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Project Home: A Pilot Evaluation of an Emotion-Focused Intervention for Mothers Reuniting With Children After Prison

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Abstract

Nearly 2 million children in the United States have a parent in prison. The circumstances related to this situation place them at increased risk for behavioral and emotional disorders. The process of reunification between mother and child after release is a stressful and emotional one. A pilot study was conducted to develop and test a new program, Emotions: Taking Care of Yourself and Your Child When You Go Home. The objective of the Emotions Program was to teach emotion regulation and emotion coaching skills to incarcerated mothers so as to assist mothers and their children to cope better with the stress associated with incarceration and the transition home from prison. Pilot participants ($N = 47$) had previously participated in Parenting Inside Out, an evidence-based parenting program for incarcerated parents. The participants were then assigned to the Emotions Program ($n = 29$) or the comparison condition of no additional treatment ($n = 18$). All mothers were assessed before (T1) and after the program (T2), and again 6 months after release from prison (T3). Intervention effects of the Emotions Program on mothers' emotion regulation, emotion socialization, and adjustment were examined using repeated-measures analysis of variance with a between-subjects factor of group (Emotions Program vs. comparison) and a within-subjects factor of time (T1 vs. T2 vs. T3). Moderate time by group interaction effects were observed for aspects of emotion regulation, emotion socialization behavior, and criminal behavior in mothers, with participants in the Emotions condition showing improvement relative to those in the comparison condition.

Keywords

emotion regulation; emotion socialization; incarceration; parent-child relations; parent training

The substantial numbers of men and women incarcerated in the criminal justice system in the United States has resulted in increased attention to the enormous challenges faced by their children, now numbering nearly two million (Glaze & Maruschak, 2008). Women are the fastest growing segment in the prison population, with an increase of 25% from 2000 to 2007 (West & Sabol, 2008) and an average annual growth rate that is nearly twice that of men (Harrison & Beck, 2006). The typical incarcerated woman has one or more children under the age of 18 years, served as the primary caregiver prior to incarceration, and will attempt to reunite with and resume custody of her children after incarceration (Glaze & Maruschak, 2008; Houck & Loper, 2002). The steep increase in maternal incarceration, along with the growing number of children affected by this rise, highlights the need for programs designed to support and strengthen the mother–child relationship as mothers transition from prison back to home.

Women in prison are far more likely to have grown up in a single-parent household, lived in poverty, dropped out of high school, experienced physical or sexual abuse, had at least one immediate family member who was incarcerated, had a parent who abused alcohol or drugs, and become a parent at an early age relative to other women (Greenfield & Snell, 2000). Given such prior life experiences, incarceration can be construed as a continuation or exacerbation of stressful life experiences. Related experiences in adulthood include limited education and vocational training, residential and financial instability, substance abuse and mental health difficulties, and abuse and trauma experiences (Kjellstrand & Eddy, 2011a). Clearly, the adverse life circumstances of many incarcerated women would not have promoted the development of either effective emotion regulation or parenting skills. The ability to successfully regulate one's emotional states has been noted as critical to an individual's mental health (e.g., Gross & Munoz, 1995), with disturbances in this capacity underlying many forms of child and adult psychopathology (e.g., Beauchaine, 2001; Chaplin & Cole, 2005; Cicchetti, Ackerman, & Izard, 1995; Gross, 1998). Without intervention in preparation for release and the transition home, many incarcerated mothers are unlikely to have the emotional and parenting skills necessary to facilitate successful parent–child reunification (Snyder, Carlo, & Coats-Mullins, 2001).

Children of incarcerated mothers are a highly vulnerable and underserved population (Dallaire, 2007a), and the ways in which parental incarceration affect children are complex and varied (Kjellstrand & Eddy, 2011b). At this time, less is known about the specific effects of maternal incarceration, given that most studies have focused on children of incarcerated fathers or children of incarcerated parents (fathers and mothers combined; Murray, Farrington, & Sekol, 2012). When parents are incarcerated, children are at risk for stressful experiences that place them at increased risk for behavioral and emotional disorders (Johnson & Easterling, 2012). In a recent systematic review and meta-analysis, the results from 45 studies indicated that parental incarceration is related to children's increased risk for antisocial behavior, though not mental health or drug use problems (Murray et al., 2012).

