42	*	*	n.s.	-1.13
18M	n.s.	0.04	n.s.	0.35	*	*	n.s.	-13.39
34M	n.s.	0.06	n.s.	0.36	n/a	*	n/a	*
Father receives any mail from focal child								
9M	n.s.	-0.01	n.s.	0.39	*	*	--	-1.13
18M	n.s.	-0.03	n.s.	0.17	*	*	n.s.	-0.24
34M	n.s.	-0.15	++	0.85	n/a	*	n/a	*
Father sends mail to focal child								
9M	n.s.	0.29	-	-0.68	*	*	n.s.	-0.35
18M	n.s.	-0.11	n.s.	-0.31	*	*	-	-2.35
34M	n.s.	-0.4	n.s.	0.53	n/a	*	n/a	*
Sample sizes								
9M	363 (T=136, C=227)	363 (T=136, C=227)	349 (T=262, C=87)	349 (T=262, C=87)	28 (T=23, C=5)	28 (T=23, C=5)	87 (T=59, C=28)	87 (T=59, C=28)
18M	247 (T=100, C=147)	247 (T=100, C=147)	253 (T=183, C=70)	253 (T=183, C=70)	9 (T=7, C=2)	9 (T=7, C=2)	68 (T=52, C=16)	68 (T=52, C=16)
34M	129 (T=52, C=77)	129 (T=52, C=77)	184 (T=127, C=57)	184 (T=127, C=57)	n/a	n/a	n/a	n/a

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### ***Total Female Sample***

*Outcomes Relevant to All Couples.* Summary findings for parenting and coparenting outcomes relevant to all couples among the total female sample are shown in **Exhibit D-5**.

*Reentry-Specific Outcomes.* **Exhibit D-6** shows summary results for the parenting and coparenting outcomes that are only relevant for women whose partners had any community exposure time during the follow-up wave.

*Incarceration-Specific Outcomes.* Finally, **Exhibit D-7** summarizes treatment effects for women for parenting and coparenting variables only relevant to women whose partners were incarcerated during the follow-up period.

**Exhibit D-5. Treatment-Comparison Differences in Parenting and Coparenting Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Parent-child relationship quality								
9M	n.s.	0.16	n.s.	0.06	n.s.	-0.19	n.s.	-0.12
18M	n.s.	-0.05	n.s.	0.01	n.s.	-0.04	n.s.	-0.34
34M	n.s.	0.03	n.s.	0.05	n/a		n/a	
Self-rating as a parent								
9M	n.s.	0.05	n.s.	-0.05	n.s.	0.12	-	-0.47
18M	n.s.	0.03	n.s.	0.05	n.s.	-0.69	n.s.	-0.61
34M	n.s.	0.01	n.s.	-0.14	n/a		n/a	
Decisions about focal child made jointly								
9M	n.s.	0.23	n.s.	-0.45	-	-0.89	+	1.19
18M	+	0.56	n.s.	-0.21	n.s.	-0.78	n.s.	0.94
34M	n.s.	0.41	n.s.	-0.06	n/a		n/a	
Parental warmth								
9M	n.s.	-0.07	n.s.	0.07	-	-0.2	n.s.	-0.2
18M	n.s.	-0.18	n.s.	-0.01	n.s.	-0.46	n.s.	-0.06
34M	--	-0.21	n.s.	-0.02	n/a		n/a	
Partner fulfills parenting responsibilities								
9M	n.s.	-0.13	n.s.	-0.01	--	-1.22	n.s.	0.3
18M	n.s.	0.2	n.s.	-0.05	n.s.	-0.19	n.s.	0.51
34M	n.s.	0.17	-	-0.28	n/a		n/a	
Sample sizes								
9M	381 (T=165, C=216)	381 (T=165, C=216)	383 (T=291, C=92)	383 (T=291, C=92)	123 (T=82, C=41)	123 (T=82, C=41)	69 (T=44, C=25)	69 (T=44, C=25)
18M	382 (T=161, C=221)	382 (T=161, C=221)	400 (T=305, C=95)	400 (T=305, C=95)	137 (T=87, C=50)	137 (T=87, C=50)	71 (T=45, C=26)	71 (T=45, C=26)
34M	369 (T=159, C=210)	369 (T=159, C=210)	402 (T=308, C=94)	402 (T=308, C=94)	n/a	n/a	n/a	n/a

n/a Not applicable.  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-6. Treatment-Comparison Differences in Reentry-Specific, Parenting Outcomes for Partners of Released Men: Coresidence with Children, Financial Support, and Family Involvement**

Outcomes	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Father-focal child coresidence								
9M	n.s.	-0.44	n.s.	0.42	--	-3.2	*	*
18M	n.s.	0.32	n.s.	0.15	n.s.	-0.97	*	*
34M	+	0.72	n.s.	-0.18	n/a	*	n/a	*
Father financially supported focal child								
9M	n.s.	0.22	n.s.	-1.23	-	-1.29	*	*
18M	+	0.68	n.s.	-0.21	n.s.	-0.97	*	*
34M	++	0.73	n.s.	-0.65	n/a	*	n/a	*
Frequency of family oriented activities with focal child								
9M	n.s.	-0.3	n.s.	-0.45	--	-0.6	*	*
18M	n.s.	0.37	n.s.	-0.31	--	-0.66	*	*
34M	n.s.	0.6	n.s.	0.15	n/a	*	n/a	*
Frequency of enjoying time together as a family								
9M	n.s.	-0.71	n.s.	-0.26	-	-0.59	*	*
18M	n.s.	0.3	n.s.	-0.07	-	-0.56	*	*
34M	n.s.	0.62	n.s.	0.19	n/a	*	n/a	*
Sample sizes								
9M	83 (T=41, C=42)	83 (T=41, C=42)	88 (T=73, C=15)	88 (T=73, C=15)	94 (T=64, C=30)	94 (T=64, C=30)	11 (T=4, C=7)	11 (T=4, C=7)
18M	160 (T=73, C=87)	160 (T=73, C=87)	160 (T=129, C=31)	160 (T=129, C=31)	117 (T=74, C=43)	117 (T=74, C=43)	19 (T=8, C=11)	19 (T=8, C=11)
34M	234 (T=107, C=127)	234 (T=107, C=127)	224 (T=180, C=44)	224 (T=180, C=44)	n/a	n/a	n/a	n/a

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-7. Treatment-Comparison Differences in Incarceration-Specific, Parenting Outcomes for Partners of Still-Incarcerated men: In-prison Contact with Child**

Outcomes	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Father receives any personal visits from focal child								
9M	n.s.	0.27	n.s.	0.36	n.s.	-11.24	n.s.	2.03
18M	n.s.	-0.22	n.s.	0.1	*	*	n.s.	0.93
34M	n.s.	-0.65	n.s.	-0.19	n/a	*	n/a	*
Father has any phone calls with focal child								
9M	n.s.	0.39	n.s.	0.17	n.s.	-1.14	n.s.	0.49
18M	n.s.	-0.19	n.s.	0.11	*	*	n.s.	-1.78
34M	n.s.	0.27	n.s.	0.45	n/a	*	n/a	*
Father receives any mail from focal child								
9M	+	0.55	n.s.	0.41	n.s.	-0.74	n.s.	0.33
18M	n.s.	0.11	n.s.	0.32	*	*	n.s.	1.15
34M	n.s.	-0.33	n.s.	0.39	n/a	*	n/a	*
Father sends mail to focal child								
9M	+	0.63	n.s.	-0.09	n.s.	-1.34	n.s.	-0.85
18M	n.s.	-0.19	n.s.	0.6	*	*	n.s.	0.81
34M	n.s.	0.1	n.s.	0.43	n/a	*	n/a	*
Sample sizes								
9M	298 (T=125, C=173)	298 (T=125, C=173)	295 (T=218, C=77)	295 (T=218, C=77)	29 (T=18, C=11)	29 (T=18, C=11)	58 (T=40, C=18)	58 (T=40, C=18)
18M	221 (T=89, C=132)	221 (T=89, C=132)	238 (T=174, C=64)	238 (T=174, C=64)	13 (T=8, C=5)	13 (T=8, C=5)	52 (T=37, C=15)	52 (T=37, C=15)
34M	126 (T=50, C=76)	126 (T=50, C=76)	171 (T=123, C=48)	171 (T=123, C=48)	n/a	n/a	n/a	n/a

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### *Differences in Treatment-Comparison Couple Trajectories over Time*

*Outcomes Relevant to All Couples.* Summary findings for the latent growth curve analyses comparing differences in the trajectories of treatment and comparison couples over time for parenting and coparenting outcomes are shown in **Exhibit D-8**. The graphical illustration of the slopes for these outcomes is shown in **Exhibits D-9** through **D-13**.

**Exhibit D-8. Treatment-Comparison (T-C) Differences in Parenting and Coparenting Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Parent self-rating	n.s.	0.068	n.s.	-0.025	n.s.	-0.031	n.s.	0.046	-	-0.1	+	0.099	n.s.	-0.075	n.s.	0.042
Parent child relationship	n.s.	-0.006	n.s.	0.029	n.s.	-0.02	n.s.	0	n.s.	-0.076	n.s.	-0.016	n.s.	-0.022	n.s.	-0.011
Joint decisionmaking	n.s.	-0.007	++	0.086	n.s.	-0.037	n.s.	0.012	--	-0.135	n.s.	-0.084	n.s.	-0.007	n.s.	0.069
Parental warmth	n.s.	0.008	--	-0.085	n.s.	-0.068	n.s.	0.047	-	-0.087	n.s.	0.008	n.s.	-0.018	n.s.	0.031
Partner fulfills parenting responsibilities	n.s.	0.037	++	0.025	n.s.	0.002	-	-0.031	-	-0.089	n.s.	-0.021	n.s.	-0.088	n.s.	0.016
Sample sizes	629	629	629	629	557	557	557	557	253	253	253	253	135	135	135	135

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit D-9. Trajectories for Parent Self-Rating based on Latent Growth Curve Models, by Site and Group

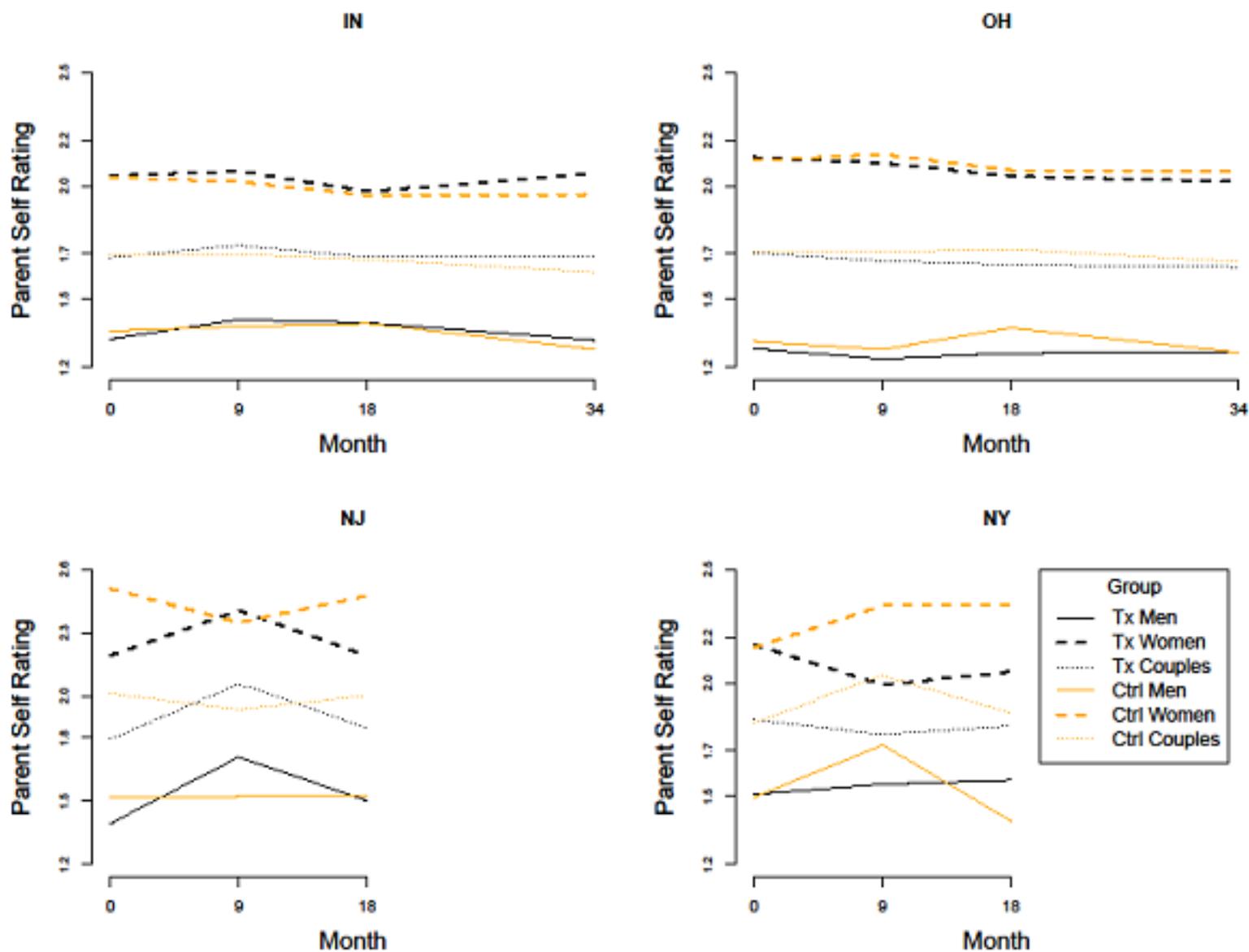


Exhibit D-10. Trajectories for Parent Child Relationship Based on Latent Growth Curve Model, by Site and Group

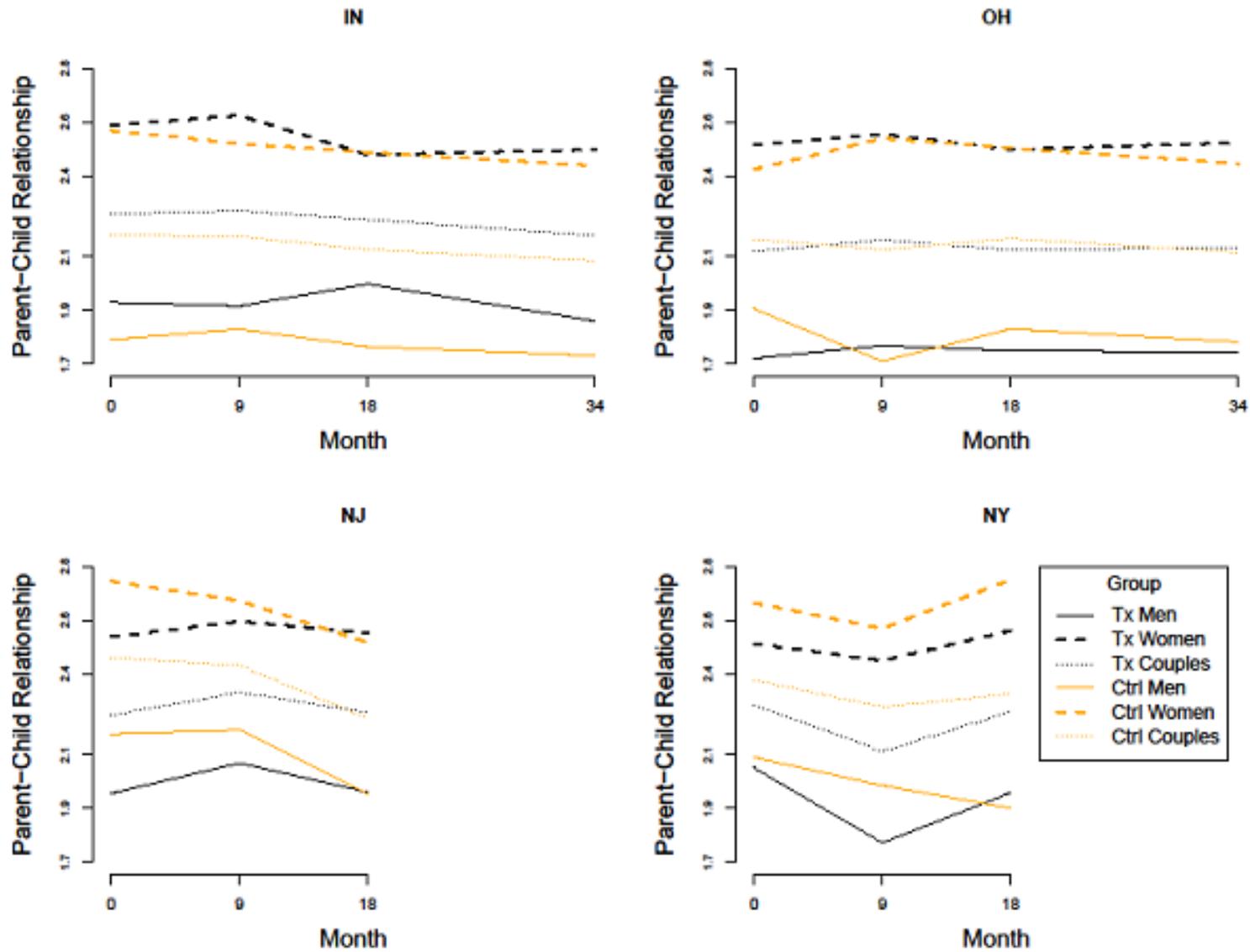


Exhibit D-11. Trajectories for Joint Decisionmaking Based on Latent Growth Curve Model, by Site and Group