Although life circumstances for many children of incarcerated parents are challenging, both prior to and during incarceration (Poehlman, Dallaire, Loper, & Shear, 2010), unfortunately, the challenges often do not abate after the release of a parent from prison. Parents typically face significant challenges after release, such as obstacles to securing employment and

finding affordable housing. These and other circumstances can render reunification very difficult for both mothers and children (Cobbina & Bender, 2012). Children may display ongoing negative emotions around reuniting with their mothers because of minimal contact and related disruptions in the relationship (Poehlmann, 2005), which may make it difficult for mothers to resume their parenting roles.

Given the emotional distress mothers and children have experienced during their separation, the reunification period calls for emotion management skills that neither mothers nor children may have had opportunities to develop. Strengthening the parenting and emotion skills of mothers has the potential to help mothers and children work through their emotions around reunification. Recent programs, such as Parenting From Inside: Making the Mother–Child Connection, appear promising in terms of helping mothers cope in prison with the emotional distress of being separated from their children and improve their emotional adjustment (Loper & Tuerk, 2011). There are, however, very few programs to support the reunification of incarcerated parents and their children upon release from prison, and none that we know of that specifically address the emotional health of incarcerated families during the transition home (Purvis, 2013).

This Study

The present study focused on: (a) reunification as a critical time for promoting family functioning and child adjustment; (b) maternal emotion regulation as a pivotal capacity for successful parenting and maternal adjustment; and (c) maternal emotion regulation and socialization of children's emotions as central in both children's mental health and adaptive functioning after reunification. We developed a program called Emotions: Taking Care of Yourself and Your Child When You Go Home. The objective of the Emotions Program was to teach emotion regulation and emotion coaching skills to incarcerated mothers to enable both the mothers and their children to better cope with the stress associated with maternal incarceration, as well as with the transition home from prison. To accomplish this, we extended work begun during the development of a prison-based parent management training program, Parenting Inside Out (PIO; Eddy et al., 2008; Schiffmann, Eddy, Martinez, Leve, & Newton, 2008), by directing additional focus to the emotional needs of incarcerated mothers and their children. PIO, a 36-session, evidence-informed program designed for delivery to small groups of inmates, was created specifically for incarcerated parents and is intended to provide parents with motivation, knowledge, and skills relevant to the prevention of antisocial behavior and associated problems in their children (for additional information, see Eddy, Martinez, & Burraston, 2013; Eddy et al., 2008). PIO was delivered to both fathers and mothers in prison and was found to have support for its continued use across gender (Eddy et al., 2013). PIO is currently being successfully implemented with incarcerated mothers and fathers throughout the Oregon Department of Corrections (DOC) system of institutions. The Emotions Program was designed to provide continued teaching and emotional support for mothers as they transition home.

Intervention Development

We recognized that mothers would need to strengthen their ability to modulate their own emotions and strengthen their emotion regulation skills to subsequently engage in adaptive

parenting behavior with their children. In the theoretical development phase of the Emotions Program, the emotion regulation and emotion socialization processes most strongly associated with adaptive child outcomes were identified, as were the intervention strategies likely to promote the development of these processes (e.g., Cole, Martin, & Dennis, 2004; Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Katz, & Hooven, 1997; Greenberg, Kusche, Cook, & Quamma, 1995; Izard, 2002). Input was also solicited via focus groups from currently and formerly incarcerated mothers, corrections-based parenting instructors and counselors, and community agencies.

On the basis of the information garnered, the decision was made to develop two intervention components, a parent emotion regulation component and an emotion coaching component. The primary parenting behavior promoted was positive socialization behaviors such as emotion coaching. Emotion coaching reflects a unique parenting behavior and socialization process whereby parents provide guidance to their children in understanding and coping with emotions (for a review, see Katz, Maliken, & Stettler, 2012). Such parental behaviors include acting in ways that are respectful of children's emotions, offering comfort when children are experiencing negative emotions, educating children about the nature of emotions and appropriate rules for expressing emotions, setting behavioral limits, and discussing goals and strategies for dealing with emotional situations (Eisenberg & Fabes, 1994; Gottman, Katz, & Hooven, 1996). Parents' validation of children's negative emotions, as well as their engagement in coaching their children to recognize and cope with these emotions, has been found to be related to children's emotion regulation abilities. In turn, these abilities are predictive of lower depressive (e.g., Katz & Hunter, 2007) and externalizing symptoms (e.g., Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010).

In the curriculum development phase, the parent emotion-regulation component was informed by key ideas and strategies from *Dialectical Behavior Therapy* (Linehan, Heard, & Armstrong, 1993; McKay, Wood, & Brantley, 2007; Spradlin, 2003), a program that teaches adults how to use "mindfulness" techniques to cope with their thoughts and feelings. The emotion coaching component was informed by ideas and strategies from the *Tuning In to Kids: Emotionally Intelligent Parenting* (Havighurst & Harley, 2006; Havighurst, Harley, & Prior, 2004), a program that teaches parents how to carry out the child emotion coaching techniques that were refined by Gottman and colleagues (Gottman et al., 1997). The intervention was created in collaboration with experts in both instructional design for adult learners and group-based work with correctional populations, with a primary goal being the inclusion, throughout each session, of active learner-centered activities to promote engagement in learning.

Hypotheses

Strengthening mothers' parenting and emotion skills was hypothesized to help both mothers and their children cope with the stress associated with maternal incarceration and the transition home from prison. In turn, because emotion regulation difficulties are associated with a wide range of psychopathology, promoting children's emotion competence through emotion related parenting practices has the potential to decrease risk for a wide range of difficulties in childhood (Eisenberg, Spinrad, & Eggum, 2010). In terms of primary

outcomes, we hypothesized that mothers within the emotions group would demonstrate fewer difficulties regulating their emotions, as well as higher levels of emotion coaching parenting behavior than mothers in the comparison group. In terms of secondary outcomes, we hypothesized that mothers in the emotions condition would experience greater improvement in their adjustment, relative to the mothers in the comparison condition.

Method

Participants

Participants were 47 mothers incarcerated at the only women's state correctional facility of the Oregon DOC. The mothers' average prison sentence was 3.6 years (range 1 to 9 years). Offenses of participants ranged widely, from assault to burglary to delivery of methamphetamine to manslaughter. The participants' children were between the ages of 4 and 12 years (62% boys). While the mothers were incarcerated, their children lived with caregivers an average of 108 miles from the prison (range 11 to 972 miles). The majority of the women were the biological mothers of their children (96%); had lived with their children before incarceration (74%, full and part time); were in contact with their children in the past month (53%); were single or never married, separated or divorced, widowed before incarceration (87%); did not complete high school (60%); were unemployed (51%); were arrested as juveniles (53%); and were arrested five or more times as adults (63%). After release from prison, 42% of the mothers returned to live with their children (full and part time), 82% were in contact with their children in the past month, 68% were unemployed, and 21% were put into detention during the period of post-prison observation. See Results section and Table 1 for additional information on the sample characteristics at the initial baseline assessment.

Recruitment

Prerequisites for participation included being within 6 months of release from prison and the prior completion of PIO. Generally, inmates were excluded from PIO, and hence from this study, if they were convicted of crimes against children or any type of sex offense. The mothers were recruited through the standard procedures that are used in the prison system to inform inmates about intervention programs, educational classes, and research projects. Project staff met with interested mothers to provide an overview of the project. The recruitment rate of mothers eligible to participate was 87%. The project received approval from the Oregon Social Learning Center's Institutional Review Board, the Oregon DOC Research Committee, and the U.S. Department of Health and Human Services, Office of Human Research Protections.