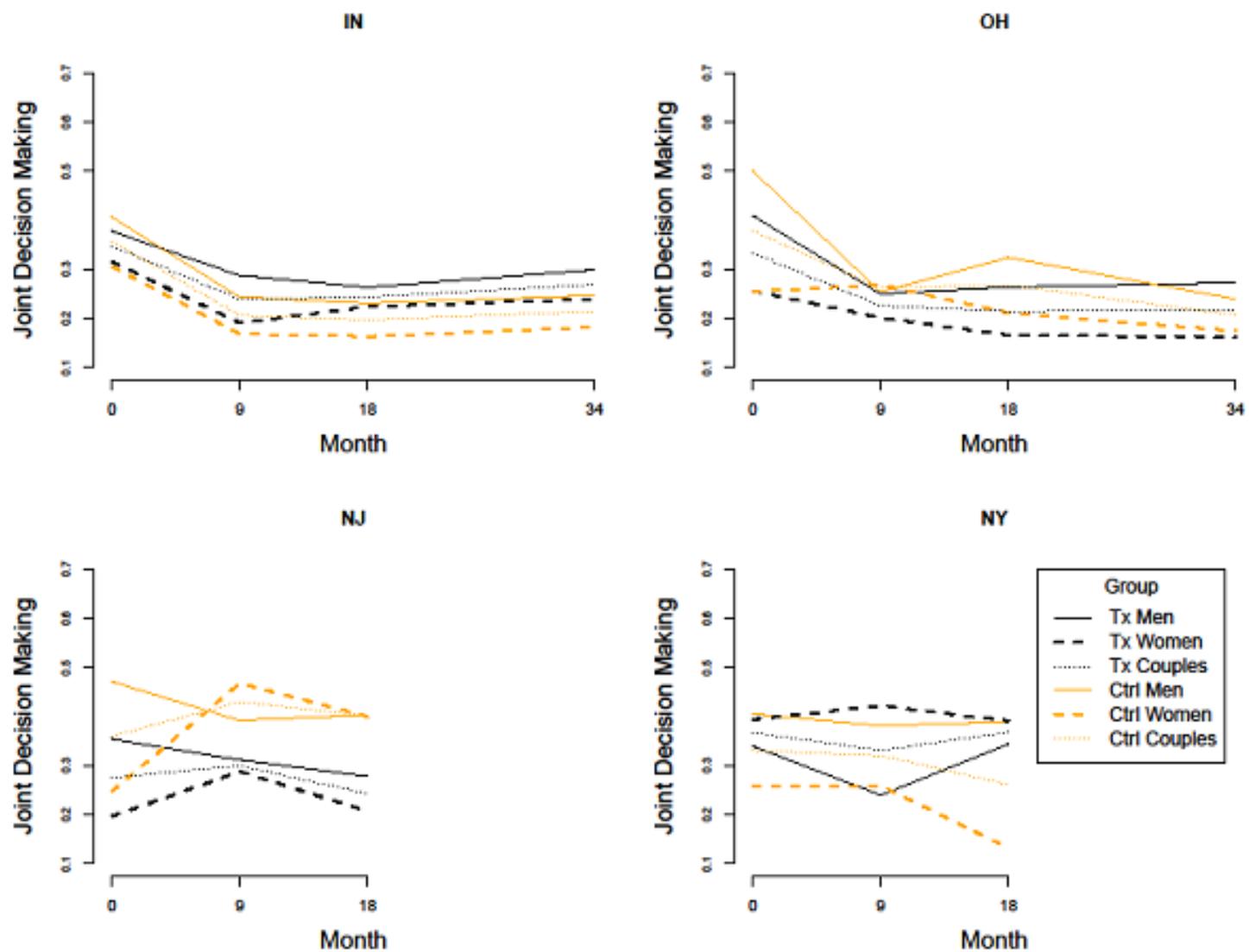


Exhibit D-12. Trajectories for Parental Warmth based on Latent Growth Curve Models, by Site and Group

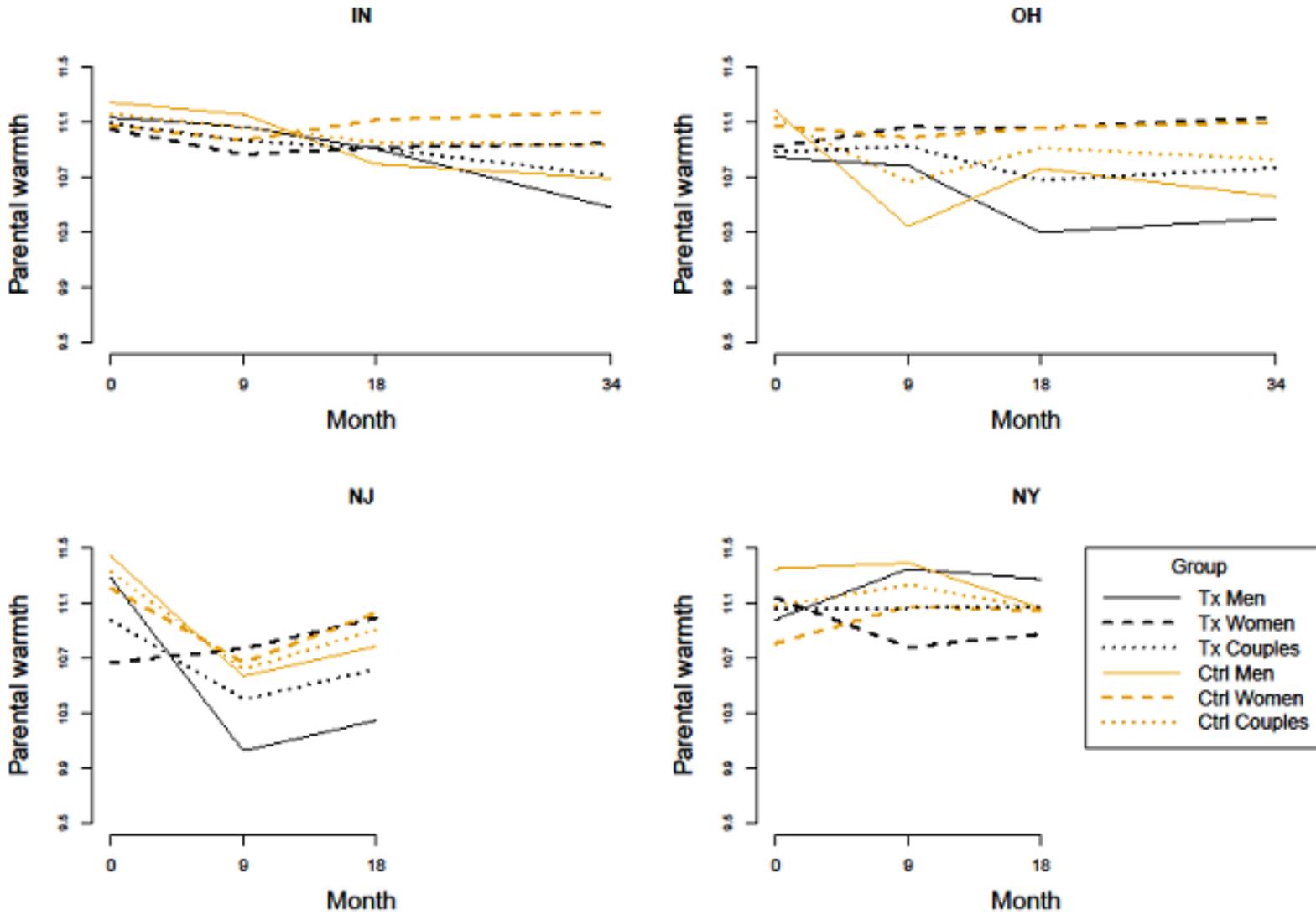
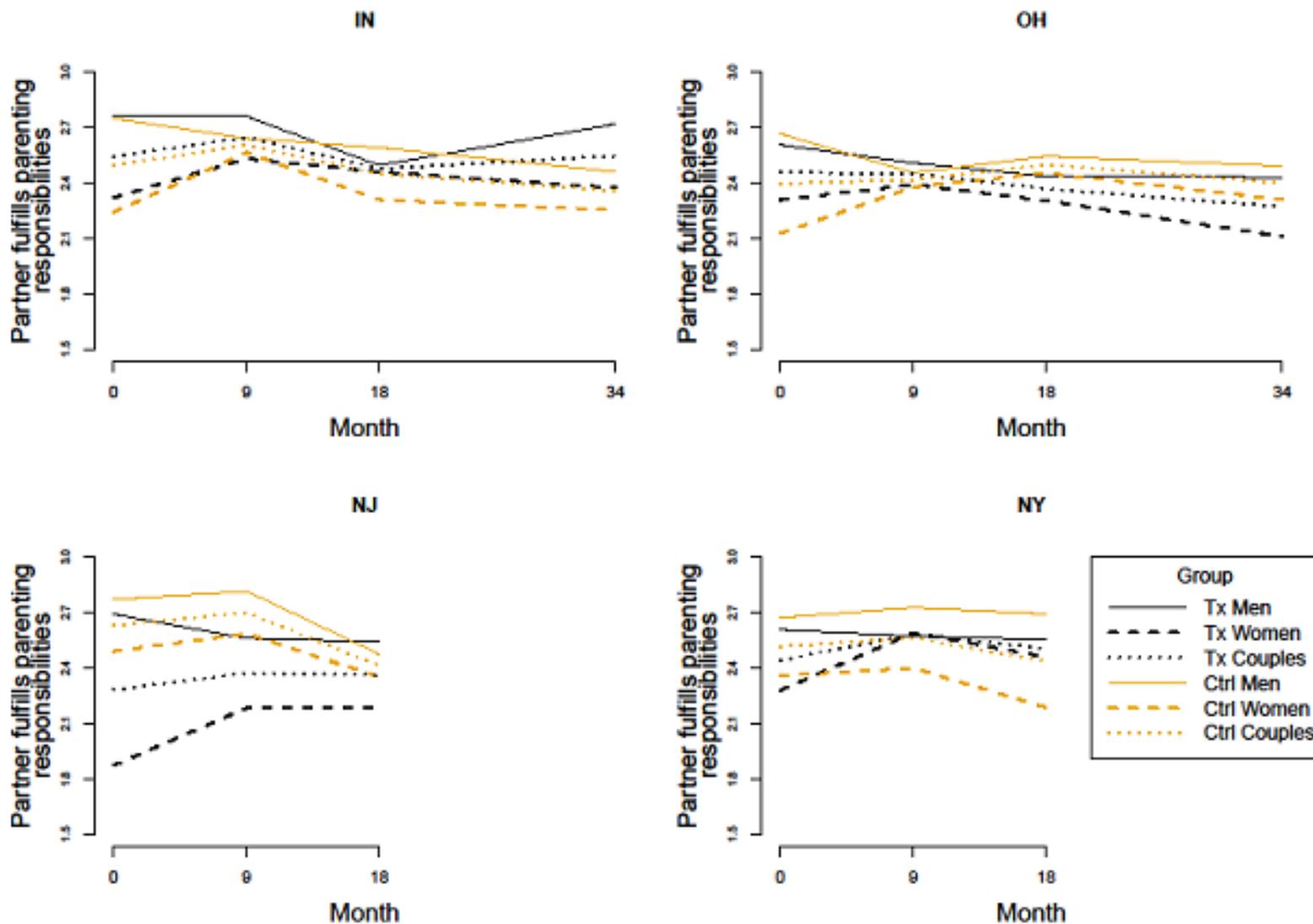


Exhibit D-13. Trajectories for Partner Fulfillment of Parenting Responsibilities based on Latent Growth Curve Models, by Site and Group



*Reentry-Specific Outcomes.* Summary findings for parenting and coparenting outcomes that are only relevant to couples in which the male partner had some community exposure during the follow-up period are shown in **Exhibit D-14**. The trajectories for each group on these outcomes are shown in **Exhibits D-15** through **D-21**.

*Incarceration-Specific Outcomes.* Summary findings for the in-prison contact outcomes dependent on the male partner's continued incarceration are shown in **Exhibit D-22**, with the graphics that illustrate the trajectories over time for each group shown in **Exhibit D-23** through **D-26**.

**Exhibit D-14. Treatment-Comparison (T-C) Differences in Reentry-Specific Parenting and Coparenting Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Father—focal child coresidence	n.s.	-0.007	+++	0.119	n.s.	0.035	n.s.	-0.023	-	-0.108	n.s.	-0.046	n.s.	0.07	+++	0.378
Father coresidence with any of his children ( <i>males only</i> )	n.s.	0.046	n.s.	0.021	n.s.	0.042	n.s.	0.041	n.s.	-0.044	n.s.	-0.041	n.s.	0.068	n.s.	0.049
Father financially supported focal child	+++	0.203	++	0.1	n.s.	0.002	n.s.	-0.002	---	-0.38	n.s.	-0.071	+++	0.475	n.s.	0.04
Frequency of nonresidential father-child interaction ( <i>males only</i> )	NoC	NoC	NoC	NoC												
Frequency of father’s activities with focal child ( <i>males only</i> )	n.s.	0.006	+++	0.125	n.s.	-0.002	n.s.	-0.007	n.s.	-0.088	n.s.	-0.095	NoC	NoC	NoC	NoC
Frequency of family oriented activities with focal child	n.s.	0.024	+++	0.123	n.s.	-0.041	n.s.	0.001	-	-0.116	n.s.	0.036	NoC	NoC	NoC	NoC
Frequency of enjoying time together as a family	n.s.	0.034	+++	0.145	NoC	NoC	NoC	NoC	n.s.	-0.074	n.s.	-0.02	NoC	NoC	NoC	NoC
Samples sizes	579	579	579	579	556	556	556	556	268	268	268	268	115	115	115	115

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit D-15. Trajectories for Father-Focal Child Coresidence based on Latent Growth Curve Models, by Site and Group

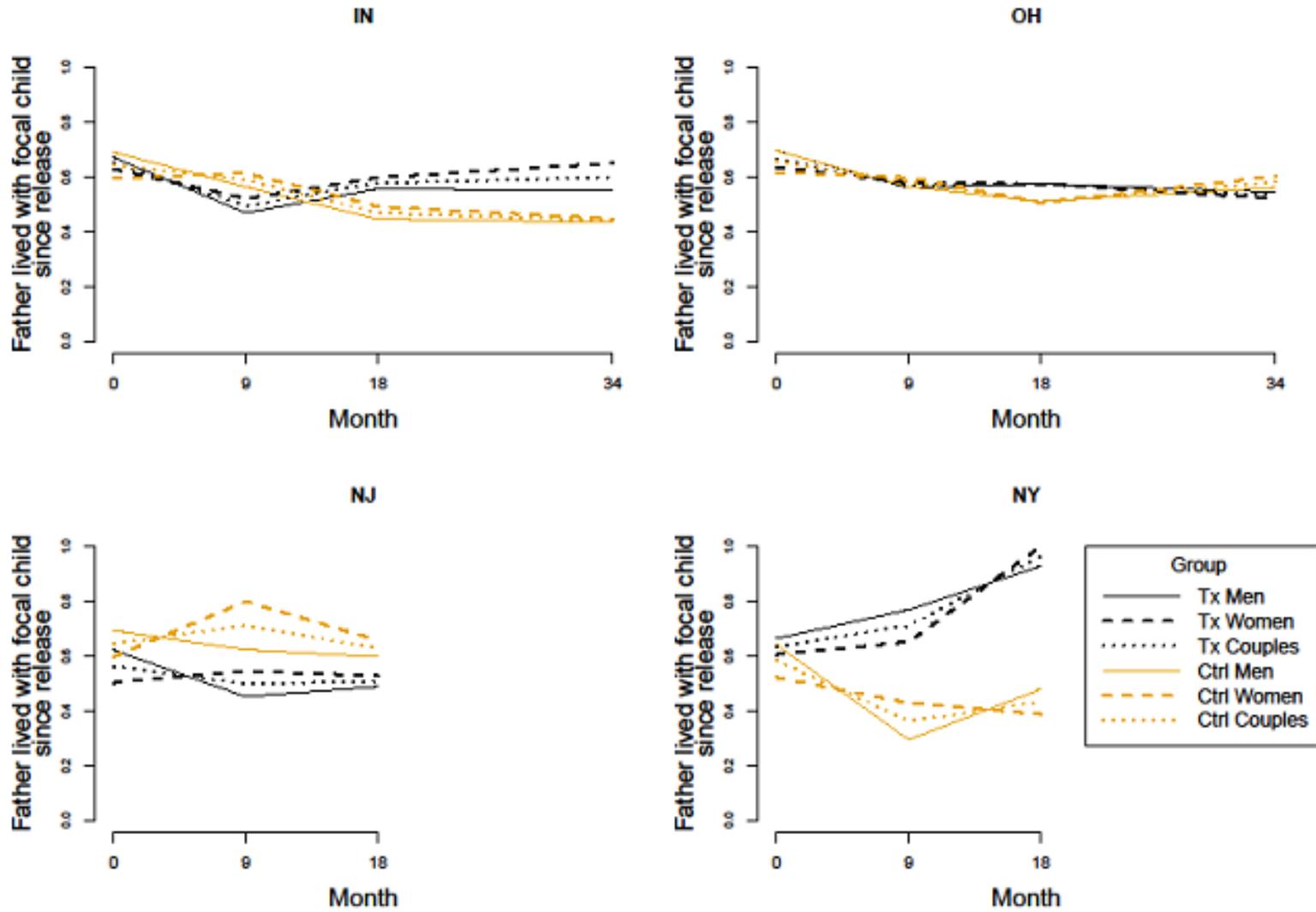


Exhibit D-16. Trajectories for Father-Child (Any Child) Coresidence based on Latent Growth Curve Models, by Site and Group