Procedure

Using a quasi-experimental design, participants were assigned to either the emotions group ($n = 29$) or to the comparison group ($n = 18$), whose members did not receive additional services after PIO, using the following method. Two series of the Emotions Program were implemented for mothers assigned to the intervention condition—a series of classes in minimum security (class size was 16) and a series in medium security (class size was 13). When the Emotions Program was taught in minimum security, the mothers eligible to

participate in minimum security were assigned to the intervention group and to take the class and the mothers eligible to participate in medium security were assigned to the comparison group. About 6 months later, when the Emotions Program was taught in medium security, the mothers eligible to participate in medium security were assigned to the intervention group and to take the class and the mothers eligible to participate in minimum security were assigned to the comparison group. Mothers received letters informing them whether or not they were selected to take the parenting classes or to be in the usual services group. Mothers in the intervention and comparison conditions were assessed at baseline prior to the Emotions Program (T1), after the Emotions Program while still in prison (T2), and 6 months after release back to the community (T3). Mothers were compensated \$25 for completing the assessments at T1 and T2 in prison and \$50 for completing the assessment at T3 after release. Mothers were not compensated for receiving intervention services.

The Emotions Program consisted of 15 2-hr lessons held over an 8-week period. Nine of the sessions focused on strengthening emotion regulation skills (i.e., being aware of emotions and thoughts, taking time to take in emotions before responding, experiencing emotions without making judgment, identifying emotions, calming down strong emotions and responding effectively to life's events). The remaining six sessions targeted emotion coaching skills (i.e., being aware of one's own and one's child's emotions; viewing emotions as a chance to connect with the child; listening and communicating understanding and acceptance of the child's emotions; helping the child use words to name and describe feelings; while accepting feelings, setting limits on behavior and helping the child find good solutions). Session content was taught via didactic instruction, role plays, discussion, video, handouts, and homework. Each session began with a review of the prior session's content to support the learning of skills being taught. Subsequent to their release from prison, mothers were offered 6 months of coaching support that included a home visit, phone calls or texting, and the provision of written materials. The goal of the postrelease support was to consolidate learning by helping mothers to draw upon the concepts and skills learned, and to increase utilization of skills in daily life. Both the in-prison classes and after-prison coaching were conducted by a masters-level interventionist with extensive experience in teaching group-based parenting classes and in working one on one with parents in the midst of difficult situations, such as child and welfare system involvement.

Measures

The primary outcome variables were mothers' emotion regulation and mothers' socialization of their children's emotional behavior. The secondary outcome was mothers' adjustment. As well, we obtained indices of participant satisfaction and engagement. In addition to providing information on demographic and criminal characteristics, mothers completed the following questionnaires using an in-person interview format conducted in a private interview room in prison and a private setting outside of prison.

Regulation of mothers' emotions—Indices of emotion regulation and effortful control were derived from the 36-item Difficulties in Emotion Regulation Scale (DERS, Gratz & Roemer, 2004) and the Adult Temperament Questionnaire (ATQ, Evans & Rothbart, 2007). A total score of DERS items was used for emotion dysregulation. Effortful control as a

measure of reactivity was derived using the average of the activation control, attentional control, and inhibitory control scales from the ATQ. Across T1 to T3, the Cronbach alphas ranged from .94 to .95 for emotion dysregulation and .82 to .87 for effortful control.

Mothers' socialization of emotion behavior—Mothers reported on their own emotion coaching and emotion dismissing using the 22-item Maternal Emotional Style Questionnaire (Lagacé-Séguin & Coplan, 2005). Across T1 to T3, Cronbach α s varied from .82 to .91 for emotion coaching and from .85 to .89 for emotion dismissing.

Mothers' adjustment—Mothers reported depressive symptoms on the 20-item Center for Epidemiologic Studies Depression Scale (Radloff, 1977), general mental health symptoms on the 52-item Brief Symptom Inventory (Derogatis & Melisaratos, 1983), and reported criminal behavior using the Self Report Delinquency Scale (SRD; Elliott, Huizinga, & Ageton, 1983). The SRD asked about 39 behaviors that could get the participant into trouble with the police (e.g., knowingly buy, sell, or hold stolen goods). The number of criminal behaviors committed one or more times was summed into a criminal behavior score. Mothers also indicated whether they had gotten in trouble with the police and had been put into detention after release. Across T1 to T3, Cronbach α s varied from .86 to .93 for depressive symptoms and from .94 to .96 for mental health symptoms. The Cronbach's α s were .90 at T1 and .88 at T3 for criminal behavior.

Data-Analytic Approach

Effect-size estimates, rather than statistical significance, were used to guide the process of determining outcome effects with this small pilot sample and to ascertain the initial effectiveness of the Emotions Program. Estimates of effect sizes provide a standard index of the strength of association between the intervention and outcome, independent of sample size (Cohen, 1988). For analysis of variance (ANOVAs), Cohen's d s were computed to indicate the proportion of variance in the outcome accounted for by main effects or interactions for the sample; for chi-squared analysis and categorical variables, ϕ s over or Cramer's V s (for more than two levels; see Table 1) were computed to indicate the strength of the association between two variables. Only findings that involved moderate effect sizes ($d > .50$ and $\phi/V > .30$; Cohen, 1988) or large effect sizes ($d > .80$ and $\phi/V > .50$; Cohen, 1988) are highlighted in the following section.

Results

Characteristics of the Pilot Sample

Demographic and criminal characteristics were first examined for comparability between the mothers in the intervention and comparison groups at T1 using ANOVAs with a between-subjects factor of group (Emotions Program vs. comparison) and chi-squared analysis for categorical variables. As shown in Table 1, moderate effect sizes for group were found for mother and child age, $d = .52$ and $d = .53$, suggesting that the intervention group mothers and children were older than the comparison mothers and children. A moderate effect size for the association between group and mother contact with child in past month was found, $\phi = -.30$, suggesting that more mothers in the comparison group were in contact with their

children than were the mothers in the intervention group. Associations between mother age, child age, and mother contact with child within the past month, and T1 baseline, T2, and T3 outcomes were examined. A moderate effect size for the association between mother age at T1 and baseline criminal behavior, $r = -.33$, suggests that younger ages were associated with more criminal behavior before incarceration.

Baseline emotion regulation, emotion socialization, and adjustment variables were examined for comparability between the mothers in the intervention and comparison groups at T1 using ANOVAs with a between-subjects factor of group (Emotions Program vs. comparison). Moderate effect sizes for group were found for depressive symptoms, $d = .53$, and mental health symptoms, $d = .52$, suggesting that mothers in the intervention group had higher levels at baseline ($M = 19.69$, $SD = 11.50$ for depressive symptoms and $M = .81$, $SD = .50$ for mental health symptoms) than the mothers in the comparison group ($M = 14.11$, $SD = 8.68$ for depressive symptoms and $M = .55$, $SD = .51$ for mental health symptoms). Moderate effect sizes for group were not found for baseline emotion regulation and emotion socialization variables and criminal behavior.

Whereas the retention rate was 100% at T2, the retention rate was 81% at T3 6 months after release, with nine mothers (three in the intervention group and six in the comparison group) not completing a T3 assessment. Demographic and criminal characteristics at T1 and emotion regulation, emotion socialization, and adjustment variables at T1 and T2 were examined across intervention and comparison groups for comparability between mothers who dropped out of the study and the rest of the sample using ANOVAs, with a between-subjects factor of completion (dropped out after T2 vs. completed T3) and chi-squared analysis for categorical variables. Moderate effect sizes for completion were found for emotion dismissing at T1, $d = .57$, and depressive symptoms at T2, $d = .63$, suggesting that mothers who dropped out of the study were more dismissive of their children's emotions at T1 ($M = 4.00$, $SD = .69$) and had higher levels of depressive symptoms at T2 ($M = 19.44$, $SD = 11.39$) than mothers who completed the study ($M = 3.53$, $SD = .65$ for emotion dismissing and $M = 12.66$, $SD = 7.93$ for depressive symptoms). Moderate effect sizes for completion were not found for the other variables.