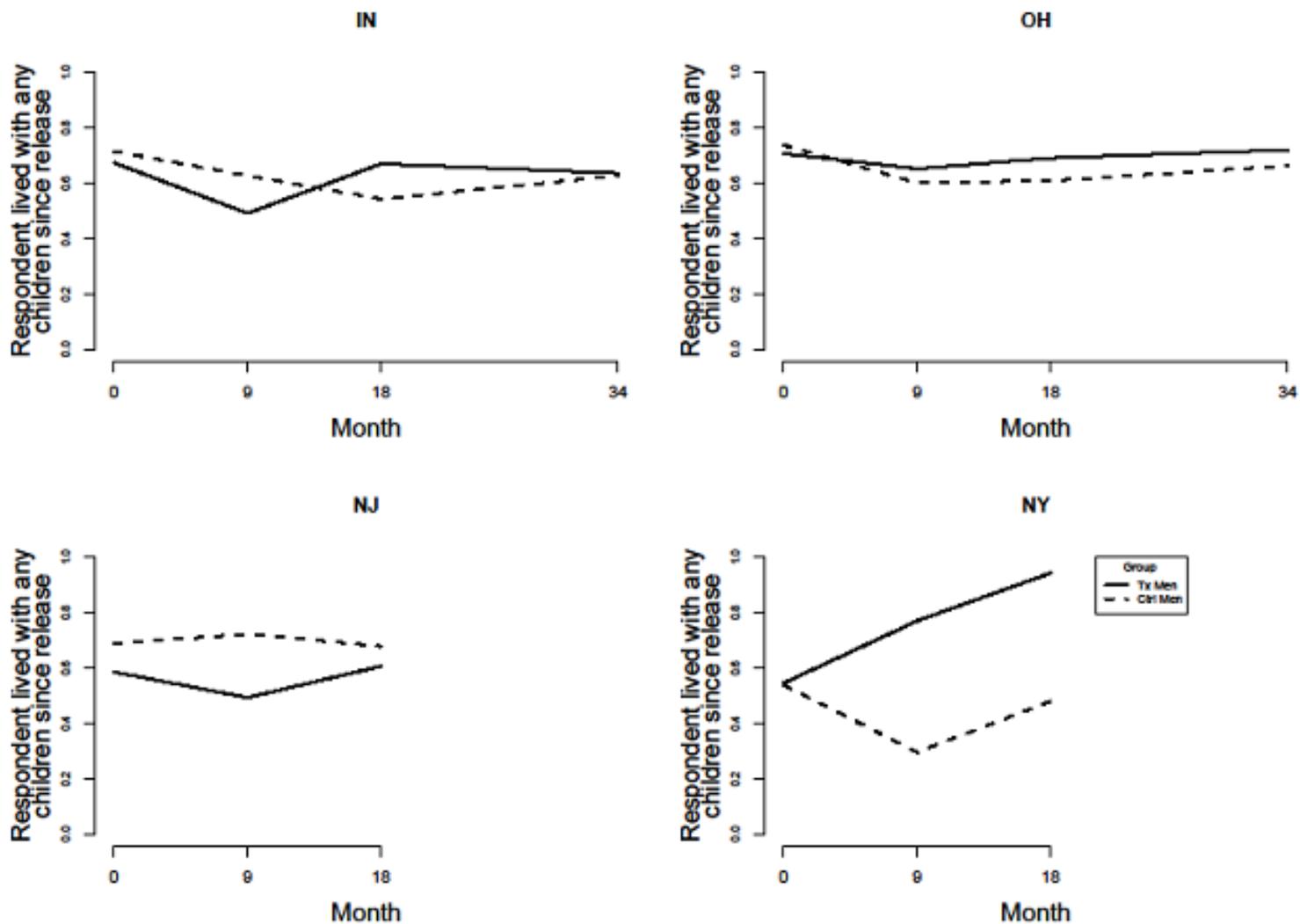


Exhibit D-17. Trajectories for Father's Financial Support for Focal Child based on Latent Growth Curve Models, by Site and Group

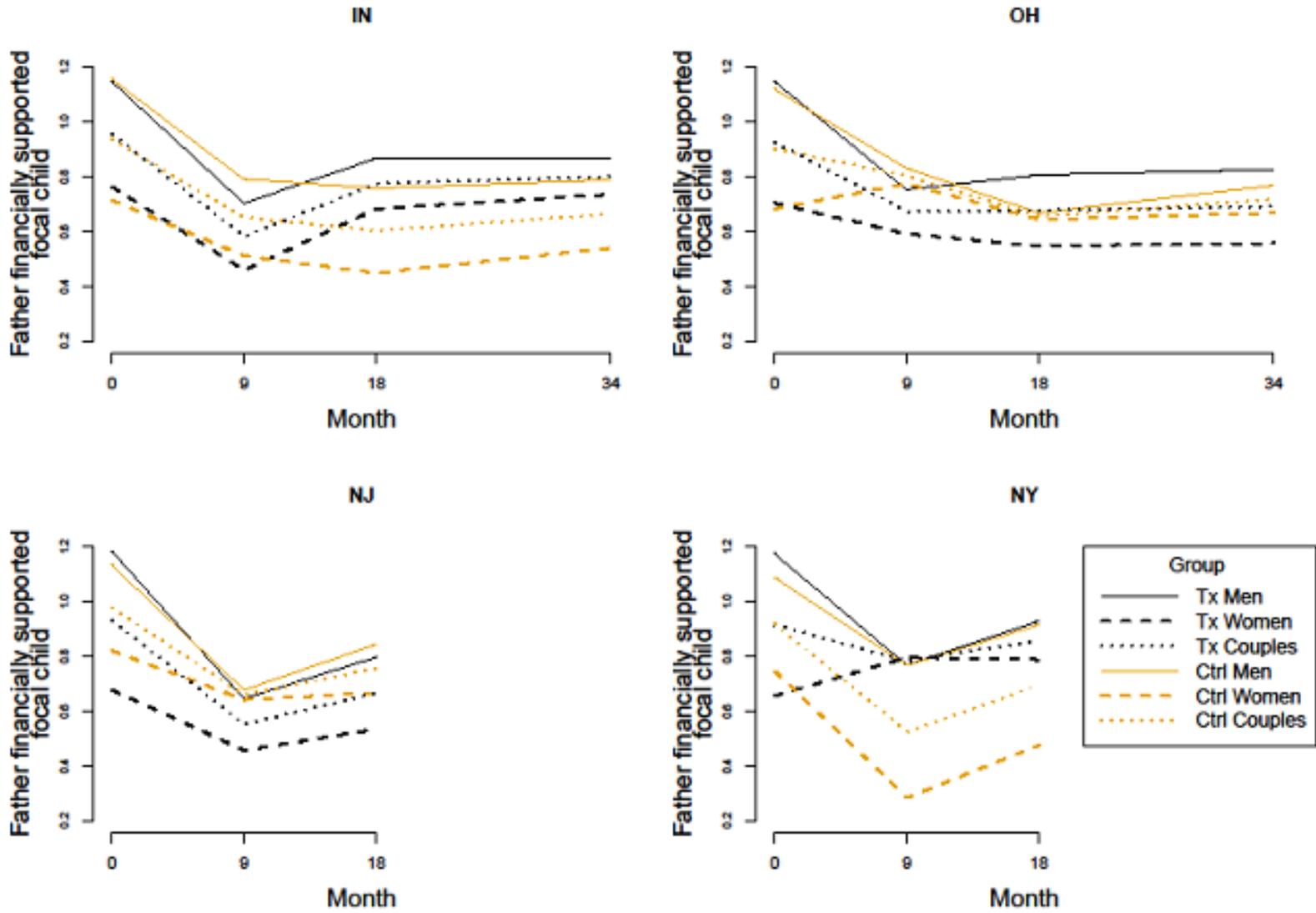


Exhibit D-18. Trajectories for Frequency of Nonresidential Father-Child Interaction based on Latent Growth Curve Models, by Site and Group

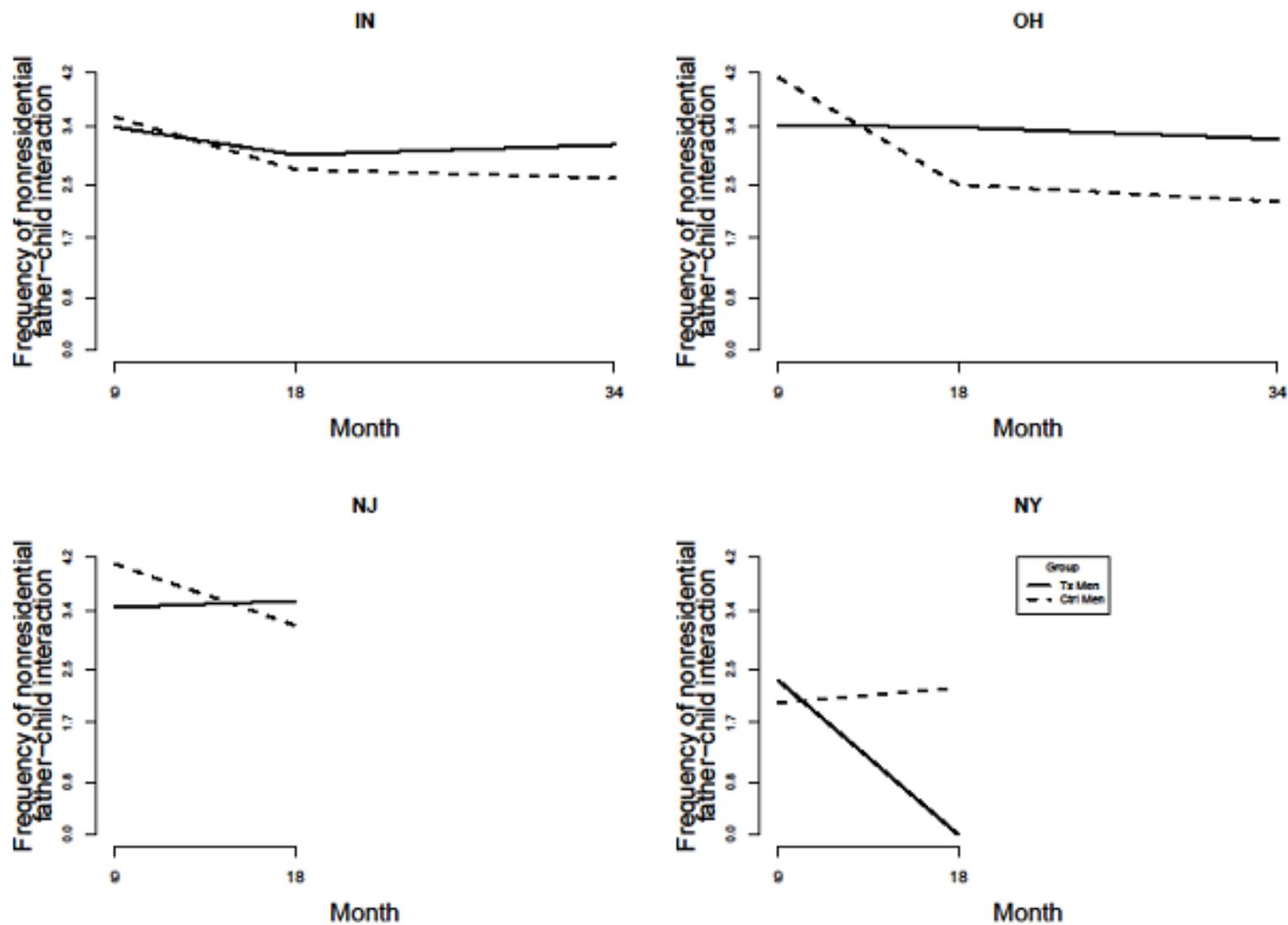


Exhibit D-19. Trajectories for Frequency of Father's Activities with Focal Child based on Latent Growth Curve Models, by Site and Group

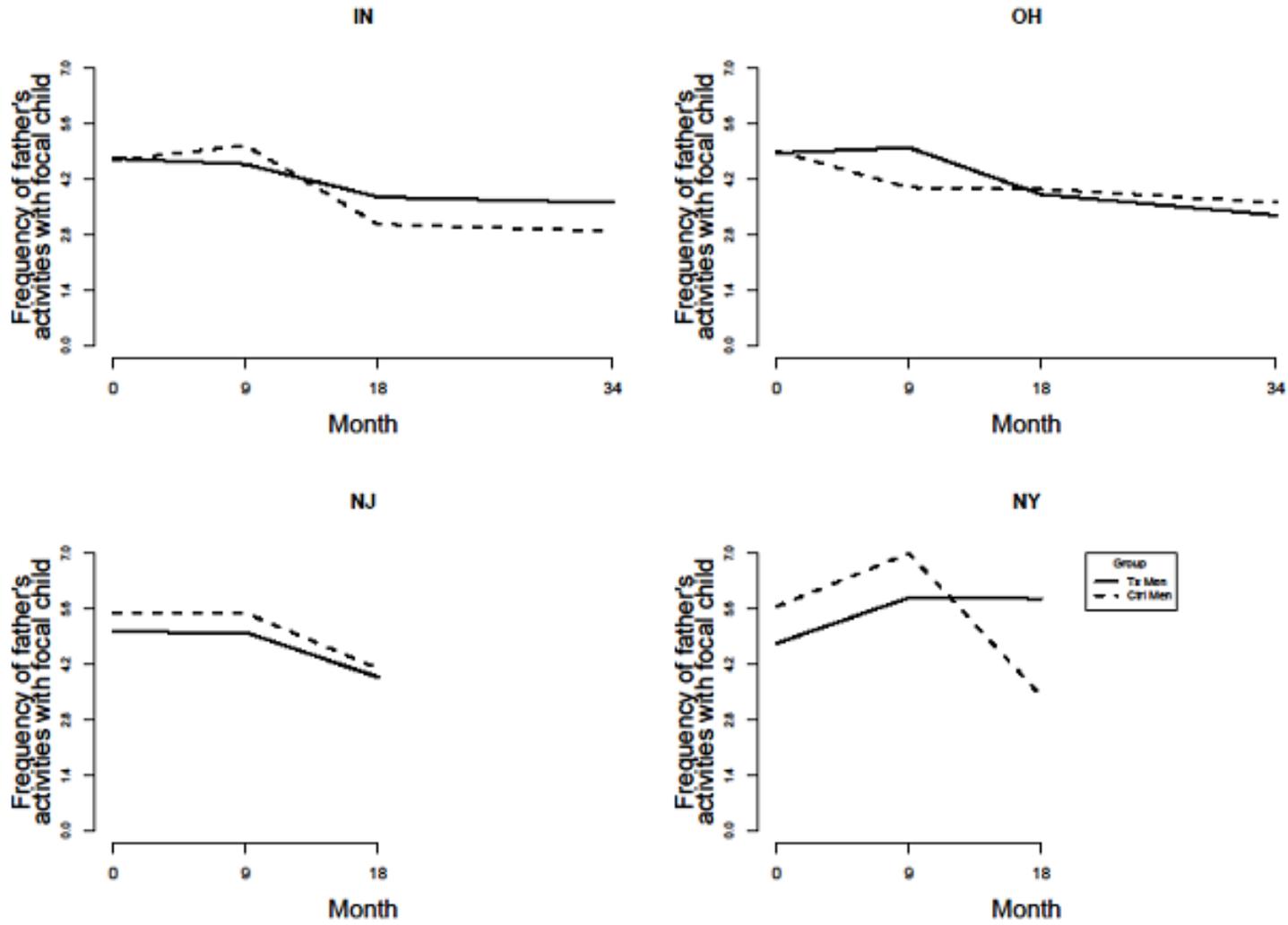


Exhibit D-20. Trajectories for Frequency of Family-Oriented Activities with Focal Child based on Latent Growth Curve Models, by Site and Group

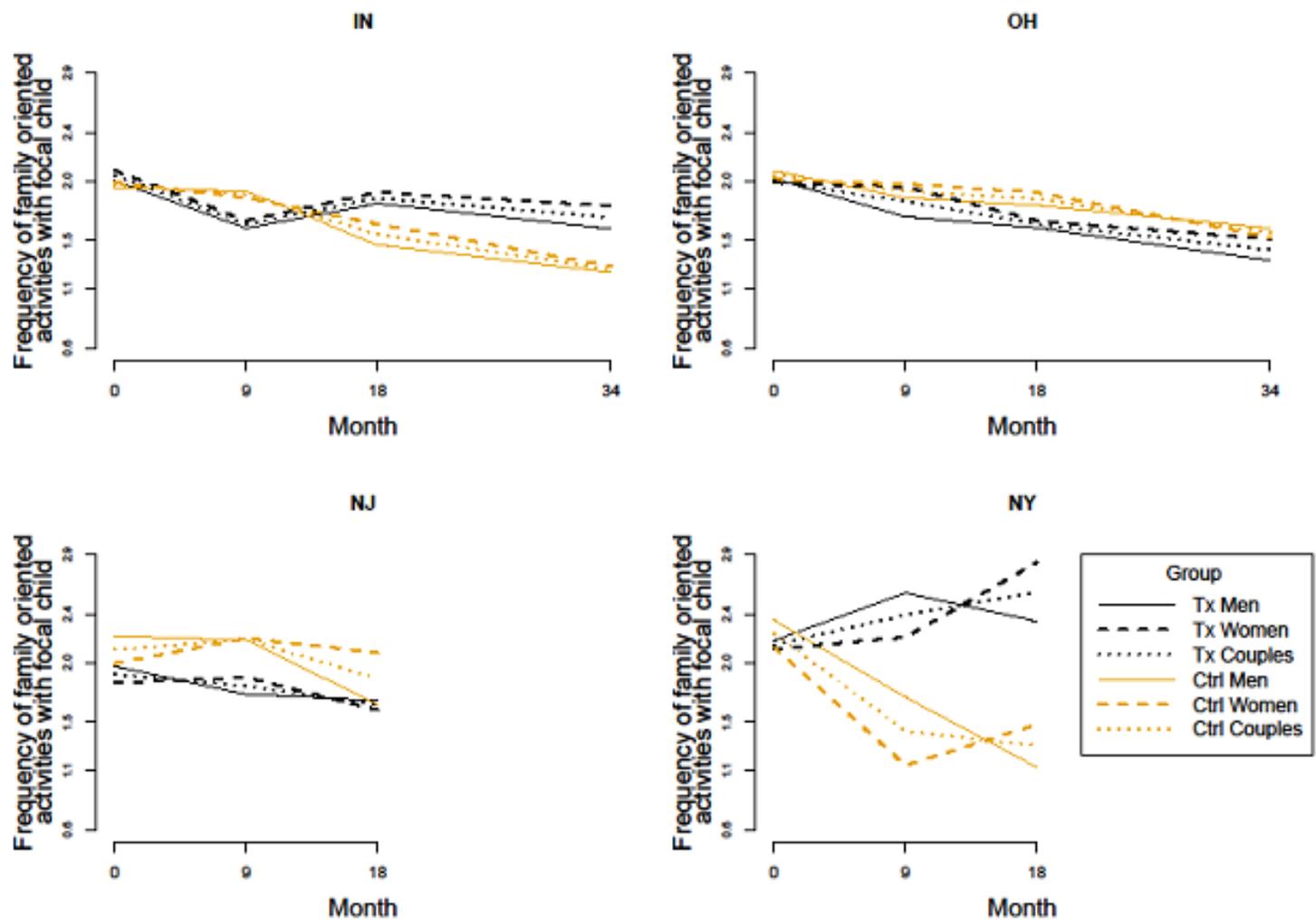
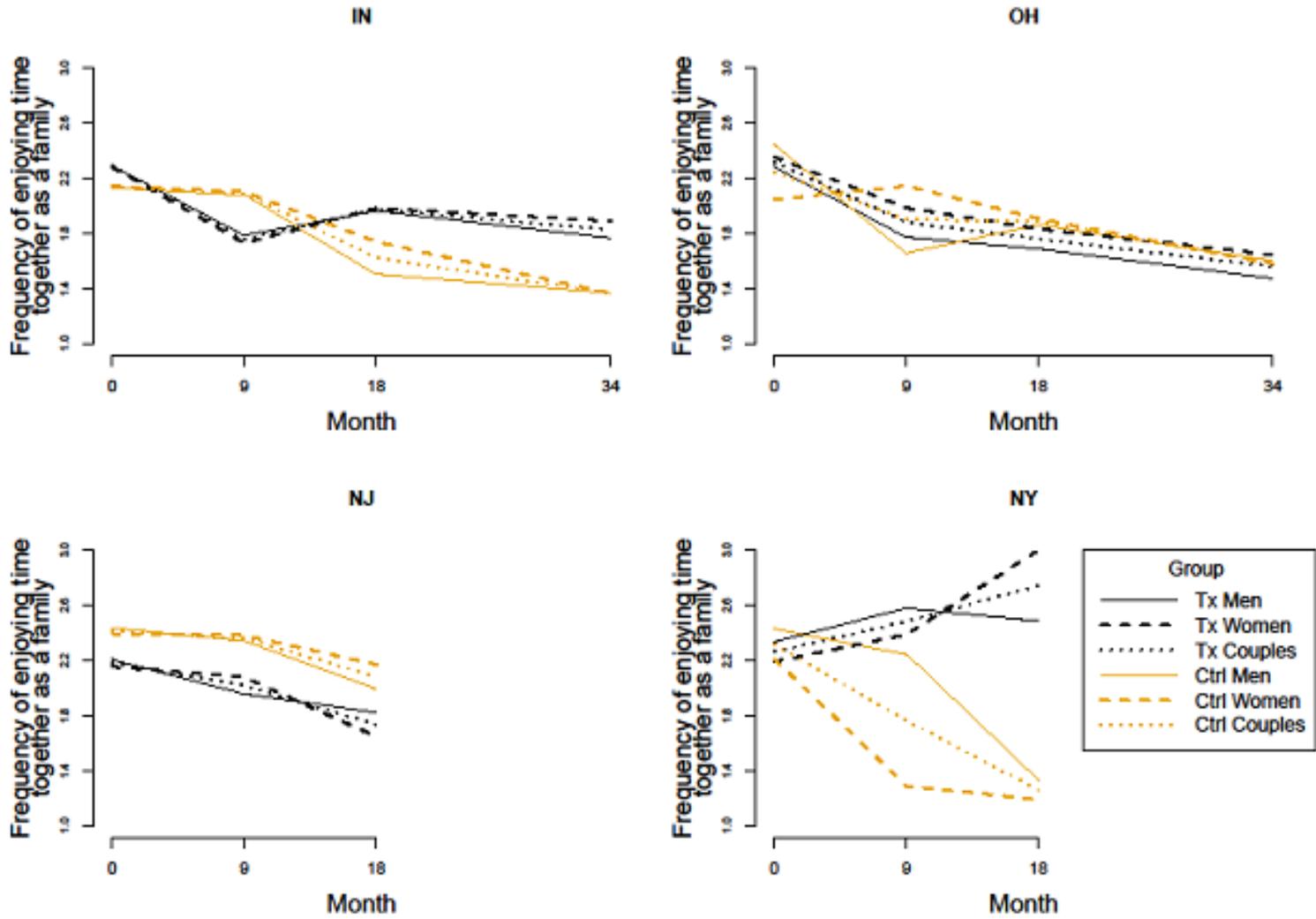


Exhibit D-21. Trajectories for Frequency of Enjoying Time Together as a Family based on Latent Growth Curve Models, by Site and Group



**Exhibit D-22. Treatment-Comparison Differences in Incarceration-Specific Parenting and Coparenting Outcomes at Baseline (Intercept) and Change over time (Slope) for Couples, based on Latent Growth Curve Model**

	Indiana				Ohio				New Jersey				New York			
	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size	T-C Intercepts	Effect Size	T-C Slopes	Effect Size
Father receives any personal visits from focal child	+++	0.197	n.s.	0.007	n.s.	-0.029	n.s.	0.014	n.s.	-0.015	-	-0.1	n.s.	-0.044	n.s.	-0.001
Father has any phone calls with focal child	+++	0.215	n.s.	0.003	n.s.	-0.028	n.s.	-0.059	NoC	n.s.	NoC	n.s.	n.s.	-0.032	n.s.	-0.032
Father receives any mail from focal child	+++	0.303	n.s.	-0.004	n.s.	-0.023	n.s.	0.018	++	0.137	n.s.	-0.076	+	0.133	n.s.	-0.045
Father sends mail to focal child	+++	0.286	--	-0.084	n.s.	0.012	n.s.	-0.027	NoC	n.s.	NoC	n.s.	++	0.185	n.s.	-0.101
Samples sizes	630	630	630	630	661	661	661	661	283	283	283	283	195	195	195	195

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

Exhibit D-23. Trajectories for Father Receives Any Personal Visits from Focal Child based on Latent Growth Curve Models, by Site and Group

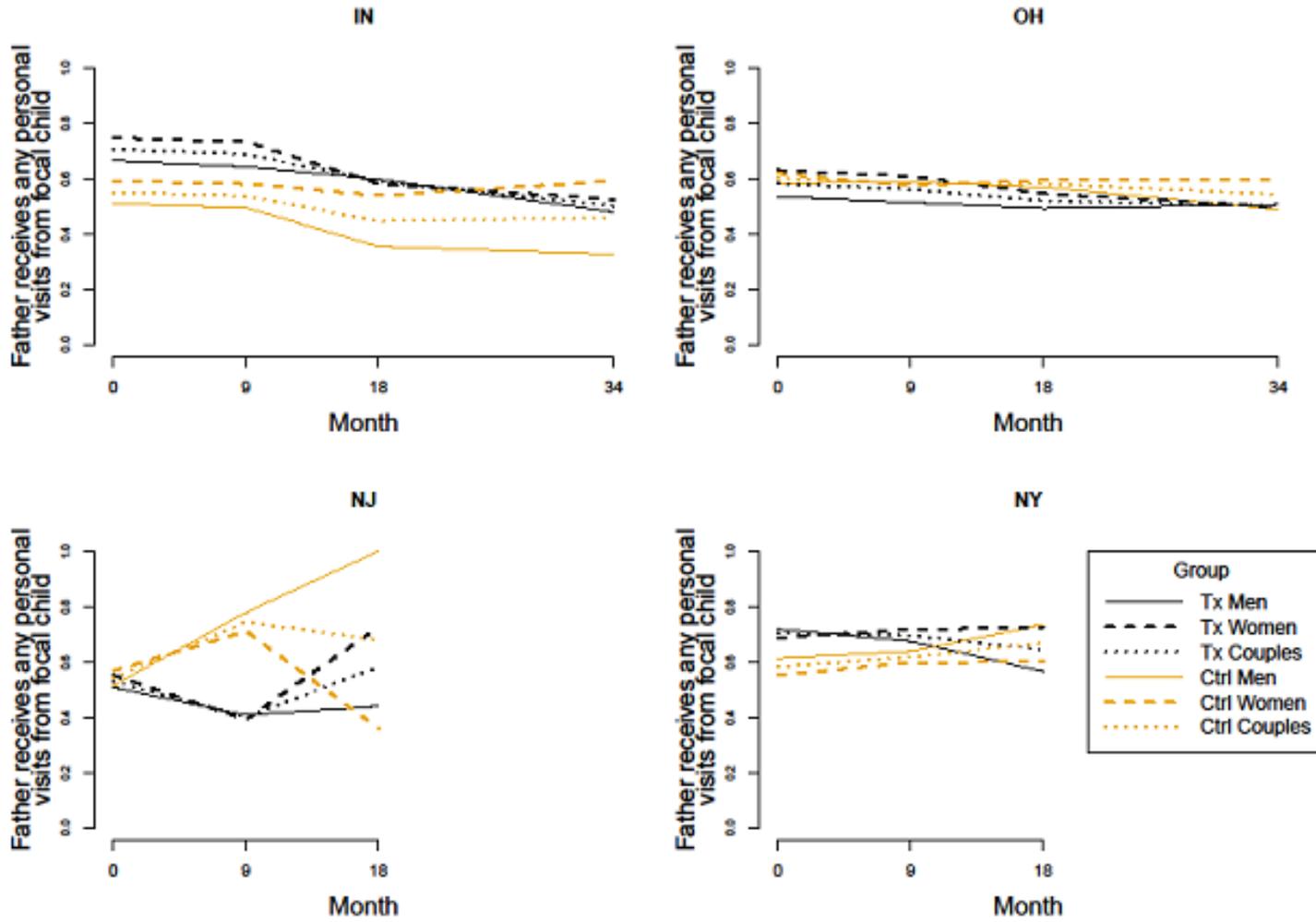


Exhibit D-24. Trajectories for Father Has Any Phone Calls with Focal Child based on Latent Growth Curve Models, by Site and Group

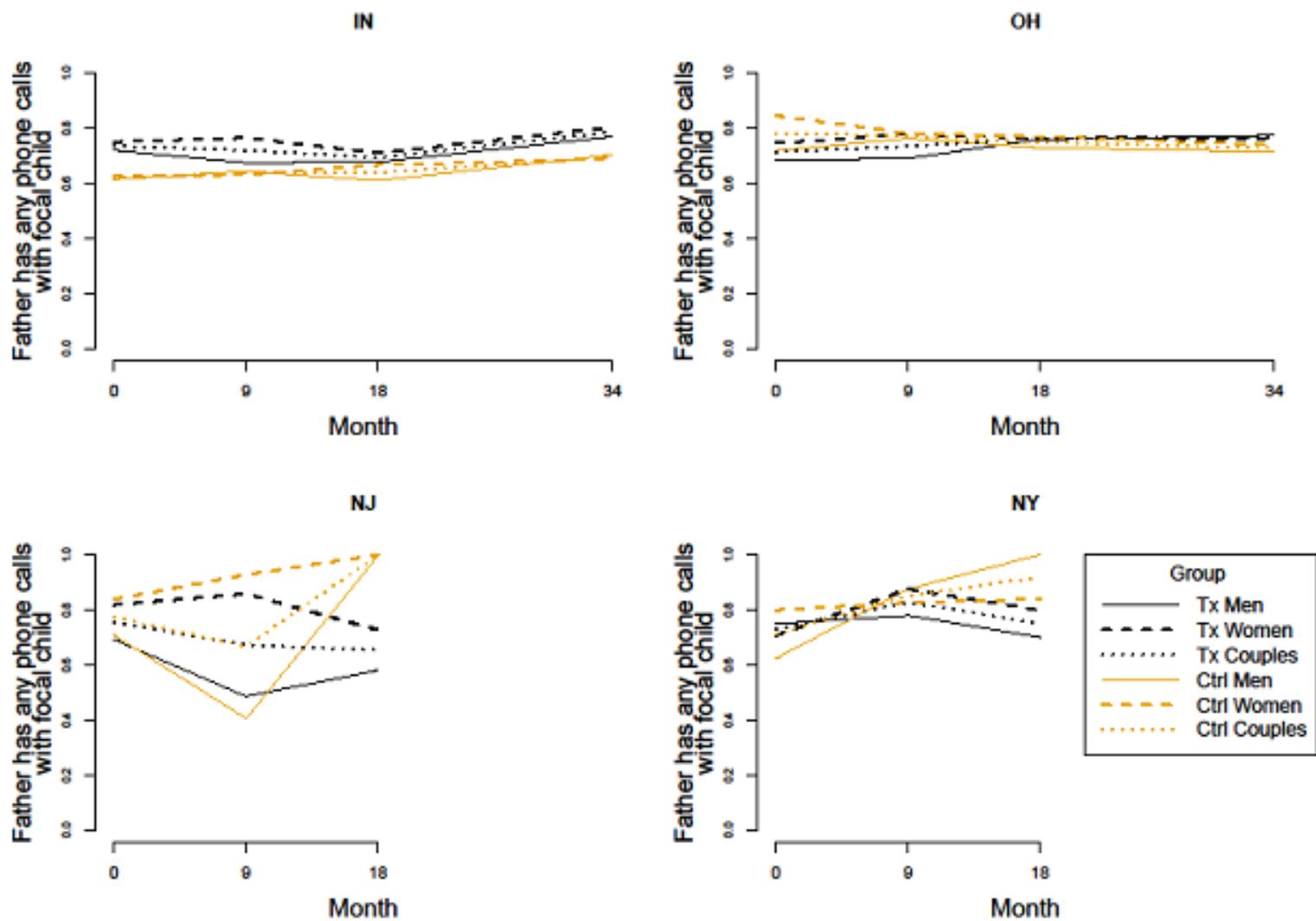


Exhibit D-25. Trajectories for Father Receives Any Mail from Focal Child based on Latent Growth Curve Models, by Site and Group

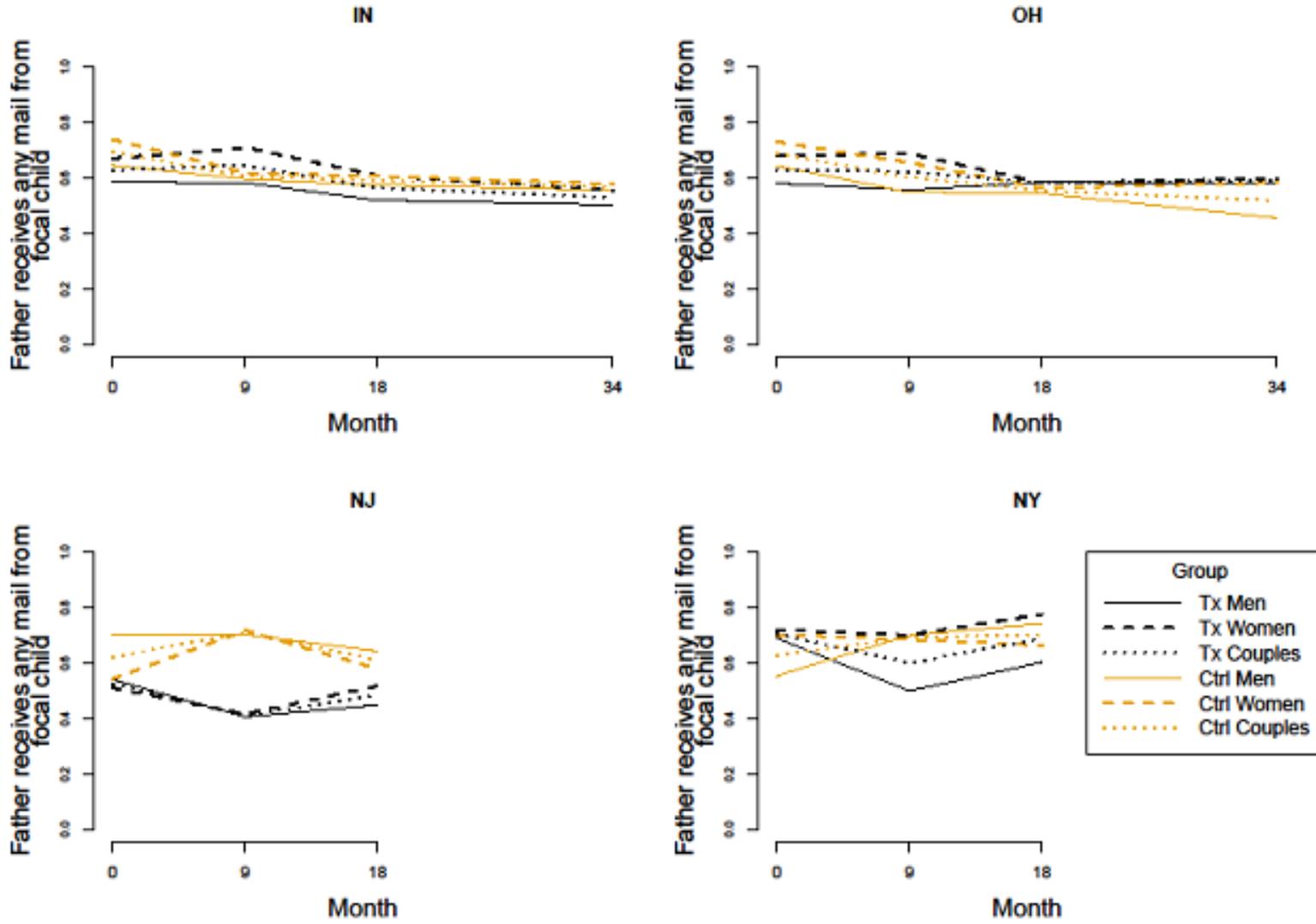
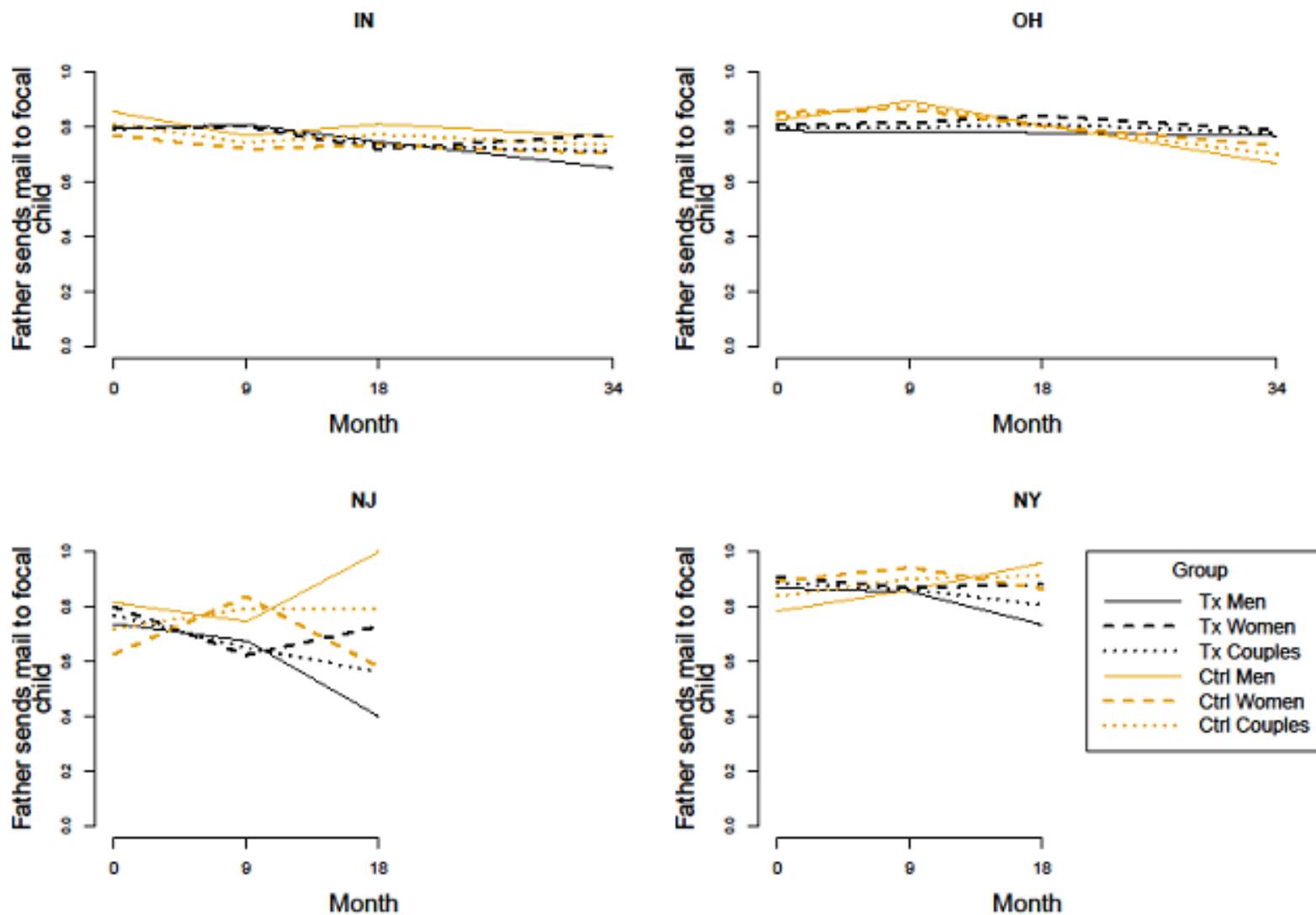


Exhibit D-26. Trajectories for Father Sends Mail to Focal Child based on Latent Growth Curve Models, by Site and Group



## **Sensitivity Analysis: Exploring the Effects of Community Exposure**

As described in **Appendix A**, a sensitivity analysis was conducted with both analytic approaches to see whether differences in the male partner's incarceration trajectory affected the findings. This section presents summary results for the sensitivity analyses.