Intervention Engagement and Satisfaction

Participation in the intervention was high, with an average class attendance of 84% (range 70% to 100%). However, engaging mothers in the intervention group after prison was more difficult. Only 38% of the mothers in the intervention group opted for support and contact after release and received a home visit and phone contact as well as written materials from the interventionist. Participant satisfaction ratings completed at T3 using a 5-point rating scale with 1 = *not at all* and 5 = *a great deal* indicated high levels of satisfaction with the Emotions Program ($M = 4.62$, $SD = .85$). From class, mothers also indicated that they learned about their emotions and about emotion regulation skills ($M = 4.54$, $SD = .71$) and about their children's emotions and emotion coaching ($M = 4.58$, $SD = .64$), and when home, that the ideas and skills they learned in class helped them manage their emotions and emotion regulation ($M = 4.15$, $SD = .88$) and helped them with their children's emotions and emotion coaching ($M = 3.77$, $SD = 1.37$).

Intervention Effects on Mother Outcomes

To examine intervention effects of the Emotions Program on outcome variables, repeated-measures ANOVAs were conducted with a between-subjects factor of group (Emotions Program vs. comparison) and a within-subjects factor of time (T1 vs. T2 vs. T3). Means and standard deviations for the mothers by group and time, as well as Cohen's d for time and Time $\times$ Group interactions, are presented in Table 2.

Regarding the primary outcomes of emotion regulation and emotion socialization, for emotion dysregulation, the large effect size for time, $d = .82$, suggests that mothers in both groups decreased in emotion dysregulation over time. For effortful control, the moderate effect size for the Time $\times$ Group interaction, $d = .65$, suggests that mothers in the intervention group increased in effortful control from baseline to after release compared with the mothers in the comparison group. For emotion coaching, moderate effect sizes were not found. For emotion dismissing, the moderate effect size for the Time $\times$ Group interaction, $d = .68$, suggests that mothers in the comparison group increased in emotion dismissing from baseline to after release compared with the mothers in the intervention group.

Regarding secondary outcomes of adjustment, the large effect size for time, $d = .82$ for depressive symptoms and $d = .67$ for mental health symptoms, suggests that mothers in both groups declined in depressive and mental health symptoms over time. For criminal behavior, the large effect size for time, $d = 1.74$, and the moderate effect size for the time by group interaction, $d = .64$, suggest that while mothers in both groups decreased in criminal behavior from before incarceration to after release, mothers in the intervention group decreased at a greater rate compared to the mothers in the comparison group.

The intervention effects of the after-prison support and contact were further examined by conducting ANOVAs on the T3 outcomes, controlling for T1 baseline and T2 outcomes levels with a between-subjects factor of group (Emotions Program: class plus support and contact, $n = 11$ vs. Emotions Program: class only, $n = 15$ vs. comparison, $n = 12$). Moderate effect sizes for group were found for emotion dysregulation, $d = .70$, and effortful control, $d = .71$, and a large effect size was found for criminal behavior, $d = .94$. For effortful control, there was a linear increase in levels from the mothers in the comparison group ($M = 4.36$, $SD = 1.00$) to the mothers who had received the class ($M = 4.44$, $SD = 1.22$) to the mothers who had received the class plus support and contact ($M = 4.88$, $SD = 1.28$). For emotion dysregulation, mothers who had received the class plus support and contact had lower levels of emotion dysregulation ($M = 54.09$, $SD = 14.10$) than the mothers who had received the class only ($M = 67.73$, $SD = 22.07$) and mothers in the comparison group ($M = 65.67$, $SD = 20.92$). For criminal behavior, mothers who had received the class only ($M = .33$, $SD = .62$) and mothers who had received the class plus support and contact ($M = .55$, $SD = 1.21$) had lower levels than the mothers in the comparison group ($M = 2.25$, $SD = 4.20$). Moderate effects for group were not found for emotion coaching, emotion dismissing, depressive symptoms, or mental health symptoms.

Recidivism

In the 6 months after release, eight mothers (21%) got in trouble with the police and were detained. A moderate effect size for the association between detention and group was not found. To examine recidivism after release across intervention and comparison groups, outcomes at T3 were examined for comparability between detained mothers and the rest of the sample using ANOVAs, with a between-subjects factor of detention (no detention vs. detention) and controlling for T1 baseline and T2 outcomes. Moderate effect sizes for detention were found for emotion dysregulation, $d = .56$, and depressive symptoms, $d = .79$, and large effect sizes were found for mental health symptoms, $d = .93$, and criminal behavior, $d = .97$, suggesting that detained mothers had higher levels of emotion dysregulation ($M = 71.75$, $SD = 26.44$), depressive symptoms ($M = 20.00$, $SD = 15.57$), mental health symptoms ($M = .97$, $SD = .81$), and criminal behavior ($M = 3.50$, $SD = 4.50$) after release than the mothers who had not been detained ($M = 60.83$, $SD = 17.88$ for emotion dysregulation; $M = 9.30$, $SD = 8.86$ for depressive symptoms; $M = .45$, $SD = .44$ for mental health symptoms; $M = .33$, $SD = 1.12$ for criminal behavior). Moderate effect sizes for detention were not found for effortful control, emotion coaching, or emotion dismissing.

Mothers' characteristics at T3 were examined using chi-squared analysis. Moderate effect sizes for the association with detention were found for marital status, $\phi = -.31$, legal guardianship of child, $\phi = .47$, and living with child, $\phi = -.44$, suggesting that mothers who had detention were less likely to be in romantic relationships (i.e., were single, not married, separated, divorced, or widowed; 100%); were less likely to have legal guardianship of their children (100%); and were less likely to be living with their children (100%) after release than were the mothers who did not get detention (67% were not in a romantic relationship, i.e., were single, not married, separated, divorced, or widowed; 43% did not have legal guardianship of their children; 47% were not living with their children). Moderate effect sizes for the association between detention and employment and contact with the child during the past month were not found.

Discussion

In the Project Home pilot study, we developed and implemented the Emotions Program, which we intended to use to improve outcomes for mothers and their children at the critical juncture of reunification following incarceration. Not only were the participants highly satisfied with the Emotions Program, initial results, as indicated by moderate effect sizes, suggest that the participants in the Emotions Program, compared with those in the comparison condition, demonstrated more positive outcomes in emotion regulation, socialization of their children's emotion behavior, and adjustment. Specifically, the Emotions Program promoted increases in mothers' effortful control as a measure of reactivity, prevented increases in mothers' dismissing of children's emotions, and effected decreases in mothers' criminal behavior over time for the intervention group relative to the comparison group.

The availability of two postintervention assessments, one in prison and one after release, provided a unique opportunity to determine whether the postrelease support and contact to consolidate learning and increase utilization of skills in daily life resulted in additional

intervention effects. The initial results suggest that the intervention mothers who took advantage of the support and contact offered were better able to regulate their emotions after release and had lower levels of emotion dysregulation and higher levels of effortful control at T3 than the intervention mothers who only participated in the class and the comparison mothers, while controlling for T1 baseline and T2 levels. However, mothers who chose support and contact could be different in ways that accounted for their outcomes. Although no intervention effects were found for recidivism as measured by whether the mothers got in trouble with the police and were detained after prison, detention across intervention and comparison groups was associated with higher levels of emotion dysregulation, depressive and mental health symptoms, criminal behavior, and whether the mothers were single without legal guardianship of their children and living apart from their children. Although the findings await further replication and extension with a larger sample size, overall, the findings of the pilot study and the Emotions Program emphasize the importance of work related to emotion functioning and parenting on improving outcomes for incarcerated mothers and their children, as mothers transition back home.