### *Treatment-Comparison Differences by Wave*

The sensitivity analysis conducted for the differences in weighted means approach measured the interaction between community exposure and treatment within the sites to determine if there were differences in the effect of treatment for couples whose male partner had any community exposure time during the reference period and couples whose male partner had been incarcerated for the entire reference period. This analysis was conducted for variables that were measured for all couples (regardless of the male partner's community exposure). Results for the total male sample are shown in **Exhibit D-27** and results for the total female sample are shown in **Exhibit D-28**. When examining whether treatment effects were related to the men's incarceration trajectories for parenting and coparenting outcomes that are relevant to all fathers, regardless of whether they had any community exposure during the follow-up period, it appears that the few treatment effects that were observed among the total sample of men (**Exhibit D-2**) were generally not affected by men's community exposure. However, in both Indiana and Ohio, one of the treatment effects found among the total sample of men (parent-child relationship quality at the 9-month follow-up in Indiana and parental warmth at 9-month follow-up in Ohio) was, in the sensitivity analysis, only significant for men who remained incarcerated and had no community exposure during the reference period. For women, neither of the two positive treatment effects observed for parenting and coparenting outcomes among the total female sample (see **Exhibit D-5**) were significant for the two subsamples explored in the sensitivity analysis (see **Exhibit D-28**).

### *Differences in Treatment-Comparison Couple Trajectories over Time*

For the latent growth curve models, the sensitivity analysis entailed including community exposure as an independent variable in the models and examining whether 1) community exposure was significantly associated with the outcome (and the direction of the relationship) and 2) whether the inclusion of community exposure affected the treatment effects previously reported. **Exhibit D-29** shows summary indicators of the significance of the relationship between community exposure and the outcomes at each time point, by site. Analyses suggest that in each site, couples in which the male partner had at least some community exposure tended to have more positive parenting and coparenting outcomes, particularly at the 9- and 18-month interview waves. **Exhibit D-30** shows summary indicators of the treatment effects when controlling for community exposure in the latent growth curve models run for the outcomes. In these analyses, Ohio treatment couples were found to have a significantly better trajectory for parent self-rating than comparison couples.

**Exhibit D-27. Treatment-Comparison Differences in Parenting and Coparenting Outcomes for Total Male Sample at Nine, 18, and 34 Months, by Site and Community Exposure**

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.
Parent-child relationship quality																
9M	0.123	n.s.	-0.061	n.s.	0.056	n.s.	0.217	n.s.	*	*	0.055	n.s.	-0.406	n.s.	*	*
18M	0.25	+	0.197	n.s.	-0.091	n.s.	-0.123	n.s.	*	*	0.1	n.s.	-0.017	n.s.	*	*
34M	0.051	n.s.	0.158	n.s.	-0.032	n.s.	-0.123	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Self-rating as a parent																
9M	0.025	n.s.	0.011	n.s.	-0.084	n.s.	0.241	n.s.	*	*	0.281	n.s.	-0.25	n.s.	*	*
18M	-0.022	n.s.	0.002	n.s.	-0.011	n.s.	-0.253	n.s.	*	*	0.004	n.s.	0.213	n.s.	*	*
34M	-0.028	n.s.	0.116	n.s.	0.004	n.s.	-0.025	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Decisions about focal child made jointly																
9M	0.022	n.s.	0.047	n.s.	-0.087	n.s.	0.294	+++	*	*	-0.003	n.s.	-0.31	--	*	*
18M	0.008	n.s.	0.054	n.s.	-0.067	n.s.	-0.134	n.s.	*	*	-0.145	n.s.	-0.058	n.s.	*	*
34M	0.039	n.s.	0.085	n.s.	0.008	n.s.	0.029	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parental warmth																
9M	0.058	n.s.	-0.394	n.s.	0.635	+	1.251	n.s.	*	*	-0.537	n.s.	0.094	n.s.	*	*
18M	0.704	+++	-0.553	n.s.	-0.337	n.s.	-0.82	-	*	*	-0.47	n.s.	-0.038	n.s.	*	*
34M	0.615	+	-0.459	n.s.	-0.051	n.s.	-0.264	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Partner fulfills parenting responsibilities																
9M	0.117	n.s.	0.171	n.s.	-0.009	n.s.	0.437	n.s.	*	*	-0.109	n.s.	-0.16	n.s.	*	*
18M	-0.117	n.s.	-0.172	n.s.	-0.164	n.s.	-0.078	n.s.	*	*	0.169	n.s.	-0.203	n.s.	*	*
34M	0.312	+	0.23	++	-0.052	n.s.	-0.074	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample sizes																
9M	361 (T=135 C=226)	361 (T=135 C=226)	109 (T=53 C=56)	109 (T=53 C=56)	346 (T=259 C=87)	346 (T=259 C=87)	109 (T=94 C=15)	109 (T=94 C=15)	28 (T=23 C=5)	28 (T=23 C=5)	123 (T=75 C=48)	123 (T=75 C=48)	86 (T=58 C=28)	86 (T=58 C=28)	14 (T=6 C=8)	14 (T=6 C=8)
18M	249 (T=99 C=150)	249 (T=99 C=150)	198 (T=84 C=114)	198 (T=84 C=114)	254 (T=184 C=70)	254 (T=184 C=70)	186 (T=146 C=40)	186 (T=146 C=40)	14 (T=10 C=4)	14 (T=10 C=4)	137 (T=88 C=49)	137 (T=88 C=49)	70 (T=54 C=16)	70 (T=54 C=16)	23 (T=8 C=15)	23 (T=8 C=15)
34M	133 (T=54 C=79)	133 (T=54 C=79)	290 (T=121 C=169)	290 (T=121 C=169)	189 (T=132 C=57)	189 (T=132 C=57)	252 (T=204 C=48)	252 (T=204 C=48)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-28. Treatment-Comparison Differences in Parenting and Coparenting Outcomes for Total Female Sample at Nine, 18, and 34 Months, by Site and Community Exposure**

Outcome	Indiana				Ohio				New Jersey				New York			
	No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure		No Community Exposure		Community Exposure	
	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.	Estimate	Sig.
Parent-child relationship quality																
9M	0.105	n.s.	0.175	n.s.	0.026	n.s.	-0.152	n.s.	-0.435	---	-0.002	n.s.	-0.131	n.s.	*	*
18M	-0.093	n.s.	0.135	n.s.	0.015	n.s.	-0.15	n.s.	*	*	0.072	n.s.	-0.355	--	*	*
34M	-0.072	n.s.	0.126	n.s.	0.274	++	-0.145	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Self-rating as a parent																
9M	0.031	n.s.	0.146	n.s.	-0.092	n.s.	0.072	n.s.	-0.357	n.s.	0.102	n.s.	-0.262	n.s.	*	*
18M	0.028	n.s.	0.016	n.s.	-0.01	n.s.	-0.122	n.s.	*	*	-0.267	n.s.	-0.352	n.s.	*	*
34M	-0.05	n.s.	0.172	n.s.	0.057	n.s.	-0.168	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Decisions about focal child made jointly																
9M	0.027	n.s.	-0.017	n.s.	-0.012	n.s.	-0.331	--	-0.512	---	-0.042	n.s.	0.085	n.s.	*	*
18M	0.013	n.s.	0.126	n.s.	-0.027	n.s.	-0.106	n.s.	*	*	-0.198	-	0.215	+	*	*
34M	0.023	n.s.	0.062	n.s.	0.043	n.s.	-0.057	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parental warmth																
9M	-0.067	n.s.	-0.326	n.s.	0.004	n.s.	0.274	n.s.	0.149	n.s.	0.279	n.s.	-0.133	n.s.	*	*
18M	-0.549	--	0.283	n.s.	-0.216	n.s.	0.332	n.s.	*	*	-0.018	n.s.	-0.272	n.s.	*	*
34M	-0.386	n.s.	-0.266	n.s.	0.061	n.s.	-0.145	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Partner fulfills parenting responsibilities																
9M	0.019	n.s.	-0.101	n.s.	0	n.s.	-0.02	n.s.	-0.362	n.s.	-0.295	n.s.	0.116	n.s.	*	*
18M	0.003	n.s.	0.304	+	0.211	n.s.	-0.51	---	*	*	-0.307	n.s.	0.185	n.s.	*	*
34M	-0.105	n.s.	0.213	n.s.	-0.082	n.s.	-0.105	n.s.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample Size																
9M	299 (T=125 C=174)	299 (T=125 C=174)	82 (T=40 C=42)	82 (T=40 C=42)	295 (T=218 C=77)	295 (T=218 C=77)	88 (T=73 C=15)	88 (T=73 C=15)	29 (T=18 C=11)	29 (T=18 C=11)	93 (T=63 C=30)	93 (T=63 C=30)	58 (T=40 C=18)	58 (T=40 C=18)	10 (T=4 C=6)	10 (T=4 C=6)
18M	223 (T=89 C=134)	223 (T=89 C=134)	158 (T=72 C=86)	158 (T=72 C=86)	241 (T=177 C=64)	241 (T=177 C=64)	159 (T=128 C=31)	159 (T=128 C=31)	21 (T=13 C=8)	21 (T=13 C=8)	115 (T=73 C=42)	115 (T=73 C=42)	52 (T=37 C=15)	52 (T=37 C=15)	18 (T=8 C=10)	18 (T=8 C=10)
34M	131 (T=51 C=80)	131 (T=51 C=80)	233 (T=106 C=127)	233 (T=106 C=127)	178 (T=128 C=50)	178 (T=128 C=50)	223 (T=179 C=44)	223 (T=179 C=44)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-29. Effects of Community Exposure on Parenting and Coparenting Outcomes for Couples, based on Latent Growth Curve Model**

	Indiana						Ohio						New Jersey				New York			
	9M		18M		34M		9M		18M		34M		9M		18M		9M		18M	
	Effect Size	Sig.																		
Parent self rating	0.087	++	0.104	++	0.075	+	0.041	n.s.	0.065	n.s.	0.125	+++	0.060	n.s.	0.050	n.s.	2.913	n.s.	0.051	n.s.
Parent child relationship	0.049	n.s.	-0.015	n.s.	-0.014	n.s.	0.081	+	0.083	+	0.081	+	0.023	n.s.	-0.021	n.s.	-1.040	++	0.093	n.s.
Joint decision making	0.050	n.s.	0.043	n.s.	0.059	n.s.	0.054	n.s.	0.102	++	0.220	+++	0.262	+++	0.044	n.s.	-0.009	n.s.	0.043	n.s.
Parental warmth	-0.014	n.s.	-0.075	-	0.004	n.s.	-0.064	n.s.	-0.032	n.s.	-0.017	n.s.	-0.052	n.s.	-0.007	n.s.	2.913	+++	0.053	n.s.
Partner fulfills parenting responsibilities	0.039	n.s.	0.015	n.s.	0.031	n.s.	0.012	n.s.	0.040	n.s.	0.004	n.s.	0.072	n.s.	0.038	n.s.	-1.040	n.s.	-0.042	n.s.
Sample sizes	621	621	621	621	621	621	621	621	553	553	553	553	27	27	27	27	140	140	140	140

Note: Cells with an asterisk indicate insufficient sample size for comparisons.  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-29. Treatment-Comparison (T-C) Differences in Parenting and Coparenting Outcomes at Baseline (Intercept) and Change over time (Slope) based on Latent Growth Curve Model, Controlling for Community Exposure**

Outcome	Indiana					Ohio					New Jersey					New York				
	Intercept		Slope			Intercept		Slope			Intercept		Slope			Intercept		Slope		
	T-C Intercept	Sig	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig	T-C Slope	Sig.	Effect Size	T-C Intercept	Sig	T-C Slope	Sig.	Effect Size
Parent self rating	0.013	n.s.	0.034	n.s.	0.034	-0.055	n.s.	-0.011	n.s.	-0.016	-0.122	n.s.	0.215	n.s.	0.044	-0.07	n.s.	-0.094	n.s.	-0.060
Parent child relationship	0.097	+	-0.055	n.s.	-0.055	-0.051	n.s.	0.045	+	0.074	-0.169	-	-0.302	---	-0.158	-0.097	n.s.	-0.098	n.s.	-0.069
Joint decisionmaking	-0.006	n.s.	0.192	n.s.	0.044	-0.279	-	0.011	n.s.	0.004	-0.449	---	-0.332	-	-0.116	0.009	n.s.	0.26	n.s.	0.034
Parental warmth	0.025	n.s.	-0.151	--	-0.079	-0.233	-	0.063	n.s.	0.049	-0.328	n.s.	0.058	n.s.	0.008	-0.057	n.s.	0.052	n.s.	0.032
Partner fulfills parenting responsibilities	0.048	n.s.	0.029	n.s.	0.024	0.004	n.s.	-0.031	n.s.	-0.033	-0.134	n.s.	-0.095	n.s.	-0.021	-0.119	n.s.	0.017	n.s.	0.016
Sample sizes	621	621	621	621	621	5563	5563	5563	5563	5563	276	276	276	276	276	140	140	140	140	140

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

## Factor Analysis Results for Parenting and Coparenting Domain

This section shows the factor analysis results for the three factors related to parenting and coparenting quality (see **Appendix A** for a description of the factor analysis methodology). Results for the total male sample, based on the comparison of weighted means approach, are shown in **Exhibits D-31** through **D-33**. Results for the total female sample, based on the comparison of weighted means approach, are shown in **Exhibits D-34** through **D-36**. Results for couples, based on the latent growth curve models, are shown in **Exhibits D-37** through **D-39**.

In Indiana, positive treatment effects were found for men in two of the three parenting factors: General Parenting and Coparenting Quality (18-month wave) and Parenting and Coparenting Experiences During Reentry (18- and 34-month follow-up interviews). For women, positive treatment effects were found for one of the three parenting and coparenting factors: In-Prison Father-Child Contact (9-month wave). For couples, a positive treatment effect was found for one of the three parenting/coparenting factors: Parenting and Coparenting Experiences During Reentry.

In Ohio, positive effects were found for two parenting/coparenting factors: General Parenting and Coparenting Quality (9 months) and In-Prison Father-Child Contact (34 months). For women, negative effects were found for one parenting/coparenting factor: Parenting and Coparenting Experiences During Reentry (at the 18-month interview). For couples, a positive treatment effect was found for In-Prison Father-Child Contact.

In New Jersey, the only significant treatment effect based on the factor analysis was a negative treatment effect for women in the Parenting and Coparenting Experiences During Reentry Factor (9-month wave).

In New York, a negative treatment effect was found among men and couples for the In-Prison Father-Child Contact factor.

**Exhibit D-30. Treatment-Comparison Differences in General Parenting and Coparenting Quality Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.1	++	0.23	n.s.	0.42	n.s.	-0.25
18M	++	0.15	n.s.	-0.28	n.s.	-0.16	n.s.	0.15
34M	n.s.	0.1	n.s.	-0.02	n/a		n/a	
Sample sizes								
9M	454	454	439	439	145	145	97	97
9M	(T=181, C=273)	(T=181, C=273)	(T=341, C=98)	(T=341, C=98)	(T=92, C=53)	(T=92, C=53)	(T=63, C=34)	(T=63, C=34)
18M	431	431	426	426	147	147	90	90
18M	(T=174, C=257)	(T=174, C=257)	(T=319, C=107)	(T=319, C=107)	(T=95, C=52)	(T=95, C=52)	(T=60, C=30)	(T=60, C=30)
34M	395	395	425	425	n/a	n/a	n/a	n/a
34M	(T=163, C=232)	(T=163, C=232)	(T=322, C=103)	(T=322, C=103)				

n/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-31. Treatment-Comparison Differences in In-Prison Father-Child Contact (Subsample with No Community Exposure) Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.19	n.s.	-0.22			--	-0.34
18M	n.s.	0.3	n.s.	-0.04			---	-0.93
34M	n.s.	0.1	++	0.35	n/a		n/a	
Sample sizes								
9M	363	363	348	348	28	28	87	87
9M	(T=136, C=227)	(T=136, C=227)	(T=261, C=87)	(T=261, C=87)	(T=23, C=5)	(T=23, C=5)	(T=59, C=28)	(T=59, C=28)
18M	247	247	252	252	9	9	68	68
18M	(T=100, C=147)	(T=100, C=147)	(T=182, C=70)	(T=182, C=70)	(T=7, C=2)	(T=7, C=2)	(T=52, C=16)	(T=52, C=16)
34M	129	129	184	184	n/a	n/a	n/a	n/a
34M	(T=52, C=77)	(T=52, C=77)	(T=127, C=57)	(T=127, C=57)			n/a	n/a

n/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-32. Treatment-Comparison Differences in Parenting and Coparenting Experiences during Reentry (Subsample with Community Exposure) Factor for Total Male Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	-0.34	n.s.	0.06	n.s.	0.02		
18M	++	0.47	n.s.	-0.2	n.s.	-0.08		
34M	++	0.37	n.s.	-0.27	n/a		n/a	
Sample sizes								
9M	100	100	105	105	114	114	10	10
9M	(T=50, C=50)	(T=50, C=50)	(T=91, C=14)	(T=91, C=14)	(T=69, C=45)	(T=69, C=45)	(T=3, C=7)	(T=3, C=7)
18M	183	183	170	170	123	123	18	18
18M	(T=76, C=107)	(T=76, C=107)	(T=134, C=36)	(T=134, C=36)	(T=78, C=45)	(T=78, C=45)	(T=5, C=13)	(T=5, C=13)
34M	269	269	234	234	n/a	n/a	n/a	n/a
34M	(T=112, C=157)	(T=112, C=157)	(T=190, C=44)	(T=190, C=44)				

n/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-33. Treatment-Comparison Differences in General Parenting and Coparenting Quality Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	0.01	n.s.	0.03	n.s.	-0.18	n.s.	-0.13
18M	n.s.	-0.07	n.s.	0	n.s.	-0.52	n.s.	-0.24
34M	n.s.	-0.07	n.s.	-0.05	n/a		n/a	
Sample sizes								
9M	364	364	354	354	105	105	63	63
9M	(T=163, C=201)	(T=163, C=201)	(T=269, C=85)	(T=269, C=85)	(T=70, C=35)	(T=70, C=35)	(T=39, C=24)	(T=39, C=24)
18M	360	360	370	370	112	112	61	61
18M	(T=157, C=203)	(T=157, C=203)	(T=280, C=90)	(T=280, C=90)	(T=73, C=39)	(T=73, C=39)	(T=37, C=24)	(T=37, C=24)
34M	351	351	366	366	n/a	n/a	n/a	n/a
34M	(T=156, C=195)	(T=156, C=195)	(T=279, C=87)	(T=279, C=87)				

n/a

Not applicable

n.s.

No statistically significant impact.

+++/++/+

Statistically significant positive impact at the .01/.05/.10 level.

---/--/-

Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-34. Treatment-Comparison Differences in in-Prison Father-Child Contact (Subsample with No Community Exposure) Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	++	0.42	n.s.	-0.01	n.s.	-1.4	n.s.	0.35
18M	n.s.	0	n.s.	-0.02			n.s.	0.38
34M	n.s.	0	n.s.	0.07	n/a		n/a	
Sample sizes								
9M	277	277	268	268	26	26	52	52
9M	(T=120, C=157)	(T=120, C=157)	(T=200, C=68)	(T=200, C=68)	(T=15, C=11)	(T=15, C=11)	(T=35, C=17)	(T=35, C=17)
18M	200	200	215	215	11	11	42	42
18M	(T=82, C=118)	(T=82, C=118)	(T=156, C=59)	(T=156, C=59)	(T=6, C=5)	(T=6, C=5)	(T=29, C=13)	(T=29, C=13)
34M	115	115	152	152	n/a	n/a	n/a	n/a
34M	(T=47, C=68)	(T=47, C=68)	(T=108, C=44)	(T=108, C=44)				

n/a Not applicable

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-35. Treatment-Comparison Differences in Parenting and Coparenting Experiences during Reentry (Subsample with Community Exposure) Factor for Total Female Sample at Nine, 18, and 34 Months, by Site**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
Follow-up Wave								
9M	n.s.	-0.09	n.s.	-0.11	-	-0.6	n.s.	-0.02
18M	n.s.	0.06	-	-0.27	n.s.	-0.14	n.s.	0.38
34M	n.s.	0.19	n.s.	-0.01	n/a		n/a	
Sample sizes								
9M	309	309	282	282	87	87	43	43
9M	(T=138, C=171)	(T=138, C=171)	(T=215, C=67)	(T=215, C=67)	(T=58, C=29)	(T=58, C=29)	(T=23, C=20)	(T=23, C=20)
18M	304	304	296	296	93	93	43	43
18M	(T=133, C=171)	(T=133, C=171)	(T=223, C=73)	(T=223, C=73)	(T=59, C=34)	(T=59, C=34)	(T=24, C=19)	(T=24, C=19)
34M	298	298	292	292	n/a	n/a	n/a	n/a
34M	(T=133, C=165)	(T=133, C=165)	(T=222, C=70)	(T=222, C=70)				

n/a Not applicable  
n.s. No statistically significant impact.  
+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-36. Treatment-Comparison (T-C) Differences in General Parenting and Coparenting Quality Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	n.s.	0.023	n.s.	-0.055	--	-0.139	n.s.	-0.04
T-C Slopes	n.s.	-0.029	n.s.	0.045	n.s.	0.021	n.s.	0.066
Sample sizes	553	553	621	621	276	276	140	140

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level

**Exhibit D-37. Treatment-Comparison (T-C) Differences in in-Prison Father-Child Contact (Subsample with No Community Exposure) Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	+	0.072	-	-0.072	n.s.	NoC	++	0.181
T-C Slopes	n.s.	-0.021	++	0.095	n.s.	NoC	--	-0.195
Sample sizes	553	553	620	620	276	276	141	141

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level

**Exhibit D-38. Treatment-Comparison (T-C) Differences in Parenting and Coparenting Experiences (Subsample with Community Exposure) Factor at Baseline (Intercept) and Change over Time (Slope) for Couples, Based on Latent Growth Curve Model**

Outcome	Indiana		Ohio		New Jersey		New York	
	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size	Sig.	Effect Size
T-C Intercepts	n.s.	-0.05	n.s.	-0.032	n.s.	NoC	n.s.	NoC
T-C Slopes	++	0.101	n.s.	-0.007	n.s.	NoC	n.s.	NoC
Sample sizes	490	490	513	513	N/A	N/A	N/A	N/A

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level

## **Adjustments for Multiple Comparisons for Parenting and Coparenting Domain**

As described in **Appendix A**, multiple comparison adjustment was performed for both analytic approaches to see if significant outcomes remained after adjusting for the number of tests. It should be kept in mind that the results of the adjustment do not mean that there are no significant differences between the treatment and comparison groups but rather that we cannot be certain that there is not at least one false significant finding.

The results of the adjustments indicate that very few of the positive treatment effects observed in Indiana for parenting and coparenting outcomes among the total male or total female samples remained significant. The only finding that remained significant was that, among the total male sample in Indiana, fathers in the treatment group who remained incarcerated were more likely to receive any personal visits from the focal child at the 18-month interview than comparison fathers. However, most of the positive treatment effects found for *couples* with the latent growth curve model results remained significant after the multiple comparison adjustment, including joint decisionmaking, perception that the partner is fulfilling parenting responsibilities, father's coresidence with the focal child, and frequency of family oriented activities with the focal child.

The few positive treatment effects for parenting and coparenting outcomes observed in the other sites (the positive effects for joint decisionmaking found among the New York female sample at the 18-month follow-up interview, parental warmth found among the Ohio male sample at the 9-month interview wave, likelihood of fathers' receiving mail from the focal child found among the Ohio male sample at the 34-month interview wave, parent self-ratings found in the New Jersey couples' models, and father's coresidence with the focal child found in the New York couples' models) did not remain significant after the multiple comparison adjustment.

These adjustments generally confirm the pattern of significant positive treatment effects on parenting and coparenting outcomes in Indiana, although positive effects only remained evident in the couple-based analyses, and lack of effects in the other sites.

## Site-Specific Detailed Findings for All Parenting and Coparenting Outcomes

This section of the report presents the detailed, site-specific findings for all analyses summarized in **Chapter 6** and this appendix.

### Treatment-Comparison Differences by Wave

#### Total Male Sample

Detailed results for all treatment-comparison differences by wave among the male sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The Indiana detailed male findings are shown in **Exhibit D-40**. Findings for Ohio men are shown in **Exhibit D-41**. The New Jersey male findings are shown in **Exhibits D-42**, and the findings for the New York male sample are shown in **Exhibits D-43**.

#### Exhibit D-39. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for Indiana Male Sample at Nine, 18, and 34 Months

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	466	188	278	1.915	1.808	n.s.	0.11	0.12
18M Follow-up	444	180	264	1.982	1.755	+	0.23	0.25
34M Follow-up	414	169	245	1.832	1.706	n.s.	0.13	0.13
Self-rating as a parent								
9M Follow-up	459	184	275	1.41	1.372	n.s.	0.04	0.05
18M Follow-up	435	175	260	1.386	1.398	n.s.	-0.01	-0.01
34M Follow-up	399	164	235	1.322	1.253	n.s.	0.07	0.09
Decisions about focal child made jointly								
9M Follow-up	470	188	282	0.283	0.238	+	0.04	0.42
18M Follow-up	447	183	264	0.253	0.226	n.s.	0.03	0.28
34M Follow-up	422	175	247	0.3	0.232	+	0.07	0.42
Parental warmth								
9M Follow-up	425	171	254	11.065	11.149	n.s.	-0.08	-0.05
18M Follow-up	397	163	234	10.897	10.727	n.s.	0.17	0.1
34M Follow-up	363	151	212	10.528	10.701	n.s.	-0.17	-0.1
Partner fulfills parenting responsibilities								
9M Follow-up	429	173	256	2.758	2.624	n.s.	0.13	0.21
18M Follow-up	394	172	222	2.463	2.604	n.s.	-0.14	-0.21
34M Follow-up	358	155	203	2.729	2.475	+++	0.25	0.36
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	111	54	57	0.464	0.562	n.s.	-0.1	-0.26
18M Follow-up	200	84	116	0.541	0.436	n.s.	0.11	0.36
34M Follow-up	294	122	172	0.55	0.446	n.s.	0.1	0.37

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Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Father coresidence with any of his children								
9M Follow-up	119	56	63	0.485	0.628	-	-0.14	-0.76
18M Follow-up	211	89	122	0.652	0.533	n.s.	0.12	0.51
34M Follow-up	316	132	184	0.631	0.618	n.s.	0.01	0.07
Father financially supported focal child								
9M Follow-up	110	53	57	0.698	0.794	n.s.	-0.1	-0.73
18M Follow-up	200	84	116	0.869	0.751	++	0.12	0.9
34M Follow-up	294	122	172	0.877	0.783	+	0.09	0.69
Frequency of nonresidential father-child interaction								
9M Follow-up	78	36	42	4.559	5.022	n.s.	-0.46	-0.62
18M Follow-up	197	82	115	3.67	3.027	+	0.64	0.39
34M Follow-up	291	121	170	3.671	2.827	+	0.84	0.42
Frequency of father's activities with focal child								
9M Follow-up	78	36	42	4.559	5.022	n.s.	-0.46	-0.62
18M Follow-up	197	82	115	3.67	3.027	+	0.64	0.39
34M Follow-up	291	121	170	3.671	2.827	+	0.84	0.42
Frequency of family oriented activities with focal child								
9M Follow-up	109	53	56	1.586	1.905	n.s.	-0.32	-0.63
18M Follow-up	197	83	114	1.763	1.424	++	0.34	0.43
34M Follow-up	291	120	171	1.615	1.222	++	0.39	0.41
Frequency of enjoying time together as a family								
9M Follow-up	107	53	54	1.769	2.064	n.s.	-0.3	-0.63
18M Follow-up	198	83	115	1.907	1.49	++	0.42	0.53
34M Follow-up	290	120	170	1.782	1.385	+	0.4	0.39
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	363	136	227	0.64	0.488	n.s.	0.15	0.03
18M Follow-up	247	100	147	0.59	0.338	+++	0.25	0.94
34M Follow-up	129	52	77	0.478	0.302	n.s.	0.18	0.4
Father has any phone calls with focal child								
9M Follow-up	363	136	227	0.672	0.637	n.s.	0.03	-0.16
18M Follow-up	247	100	147	0.678	0.61	n.s.	0.07	0.04
34M Follow-up	129	52	77	0.752	0.673	n.s.	0.08	0.06
Father receives any mail from focal child								
9M Follow-up	363	136	227	0.576	0.589	n.s.	-0.01	-0.01
18M Follow-up	247	100	147	0.533	0.542	n.s.	-0.01	-0.03
34M Follow-up	129	52	77	0.485	0.552	n.s.	-0.07	-0.15
Father sends mail to focal child								
9M Follow-up	363	136	227	0.805	0.758	n.s.	0.05	0.29
18M Follow-up	247	100	147	0.746	0.78	n.s.	-0.03	-0.11
34M Follow-up	129	52	77	0.637	0.752	n.s.	-0.11	-0.4

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-40. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for Ohio Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	453	351	102	1.77	1.655	n.s.	0.12	0.12
18M Follow-up	437	328	109	1.736	1.834	n.s.	-0.1	-0.1
34M Follow-up	439	334	105	1.68	1.724	n.s.	-0.04	-0.04
Self-rating as a parent								
9M Follow-up	445	346	99	1.238	1.238	n.s.	0	0
18M Follow-up	432	324	108	1.272	1.372	n.s.	-0.1	-0.12
34M Follow-up	428	325	103	1.221	1.203	n.s.	0.02	0.02
Decisions about focal child made jointly								
9M Follow-up	455	353	102	0.254	0.25	n.s.	0	0.12
18M Follow-up	439	330	109	0.255	0.349	n.s.	-0.09	-0.28
34M Follow-up	440	335	105	0.256	0.227	n.s.	0.03	0.3
Parental warmth								
9M Follow-up	411	314	97	10.798	10.113	++	0.68	0.28
18M Follow-up	395	297	98	10.28	10.837	n.s.	-0.56	-0.32
34M Follow-up	386	296	90	10.305	10.534	n.s.	-0.23	-0.11
Partner fulfills parenting responsibilities								
9M Follow-up	429	329	100	2.516	2.429	n.s.	0.09	0.09
18M Follow-up	382	289	93	2.424	2.551	n.s.	-0.13	-0.18
34M Follow-up	375	283	92	2.428	2.494	n.s.	-0.07	-0.09
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	110	95	15	0.56	0.57	n.s.	-0.01	-0.09
18M Follow-up	187	146	41	0.56	0.50	n.s.	0.06	0.12
34M Follow-up	254	204	50	0.53	0.56	n.s.	-0.02	-0.14
Father coresidence with any of his children								
9M Follow-up	114	98	16	0.65	0.60	n.s.	0.05	0.31
18M Follow-up	193	150	43	0.68	0.60	n.s.	0.08	0.49
34M Follow-up	263	209	54	0.72	0.66	n.s.	0.06	0.47
Father financially supported focal child								
9M Follow-up	110	95	15	0.75	0.85	n.s.	-0.1	-0.58
18M Follow-up	187	146	41	0.81	0.68	n.s.	0.13	0.55
34M Follow-up	254	204	50	0.81	0.76	n.s.	0.05	0.34
Frequency of nonresidential father-child interaction								
9M Follow-up	68	60	8					
18M Follow-up	187	146	41	3.75	4.14	n.s.	-0.39	-0.24
34M Follow-up	253	204	49	3.26	3.57	n.s.	-0.31	-0.17
Frequency of father's activities with focal child								
9M Follow-up	68	60	8	5.07	4.09	0	0.98	1.46
18M Follow-up	187	146	41	3.75	4.14	n.s.	-0.39	-0.24
34M Follow-up	253	204	49	3.26	3.57	n.s.	-0.31	-0.17
Frequency of family oriented activities with focal child								
9M Follow-up	110	95	15	1.73	1.81	n.s.	-0.09	-0.17
18M Follow-up	187	146	41	1.63	1.88	n.s.	-0.25	-0.32
34M Follow-up	252	203	49	1.27	1.59	n.s.	-0.32	-0.39

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Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Frequency of enjoying time together as a family								
9M Follow-up	109	95	14	1.79	1.62	n.s.	0.18	0.36
18M Follow-up	187	146	41	1.65	1.97	n.s.	-0.32	-0.39
34M Follow-up	252	203	49	1.42	1.59	n.s.	-0.17	-0.2
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	349	262	87	0.52	0.59	n.s.	-0.07	-0.28
18M Follow-up	253	183	70	0.49	0.56	n.s.	-0.07	0.05
34M Follow-up	184	127	57	0.50	0.46	n.s.	0.04	0.35
Father has any phone calls with focal child								
9M Follow-up	349	262	87	0.70	0.76	n.s.	-0.07	-0.42
18M Follow-up	253	183	70	0.76	0.73	n.s.	0.03	0.35
34M Follow-up	184	127	57	0.76	0.71	n.s.	0.06	0.36
Father receives any mail from focal child								
9M Follow-up	349	262	87	0.56	0.55	n.s.	0.01	0.39
18M Follow-up	253	183	70	0.58	0.56	n.s.	0.02	0.17
34M Follow-up	184	127	57	0.57	0.41	++	0.16	0.85
Father sends mail to focal child								
9M Follow-up	349	262	87	0.78	0.89	-	-0.11	-0.68
18M Follow-up	253	183	70	0.78	0.81	n.s.	-0.03	-0.31
34M Follow-up	184	127	57	0.76	0.66	n.s.	0.1	0.53

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-41. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for New Jersey Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	149	96	53	2.04	2.13	n.s.	-0.09	-0.1
18M Follow-up	149	97	52	1.98	1.91	n.s.	0.07	0.07
Self-rating as a parent								
9M Follow-up	148	95	53	1.69	1.51	n.s.	0.19	0.23
18M Follow-up	148	96	52	1.50	1.47	n.s.	0.03	0.05
Decisions about focal child made jointly								
9M Follow-up	151	98	53	0.33	0.38	n.s.	-0.05	-0.25
18M Follow-up	150	97	53	0.26	0.39	n.s.	-0.13	-0.61
Parental warmth								
9M Follow-up	134	84	50	9.95	10.28	n.s.	-0.33	-0.19
18M Follow-up	137	87	50	10.30	10.83	n.s.	-0.52	-0.27
Partner fulfills parenting responsibilities								
9M Follow-up	128	81	47	2.60	2.79	-	-0.19	-0.38
18M Follow-up	130	83	47	2.50	2.40	n.s.	0.1	0.1
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	123	75	48	0.47	0.62	n.s.	-0.15	-0.42
18M Follow-up	138	89	49	0.53	0.59	n.s.	-0.07	-0.31
Father coresidence with any of his children								
9M Follow-up	129	79	50	0.49	0.73	--	-0.24	-1.1
18M Follow-up	144	92	52	0.63	0.66	n.s.	-0.03	-0.02
Father financially supported focal child								
9M Follow-up	123	75	48	0.68	0.70	n.s.	-0.01	0.48
18M Follow-up	138	89	49	0.82	0.85	n.s.	-0.03	0.37
Frequency of nonresidential father-child interaction								
9M Follow-up	82	50	32	4.95	5.40	n.s.	-0.45	-0.26
18M Follow-up	137	88	49	3.96	4.07	n.s.	-0.11	-0.04
Frequency of father's activities with focal child								
9M Follow-up	82	50	32	4.95	5.40	n.s.	-0.45	-0.26
18M Follow-up	137	88	49	3.96	4.07	n.s.	-0.11	-0.04
Frequency of family oriented activities with focal child								
9M Follow-up	123	75	48	1.76	2.10	n.s.	-0.35	-0.35
18M Follow-up	137	88	49	1.74	1.59	n.s.	0.15	0.12
Frequency of enjoying time together as a family								
9M Follow-up	122	74	48	2.03	2.32	n.s.	-0.29	-0.29
18M Follow-up	137	88	49	1.84	1.91	n.s.	-0.07	-0.06
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	28	23	5	*	*	*	*	*
18M Follow-up	9	7	2	*	*	*	*	*
Father has any phone calls with focal child								
9M Follow-up	28	23	5	*	*	*	*	*
18M Follow-up	9	7	2	*	*	*	*	*

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Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Father receives any mail from focal child								
9M Follow-up	28	23	5					
18M Follow-up	9	7	2					
Father sends mail to focal child								
9M Follow-up	28	23	5					
18M Follow-up	9	7	2					

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-42. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for New York Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	97	62	35	1.75	1.97	n.s.	-0.22	-0.26
18M Follow-up	92	62	30	1.90	1.89	n.s.	0.00	0.00
Self-rating as a parent								
9M Follow-up	98	63	35	1.52	1.68	n.s.	-0.16	-0.19
18M Follow-up	90	60	30	1.57	1.28	n.s.	0.29	0.33
Decisions about focal child made jointly								
9M Follow-up	100	64	36	0.25	0.40	n.s.	-0.16	-0.73
18M Follow-up	91	60	31	0.34	0.30	n.s.	0.04	0.19
Parental warmth								
9M Follow-up	88	56	32	11.38	11.48	n.s.	-0.1	-0.09
18M Follow-up	81	51	30	11.31	11.09	n.s.	0.22	0.18
Partner fulfills parenting responsibilities								
9M Follow-up	91	57	34	2.61	2.76	n.s.	-0.14	-0.32
18M Follow-up	86	57	29	2.48	2.65	n.s.	-0.16	-0.43
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	14	6	8	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
Father coresidence with any of his children								
9M Follow-up	14	6	8	*	*	*	*	*
18M Follow-up	25	10	15	0.95	0.56	n.s.	0.4	2.52
Father financially supported focal child								
9M Follow-up	14	6	8	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
Frequency of nonresidential father-child interaction								
9M Follow-up	8	4	4	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
Frequency of father's activities with focal child								
9M Follow-up	8	4	4	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
Frequency of family oriented activities with focal child								
9M Follow-up	14	6	8	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
Frequency of enjoying time together as a family								
9M Follow-up	14	6	8	*	*	*	*	*
18M Follow-up	23	8	15	*	*	*	*	*
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	87	59	28	0.67	0.64	n.s.	0.03	0.23
18M Follow-up	68	52	16	0.56	0.61	n.s.	-0.05	-0.86
Father has any phone calls with focal child								
9M Follow-up	87	59	28	0.76	0.89	n.s.	-0.12	-1.13
18M Follow-up	68	52	16	0.69	1.00	---	-0.31	-13.39

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Outcome	N			Mean		P-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Father receives any mail from focal child								
9M Follow-up	87	59	28	0.49	0.70	--	-0.21	-1.13
18M Follow-up	68	52	16	0.59	0.62	n.s.	-0.03	-0.24
Father sends mail to focal child								
9M Follow-up	87	59	28	0.84	0.87	n.s.	-0.02	-0.35
18M Follow-up	68	52	16	0.70	0.95	-	-0.25	-2.35

Note: Cells with an asterisk indicate insufficient sample size for comparisons.  
n.s. No statistically significant impact.  
+++/+/+ Statistically significant positive impact at the .01/.05/.10 level.  
---/-/- Statistically significant negative impact at the .01/.05/.10 level.

### Total Female Sample

Detailed results for all treatment-comparison differences by wave among the female sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The Indiana detailed female findings are shown in **Exhibit D-44**.

Findings for Ohio women are shown in **Exhibit D-45**. The New Jersey female findings are shown in **Exhibits D-46**, and the findings for the New York female sample are shown in **Exhibits D-47**.

#### Exhibit D-43. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for Indiana Female Sample at Nine, 18, and 34 Months

Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	363	164	199	2.62	2.54	n.s.	0.08	0.16
18M Follow-up	360	158	202	2.49	2.51	n.s.	-0.03	-0.05
34M Follow-up	348	155	193	2.50	2.48	n.s.	0.02	0.03
Self-rating as a parent								
9M Follow-up	358	162	196	2.06	2.03	n.s.	0.03	0.05
18M Follow-up	354	153	201	1.97	1.95	n.s.	0.02	0.03
34M Follow-up	345	153	192	2.02	2.02	n.s.	0.01	0.01
Decisions about focal child made jointly								
9M Follow-up	365	164	201	0.19	0.17	n.s.	0.03	0.23
18M Follow-up	359	158	201	0.22	0.15	+	0.07	0.56
34M Follow-up	342	152	190	0.23	0.17	n.s.	0.06	0.41
Parental warmth								
9M Follow-up	363	163	200	10.86	10.98	n.s.	-0.12	-0.07
18M Follow-up	359	157	202	10.92	11.18	n.s.	-0.27	-0.18
34M Follow-up	348	155	193	10.95	11.22	--	-0.28	-0.21
Partner fulfills parenting responsibilities								
9M Follow-up	245	114	131	2.53	2.60	n.s.	-0.07	-0.13
18M Follow-up	252	112	140	2.46	2.32	n.s.	0.13	0.2
34M Follow-up	244	121	123	2.39	2.27	n.s.	0.12	0.17
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	80	41	39	0.52	0.61	n.s.	-0.09	-0.44
18M Follow-up	152	72	80	0.58	0.48	n.s.	0.1	0.32
34M Follow-up	220	104	116	0.64	0.44	+	0.2	0.72
Father financially supported focal child								
9M Follow-up	79	40	39	0.457	0.48	n.s.	-0.02	0.22
18M Follow-up	152	72	80	0.683	0.443	+	0.24	0.68
34M Follow-up	221	105	116	0.719	0.537	++	0.18	0.73
Frequency of family oriented activities with focal child								
9M Follow-up	79	40	39	1.665	1.805	n.s.	-0.14	-0.3
18M Follow-up	152	72	80	1.854	1.605	n.s.	0.25	0.37
34M Follow-up	221	105	116	1.75	1.275	n.s.	0.48	0.6

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Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Frequency of enjoying time together as a family								
9M Follow-up	79	40	39	1.726	2.045	n.s.	-0.32	-0.71
18M Follow-up	152	72	80	1.934	1.727	n.s.	0.21	0.3
34M Follow-up	221	105	116	1.871	1.354	n.s.	0.52	0.62
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	284	124	160	0.733	0.573	n.s.	0.16	0.27
18M Follow-up	207	86	121	0.585	0.536	n.s.	0.05	-0.22
34M Follow-up	117	48	69	0.533	0.594	n.s.	-0.06	-0.65
Father has any phone calls with focal child								
9M Follow-up	284	124	160	0.762	0.636	n.s.	0.13	0.39
18M Follow-up	206	86	120	0.7	0.684	n.s.	0.02	-0.19
34M Follow-up	117	48	69	0.79	0.696	n.s.	0.09	0.27
Father receives any mail from focal child								
9M Follow-up	282	122	160	0.716	0.62	+	0.1	0.55
18M Follow-up	206	87	119	0.622	0.637	n.s.	-0.02	0.11
34M Follow-up	117	48	69	0.563	0.588	n.s.	-0.03	-0.33
Father sends mail to focal child								
9M Follow-up	285	124	161	0.798	0.716	+	0.08	0.63
18M Follow-up	207	86	121	0.721	0.756	n.s.	-0.03	-0.19
34M Follow-up	118	48	70	0.769	0.697	n.s.	0.07	0.1

n.s. No statistically significant impact.  
 +++/+/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/-/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-44. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for Ohio Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	355	269	86	2.58	2.54	n.s.	0.04	0.06
18M Follow-up	369	279	90	2.50	2.49	n.s.	0.01	0.01
34M Follow-up	368	280	88	2.49	2.46	n.s.	0.03	0.05
Self-rating as a parent								
9M Follow-up	352	267	85	2.11	2.15	n.s.	-0.04	-0.05
18M Follow-up	367	278	89	2.04	2.01	n.s.	0.03	0.05
34M Follow-up	366	278	88	1.96	2.07	n.s.	-0.11	-0.14
Decisions about focal child made jointly								
9M Follow-up	354	267	87	0.19	0.25	n.s.	-0.06	-0.45
18M Follow-up	369	279	90	0.16	0.19	n.s.	-0.03	-0.21
34M Follow-up	366	279	87	0.17	0.17	n.s.	0	-0.06
Parental warmth								
9M Follow-up	355	268	87	11.07	10.95	n.s.	0.12	0.07
18M Follow-up	369	279	90	11.05	11.06	n.s.	-0.02	-0.01
34M Follow-up	367	279	88	11.08	11.10	n.s.	-0.03	-0.02
Partner fulfills parenting responsibilities								
9M Follow-up	284	209	75	2.36	2.37	n.s.	-0.01	-0.01
18M Follow-up	263	203	60	2.34	2.38	n.s.	-0.04	-0.05
34M Follow-up	261	194	67	2.11	2.32	-	-0.21	-0.28
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	80	66	14	0.58	0.54	n.s.	0.03	0.42
18M Follow-up	146	118	28	0.56	0.48	n.s.	0.08	0.15
34M Follow-up	205	165	40	0.53	0.58	n.s.	-0.05	-0.18
Father financially supported focal child								
9M Follow-up	80	66	14	0.53	0.74	n.s.	-0.2	-1.23
18M Follow-up	146	118	28	0.53	0.59	n.s.	-0.05	-0.21
34M Follow-up	204	164	40	0.55	0.65	n.s.	-0.1	-0.65
Frequency of family oriented activities with focal child								
9M Follow-up	79	65	14	1.87	2.11	n.s.	-0.24	-0.45
18M Follow-up	147	119	28	1.62	1.84	n.s.	-0.22	-0.31
34M Follow-up	204	164	40	1.58	1.45	n.s.	0.13	0.15
Frequency of enjoying time together as a family								
9M Follow-up	79	65	14	1.90	2.03	n.s.	-0.13	-0.26
18M Follow-up	147	119	28	1.80	1.85	n.s.	-0.05	-0.07
34M Follow-up	204	164	40	1.70	1.53	n.s.	0.18	0.19
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	276	203	73	0.62	0.58	n.s.	0.04	0.36
18M Follow-up	220	158	62	0.57	0.58	n.s.	-0.01	0.1
34M Follow-up	155	109	46	0.51	0.55	n.s.	-0.04	-0.19
Father has any phone calls with focal child								
9M Follow-up	276	203	73	0.78	0.79	n.s.	-0.02	0.17
18M Follow-up	218	157	61	0.74	0.76	n.s.	-0.01	0.11

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Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
34M Follow-up	156	110	46	0.76	0.74	n.s.	0.03	0.45
Father receives any mail from focal child								
9M Follow-up	274	201	73	0.68	0.64	n.s.	0.04	0.41
18M Follow-up	219	158	61	0.61	0.62	n.s.	-0.01	0.32
34M Follow-up	155	109	46	0.61	0.58	n.s.	0.03	0.39
Father sends mail to focal child								
9M Follow-up	274	202	72	0.81	0.85	n.s.	-0.04	-0.09
18M Follow-up	219	158	61	0.86	0.81	n.s.	0.05	0.6
34M Follow-up	155	109	46	0.78	0.73	n.s.	0.05	0.43

n.s. No statistically significant impact.  
 +++/++/+ Statistically significant positive impact at the .01/.05/.10 level.  
 ---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-45. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for New Jersey Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	102	67	35	2.59	2.69	n.s.	-0.1	-0.19
18M Follow-up	110	71	39	2.57	2.59	n.s.	-0.02	-0.04
Self-rating as a parent								
9M Follow-up	102	67	35	2.43	2.36	n.s.	0.07	0.12
18M Follow-up	110	71	39	2.17	2.57	n.s.	-0.41	-0.69
Decisions about focal child made jointly								
9M Follow-up	104	69	35	0.30	0.50	-	-0.2	-0.89
18M Follow-up	112	73	39	0.23	0.42	n.s.	-0.19	-0.78
Parental warmth								
9M Follow-up	103	68	35	10.72	11.11	-	-0.39	-0.2
18M Follow-up	110	71	39	11.09	11.54	n.s.	-0.45	-0.46
Partner fulfills parenting responsibilities								
9M Follow-up	92	60	32	2.18	2.72	--	-0.54	-1.22
18M Follow-up	91	54	37	2.22	2.37	n.s.	-0.16	-0.19
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	78	54	24	0.54	0.83	--	-0.28	-3.21
18M Follow-up	93	61	32	0.57	0.63	n.s.	-0.06	-0.97
Father financially supported focal child								
9M Follow-up	78	54	24	0.44	0.65	-	-0.21	-1.29
18M Follow-up	92	61	31	0.50	0.74	n.s.	-0.24	-0.97
Frequency of family oriented activities with focal child								
9M Follow-up	78	54	24	1.96	2.37	--	-0.4	-0.6
18M Follow-up	93	62	31	1.74	2.26	--	-0.52	-0.66
Frequency of enjoying time together as a family								
9M Follow-up	78	54	24	2.23	2.59	-	-0.36	-0.59
18M Follow-up	93	62	31	1.85	2.28	-	-0.43	-0.56
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	26	15	11	0.42	0.73	---	-0.32	-11.24
18M Follow-up	11	6	5	*	*	*	*	*
Father has any phone calls with focal child								
9M Follow-up	26	15	11	0.83	0.93	n.s.	-0.1	-1.14
18M Follow-up	11	6	5	*	*	*	*	*
Father receives any mail from focal child								
9M Follow-up	26	15	11	0.47	0.76	n.s.	-0.29	-0.74
18M Follow-up	11	6	5	*	*	*	*	*
Father sends mail to focal child								
9M Follow-up	26	15	11	0.60	0.86	n.s.	-0.25	-1.34
18M Follow-up	11	6	5	*	*	*	*	*

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-46. Treatment and Comparison Means and Effect Sizes for Parenting and Coparenting Outcomes for New York Female Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
<b>Outcomes Relevant to All Study Couples</b>								
Parent-child relationship quality								
9M Follow-up	62	38	24	2.47	2.53	n.s.	-0.06	-0.12
18M Follow-up	60	36	24	2.54	2.69	n.s.	-0.14	-0.34
Self-rating as a parent								
9M Follow-up	62	38	24	2.02	2.26	-	-0.24	-0.47
18M Follow-up	60	36	24	2.03	2.40	n.s.	-0.37	-0.62
Decisions about focal child made jointly								
9M Follow-up	63	39	24	0.41	0.17	+	0.24	1.19
18M Follow-up	61	37	24	0.35	0.15	n.s.	0.2	0.94
Parental warmth								
9M Follow-up	62	38	24	10.72	11.01	n.s.	-0.29	-0.2
18M Follow-up	60	36	24	11.01	11.08	n.s.	-0.07	-0.06
Partner fulfills parenting responsibilities								
9M Follow-up	51	34	17	2.53	2.29	n.s.	0.24	0.3
18M Follow-up	50	35	15	2.33	1.93	n.s.	0.4	0.51
<b>Reentry-Specific Outcomes</b>								
Father-focal child coresidence								
9M Follow-up	11	4	7	*	*	*	*	*
18M Follow-up	19	8	11	*	*	*	*	*
Father financially supported focal child								
9M Follow-up	11	4	7	*	*	*	*	*
18M Follow-up	19	8	11	*	*	*	*	*
Frequency of family oriented activities with focal child								
9M Follow-up	11	4	7	*	*	*	*	*
18M Follow-up	19	8	11	*	*	*	*	*
Frequency of enjoying time together as a family								
9M Follow-up	11	4	7	*	*	*	*	*
18M Follow-up	19	8	11	*	*	*	*	*
<b>Incarceration-Specific Outcomes</b>								
Father receives any personal visits from focal child								
9M Follow-up	52	35	17	0.80	0.52	n.s.	0.28	2.03
18M Follow-up	42	29	13	0.72	0.53	n.s.	0.19	0.93
Father has any phone calls with focal child								
9M Follow-up	52	35	17	0.87	0.79	n.s.	0.08	0.49
18M Follow-up	42	29	13	0.77	0.81	n.s.	-0.05	-1.78
Father receives any mail from focal child								
9M Follow-up	52	35	17	0.67	0.63	n.s.	0.04	0.33
18M Follow-up	42	29	13	0.72	0.55	n.s.	0.17	1.15
Father sends mail to focal child								
9M Follow-up	52	35	17	0.85	0.93	n.s.	-0.08	-0.85
18M Follow-up	42	29	13	0.87	0.83	n.s.	0.04	0.81

Note: Cells with an asterisk indicate insufficient sample size for comparisons.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

### *Differences in Treatment-Comparison Trajectories over Time*

Detailed results for all latent growth curve findings summarized in **Chapter 6** and in this appendix are presented for each site in **Exhibits D-48** through **D-51**. Each exhibit shows the mean intercepts and slopes for the couples in in each group (treatment and comparison), along with the difference in slope, p value for the significance test, and effect sizes for each estimate.

**Exhibit D-47. Treatment-Comparison Differences in All Parenting and Coparenting Outcomes for Baseline (Intercept) and Change over time (Slope) for Indiana Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	P-value	Effect Size
<b>Outcomes Relevant to All Study Couples</b>											
Parent-child relationship quality	553	218	335	2.62	2.53	n.s.	-0.04	-0.03	-0.01	n.s.	-0.021
Self-rating as a parent	531	210	321	2.01	2.01	n.s.	-0.01	-0.02	0.01	n.s.	0.022
Decisions about focal child made jointly	553	271	282	-1.7	-1.66	n.s.	-0.53	-0.78	0.25	++	0.089
Parental warmth	546	213	333	11.06	11.05	n.s.	-0.08	0	-0.08	--	-0.086
Partner fulfills parenting responsibilities	557	225	332	2.35	2.32	n.s.	-0.02	-0.07	0.05	++	0.106
<b>Reentry-Specific Outcomes</b>											
Father-focal child coresidence	556	272	284	0.99	1.07	n.s.	-0.26	-0.72	0.46	+++	0.122
Father financially supported focal child	546	264	282	-0.13	-0.16	+++	1.07	0.7	0.37	++	0.099
Frequency of family oriented activities with focal child	531	210	321	1.89	1.83	n.s.	-0.09	-0.19	0.1	+++	0.108
Frequency of enjoying time together as a family	531	210	321	2.06	1.98	n.s.	-0.1	-0.22	0.12	+++	0.13
<b>Incarceration-Specific Outcomes</b>											
Father receives any personal visits from focal child	553	271	282	2.74	0.44	+++	-0.88	-0.34	-0.53	--	-0.098
Father has any phone calls with focal child	553	271	282	2.01	0.97	+++	-0.05	0.08	-0.14	n.s.	-0.043
Father receives any mail from focal child	553	271	282	1.18	1.47	n.s.	-0.28	-0.35	0.07	n.s.	0.021
Father sends mail to focal child	553	271	282	1.94	2.01	n.s.	-0.24	-0.22	-0.01	n.s.	-0.003

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/-- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-49. Treatment-Comparison Differences in All Parenting and Coparenting Outcomes for Baseline (Intercept) and Change over time (Slope) for Ohio Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				Effect Size
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	P-value	
<b>Outcomes Relevant to All Study Couples</b>											
Parent-child relationship quality	621	471	150	2.5	2.55	n.s.	0	0.02	-0.02	n.s.	0.04
Self-rating as a parent	565	430	135	2.08	2.13	n.s.	-0.01	0	-0.02	n.s.	0
Decisions about focal child made jointly	621	311	310	-1.86	-1.42	n.s.	-0.46	0.09	-0.56	n.s.	0.012
Parental warmth	607	458	149	11	11.13	n.s.	0	0.03	-0.04	n.s.	0.03
Partner fulfills parenting responsibilities	629	479	150	2.31	2.3	n.s.	-0.07	-0.04	-0.03	-	-0.08
<b>Reentry-Specific Outcomes</b>											
Father-focal child coresidence	579	289	290	0.89	0.5	n.s.	-0.46	-0.18	-0.28	n.s.	-0.023
Father financially supported focal child	571	284	287	0.23	-0.1	n.s.	0.87	-0.28	1.15	n.s.	-0.002
Frequency of family oriented activities with focal child	557	421	136	1.86	1.98	n.s.	-0.17	0	-0.17	n.s.	0
Frequency of enjoying time together as a family	557	421	136	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
<b>Incarceration-Specific Outcomes</b>											
Father receives any personal visits from focal child	621	311	310	0.91	1.46	n.s.	-0.32	0.2	-0.52	n.s.	0.038
Father has any phone calls with focal child	621	311	310	1.89	2.61	-	0.2	0.32	-0.12	+	0.068
Father receives any mail from focal child	620	311	309	0.95	1.25	n.s.	-0.12	0.18	-0.31	+++	0.723
Father sends mail to focal child	621	311	310	2.29	2.86	n.s.	-0.08	0.3	-0.38	++	0.08

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-50. Treatment-Comparison Differences in All Parenting and Coparenting Outcomes for Baseline (Intercept) and Change over time (Slope) for New Jersey Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				Effect Size
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	P-value	
<b>Outcomes Relevant to All Study Couples</b>											
Parent-child relationship quality	276	170	106	2.52	2.69	-	0.01	0.08	-0.07	+	0.096
Self-rating as a parent	190	123	67	2.21	2.29	n.s.	0	-0.02	0.03	n.s.	-0.024
Decisions about focal child made jointly	276	141	135	-1.4	-0.88	--	-0.68	-0.36	-0.32	n.s.	-0.083
Parental warmth	269	167	102	10.79	11.22	-	-0.05	0.2	-0.25	n.s.	0.053
Partner fulfills parenting responsibilities	253	159	94	2.2	2.37	-	-0.1	-0.01	-0.09	n.s.	-0.009
<b>Reentry-Specific Outcomes</b>											
Father-focal child coresidence	268	134	134	0.03	0.76	-	-0.64	-0.44	-0.2	n.s.	-0.046
Father financially supported focal child	268	134	134	-0.29	-0.15	---	0.79	-0.26	1.05	n.s.	-0.072
Frequency of family oriented activities with focal child	264	158	106	1.75	2.03	-	-0.14	0.07	-0.21	n.s.	0.036
Frequency of enjoying time together as a family	264	158	106	1.9	2.09	n.s.	-0.22	-0.04	-0.18	n.s.	-0.021
<b>Incarceration-Specific Outcomes</b>											
Father receives any personal visits from focal child	276	141	135	-0.36	-0.43	n.s.	-0.24	-0.81	0.57	--	-0.132
Father has any phone calls with focal child	276	141	135	2.43	2.55	n.s.	-0.18	-0.74	0.56	n.s.	-0.066
Father receives any mail from focal child	276	141	135	0	0.67	-	-0.08	0.02	-0.1	n.s.	0.002
Father sends mail to focal child	276	141	135	1.31	1.37	n.s.	-0.2	0.04	-0.24	n.s.	0.002

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit D-51. Treatment-Comparison Differences in All Parenting and Coparenting Outcomes for Baseline (Intercept) and Change over time (Slope) for New York Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				Effect Size
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	P-value	
<b>Outcomes Relevant to All Study Couples</b>											
Parent-child relationship quality	141	86	55	2.55	2.66	n.s.	0	0.04	-0.04	n.s.	0.042
Self-rating as a parent	85	44	41	2.14	2.23	n.s.	-0.03	0.01	-0.04	n.s.	0.012
Decisions about focal child made jointly	140	73	67	-0.97	-0.93	n.s.	-0.47	0.3	-0.77	n.s.	0.069
Parental warmth	139	84	55	10.97	11.12	n.s.	0.01	0.04	-0.03	n.s.	0.028
Partner fulfills parenting responsibilities	135	81	54	2.36	2.47	n.s.	0	0.03	-0.04	n.s.	0.032
<b>Reentry-Specific Outcomes</b>											
Father-focal child coresidence	115	56	59	0.45	-0.35	n.s.	1.94	2.38	-0.43	+++	0.376
Father financially supported focal child	109	52	57	0.08	-0.06	+++	3.5	0.77	2.73	n.s.	0.04
Frequency of family oriented activities with focal child	106	58	48	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC
Frequency of enjoying time together as a family											
<b>Incarceration-Specific Outcomes</b>											
Father receives any personal visits from focal child	141	74	67	1.84	0.02	+	-0.4	-0.39	-0.01	---	-0.235
Father has any phone calls with focal child	141	74	67	2.2	1.45	n.s.	-0.43	-1.6	1.17	---	-0.221
Father receives any mail from focal child	141	74	67	1.12	0.62	n.s.	-0.13	-0.36	0.23	---	-0.276
Father sends mail to focal child	141	74	67	4	3.25	n.s.	-0.45	-1.33	0.88	--	-0.187

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.



# Appendix E. Detailed Results for Employment, Drug Use, and Recidivism Outcomes

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This appendix contains the site-specific detailed findings for the employment, illicit drug use (excluding marijuana), and recidivism outcomes discussed in **Chapter 7**, based on both statistical approaches.

## Treatment-Comparison Differences by Wave

### *Total Male Sample*

Detailed results for all treatment-comparison differences by wave among the male sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The findings are shown in **Exhibit E-1** (Indiana), **Exhibit E-2** (Ohio), **Exhibit E-3** (New Jersey), and **Exhibit E-4** (New York).

When the adjustments for multiple comparisons are implemented, the positive treatment effects for employment observed in Indiana and for self-reported rearrest in New Jersey are no longer significant.

**Exhibit E-1. Treatment and Comparison Means and Effect Sizes for Employment, Drug Use, and Recidivism Outcomes for Indiana Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M Follow-up	133	66	67	0.48	0.41	n.s.	0.07	0.42
18M Follow-up	231	102	129	0.55	0.55	n.s.	0	0.07
34M Follow-up	325	139	186	0.70	0.60	+	0.09	0.47
No illicit drug use (excluding marijuana)								
9M Follow-up	134	65	69	0.92	0.93	n.s.	0	-0.08
18M Follow-up	244	108	136	0.91	0.88	n.s.	0.03	0.29
34M Follow-up	367	160	207	0.78	0.85	n.s.	-0.07	-0.54
No rearrest <sup>a</sup>								
9M Follow-up	138	67	71	0.95	0.90	n.s.	0.05	0.77
18M Follow-up	248	110	138	0.89	0.82	n.s.	0.07	0.59
34M Follow-up	371	162	209	0.75	0.71	n.s.	0.03	0.17
No reincarceration (self-reported) <sup>a</sup>								
9M Follow-up	138	67	71	0.93	0.90	n.s.	0.02	0.31
18M Follow-up	257	112	145	0.87	0.80	n.s.	0.07	0.52
34M Follow-up	377	164	213	0.64	0.67	n.s.	-0.04	-0.17
No reincarceration in state prison (DOC data) <sup>a</sup>								
Within 12 months	494	209	285	0.884	0.889	n.s.	0.00	-0.05
Within 24 months	470	196	274	0.740	0.753	n.s.	-0.01	-0.07

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

—/—/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-2. Treatment and Comparison Means and Effect Sizes for Employment, Drug Use, and Recidivism Outcomes for Ohio Male Sample at Nine, 18, and 34 Months**

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M Follow-up	117	98	19	0.35	0.25	n.s.	0.09	0.17
18M Follow-up	197	146	51	0.34	0.37	n.s.	-0.03	-0.19
34M Follow-up	253	198	55	0.45	0.51	n.s.	-0.06	-0.26
No illicit drug use (excluding marijuana)								
9M Follow-up	121	102	19	0.90	0.94	n.s.	-0.03	-0.64
18M Follow-up	204	152	52	0.89	0.91	n.s.	-0.01	-0.15
34M Follow-up	274	211	63	0.86	0.90	n.s.	-0.04	-0.4
No rearrest <sup>a</sup>								
9M Follow-up	121	102	19	0.83	0.91	n.s.	-0.08	-0.72
18M Follow-up	204	153	51	0.77	0.86	n.s.	-0.1	-0.64
34M Follow-up	279	215	64	0.65	0.71	n.s.	-0.06	-0.28
No reincarceration (self-reported) <sup>a</sup>								
9M Follow-up	121	102	19	0.85	0.86	n.s.	-0.02	-0.13
18M Follow-up	208	156	52	0.71	0.93	---	-0.22	-1.64
34M Follow-up	285	220	65	0.68	0.66	n.s.	0.02	0.09
No reincarceration in state prison (DOC data) <sup>a</sup>								
Within 12 months	372	283	89	0.889	0.921	n.s.	-0.03	-0.37
Within 24 months	328	250	78	0.777	0.868	-	-0.09	-0.64

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-3. Treatment and Comparison Means and Effect Sizes for Employment, Drug Use, and Recidivism Outcomes for New Jersey Male Sample at Nine and 18 Months**

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M Follow-up	140	81	59	0.25	0.34	n.s.	-0.09	-0.61
18M Follow-up	152	93	59	0.39	0.47	n.s.	-0.08	-0.31
No illicit drug use (excluding marijuana)								
9M Follow-up	143	83	60	0.89	0.90	n.s.	0	0.04
18M Follow-up	158	98	60	0.91	0.87	n.s.	0.04	0.57
No rearrest <sup>a</sup>								
9M Follow-up	146	85	61	0.87	0.78	n.s.	0.09	0.63
18M Follow-up	158	97	61	0.89	0.77	+	0.11	0.82
No reincarceration (self-report) <sup>a</sup>								
9M Follow-up	146	85	61	0.89	0.81	n.s.	0.08	0.62
18M Follow-up	164	101	63	0.82	0.70	n.s.	0.11	0.63
No reincarceration in state prison (DOC data) <sup>a</sup>								
Within 12 months	272	162	110	0.931	0.848	+	0.08	0.89
Within 24 months	270	160	110	0.824	0.821	n.s.	0.00	0.02

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

—/—/— Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-4. Treatment and Comparison Means and Effect Sizes for Employment, Drug Use, and Recidivism Outcomes for New York Male Sample at Nine and 18 Months**

Outcome	N			Mean		P- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M	16	8	8					
18M	32	15	17	0.42	0.53	n.s.	-0.11	-0.51
No illicit drug use (excluding marijuana)								
9M	16	8	8					
18M	32	15	17	0.94	0.88	n.s.	0.06	-0.68
No rearrest <sup>a</sup>								
9M	16	8	8					
18M	32	15	17	0.96	1.00	n.s.	-0.04	-10.16
No reincarceration (self-report) <sup>a</sup>								
9M	16	8	8					
18M	32	15	17	0.96	0.97	n.s.	-0.01	-0.18
No reincarceration in state prison (DOC data) <sup>a</sup>								
Within 12 months	83	47	36	0.931	0.876	n.s.	0.06	0.66
Within 24 months	73	39	34	0.873	0.748	n.s.	0.12	0.84

<sup>a</sup> No equivalent baseline variable was available for inclusion as a control variable.

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

—/—/— Statistically significant negative impact at the .01/.05/.10 level.

### Total Female Sample

Detailed results for all treatment-comparison differences by wave among the female sample are shown in the exhibits that follow. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for each estimate. The findings are shown in **Exhibit E-5** (Indiana), **Exhibit E-6** (Ohio), **Exhibit E-7** (New Jersey), and **Exhibit E-8** (New York).

When the adjustments for multiple comparisons are implemented, the positive treatment effects for employment observed in Indiana are no longer significant.

#### Exhibit E-5. Treatment and Comparison Means and Effect Sizes for Employment and Drug Use Outcomes for Indiana Female Sample at Nine, 18, and 34 Months

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M	514	245	269	0.68	0.55	++	0.13	0.52
18M	513	239	274	0.69	0.56	++	0.14	0.54
34M	496	232	264	0.70	0.59	++	0.11	0.53
No illicit drug use (excluding marijuana)								
9M	511	244	267	0.93	0.91	n.s.	0.02	0.28
18M	514	239	275	0.91	0.90	n.s.	0.01	-0.01
34M	499	233	266	0.93	0.91	n.s.	0.02	0.13

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/+/+ Statistically significant positive impact at the .01/.05/.10 level.

---/-/- Statistically significant negative impact at the .01/.05/.10 level.

#### Exhibit E-6. Treatment and Comparison Means and Effect Sizes for Employment and Drug Use Outcomes for Ohio Female Sample at Nine, 18, and 34 months

Outcome	N			Mean		p-Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M	433	319	114	0.52	0.58	n.s.	-0.05	0.04
18M	446	332	114	0.54	0.59	n.s.	-0.05	-0.11
34M	443	330	113	0.63	0.69	n.s.	-0.06	-0.04
No illicit drug use (excluding marijuana)								
9M	430	316	114	0.94	0.94	n.s.	0	-0.08
18M	446	331	115	0.94	0.93	n.s.	0	0.12
34M	442	331	111	0.91	0.90	n.s.	0.01	0.22

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/+/+ Statistically significant positive impact at the .01/.05/.10 level.

---/-/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-7. Treatment and Comparison Means and Effect Sizes for Employment and Drug Use Outcomes for New Jersey Female Sample at Nine and 18 Months**

Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M	139	87	52	0.55	0.60	n.s.	-0.05	-0.58
18M	145	88	57	0.51	0.50	n.s.	0.02	-0.12
No illicit drug use (excluding marijuana)								
9M	138	86	52	0.94	0.90	n.s.	0.04	0.55
18M	146	89	57	0.97	0.96	n.s.	0	0.54

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/---/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-8. Treatment and Comparison Means and Effect Sizes for Employment and Drug Use Outcomes for New York Female Sample at Nine and 18 Months**

Outcome	N			Mean		p- Value	Impact	Effect Size
	Total	Treat	Comp	Treat	Comp			
Currently employed								
9M	93	63	30	0.54	0.43	n.s.	0.1	-0.32
18M	92	62	30	0.63	0.39	n.s.	0.23	0.69
No illicit drug use (excluding marijuana)								
9M	91	61	30	0.96	0.92	n.s.	0.04	0.68
18M	92	62	30	0.98	0.93	n.s.	0.05	1.98

Note: blank cells indicate insufficient sample size for comparisons. N/a = not applicable.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/---/- Statistically significant negative impact at the .01/.05/.10 level.

## Differences in Treatment-Comparison Trajectories over Time

Detailed results for the latent growth curve findings for illicit drug use are presented for each site in **Exhibits E-9 through E-12**. Each exhibit shows the weighted means for each group (treatment and comparison) at each wave, the p value for the significance test, and the effect sizes for the estimate.

**Exhibit E-9. Treatment-Comparison Differences in Drug Use for Baseline (Intercept) and Change over time (Slope) for Indiana Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	p- Value	Effect Size
No illicit drug use (excluding marijuana)	686	340	346	1.05	1	n.s.	1.21	1.3	-0.09	n.s.	-0.025

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-10. Treatment-Comparison Differences in Drug Use for Baseline (Intercept) and Change over time (Slope) for Ohio Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	p- Value	Effect Size
No illicit drug use (excluding marijuana)	687	343	344	1.72	1.9	n.s.	0.2	0.12	0.08	n.s.	0.006

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-11. Treatment-Comparison Differences in Drug Use for Baseline (Intercept) and Change over time (Slope) for New Jersey Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	p- Value	Effect Size
No illicit drug use (excluding marijuana)	309	158	151	1.34	1.91	n.s.	1.66	1.12	0.54	n.s.	0.083

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

**Exhibit E-12. Treatment-Comparison Differences in Drug Use for Baseline (Intercept) and Change over time (Slope) for New York Couples, based on Latent Growth Curve Model**

Outcome	N			Mean Intercept			Mean Slope				
	Total	Treat	Comp	Treat	Comp	p- Value	Treat	Comp	T-C	p- Value	Effect Size
No illicit drug use (excluding marijuana)	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC	NoC

NoC The LGC model did not converge, usually due to too few time points or insufficient sample size.

n.s. No statistically significant impact.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.