The evaluation of the emotions intervention in a sample of mothers who had already completed PIO, an intensive parenting intervention, provided a stringent test of the Emotions Program. The design was a necessary component of the valuable collaboration that we had during this study with the Oregon DOC, which is implementing PIO statewide. We considered it to be a reasonable approach because the Emotions Program was distinct from PIO in content and scope and, with regard to primary outcomes, had different targets. Providing a sequence of programs such as PIO followed by the Emotions Program is consistent with the idea that ongoing support around parenting and family issues is important for incarcerated parents as they approach release and discharge from prison—a prison-based parenting class is probably best viewed as simply the beginning of a concerted effort to make positive changes in relationships with children, their caregivers, and other coparents (Eddy, Kjellstrand, Martinez, & Newton, 2011).

The emotions intervention, in contrast to PIO, focused on mothers rather than mothers and fathers because of potential gender differences in pertinent issues around release. In contrast to fathers, who may have more hurdles to overcome in terms of access to their children, the majority of incarcerated mothers have opportunities to attempt to reunify with and resume the primary parenting role after incarceration (Houck & Loper, 2002; Loper, Phillips, Nichols, & Dallaire, in press). Issues related to the difficulties experienced to a greater degree by incarcerated mothers as they reenter society include single parenthood and problems related to preincarceration adverse life circumstances, including abuse and trauma (Glaze & Maruschak, 2008; Kjellstrand & Eddy, 2011a). The potentially important differences that exist for children when mothers versus fathers are incarcerated (Dallaire, 2007b; Dallaire & Wilson, 2010; Kjellstrand, Cearley, Eddy, Foney, & Martinez, 2012; Spjeldnes & Goodkind, 2009) may limit the generalizability of the Emotions Program to fathers.

Compared with the majority of children with mothers in prison who need to move into the homes of relatives during incarceration, a greater proportion of children with their fathers in prison continue to live with their other parent and are spared the stress of residential

transition and separation from their primary caregivers (Glaze & Maruschak, 2008; Mumola, 2000). Moreover, incarcerated fathers are less likely to live with their children prior to incarceration (Glaze & Maruschak, 2008), are less involved in the daily child care before incarceration (Loper & Tuerk, 2006), and have lower levels of contact with their children (Loper, Carlson, Levitt, & Scheffel, 2009) than incarcerated mothers. Nonetheless, many incarcerated fathers have relationships with their children and experience difficulties when they attempt to connect with their children after release. In this regard, a version of the Emotions Program specifically targeting the needs and situations of fathers likely would be beneficial as well in helping incarcerated fathers reunite with their children.

This study benefitted from a number of methodological strengths, such as multiple assessment points, including one after release; the use of a comparison group design; and relatively high retention rates. As an initial development project, the study also had limitations. As noted, the sample size was small and hindered our ability to obtain statistical significance, despite obtaining moderate effect sizes for intervention effects. We relied on mothers' self-reports for the measurement of key constructs. It is possible that group assignment affected mothers responses on the postintervention assessments. We were unable to involve the children in the intervention because of the broad geographical region served by the prison. The mothers in the Emotions Program not only received a different program, they also received more services than the mothers in the comparison group, which could have contributed to group differences.

The current study provides the groundwork for a study of larger size. Increased child contact and communication via phone calls or visitation in conjunction with parenting instruction would certainly afford the mothers more opportunity to practice and incorporate new parenting skills, given the restricted contact they have with their children while in prison (Hoffmann, Byrd, & Kightlinger, 2010). The intervention would likely be improved by incorporating services for the children and the children's caregivers. This would require overcoming the numerous barriers posed by distance and the stressful life conditions of the families to be served. With regards to measurement, in future work, the use of observation methodology plus the recording of physiological changes during interactions between the mothers and their children would provide another window on the extent of behavioral and emotional changes taking place. Future research could also examine the viability of the Emotions Program as a stand-alone intervention, without the prerequisite of PIO.

Though the intervention was aimed at the vulnerable population of incarcerated mothers and their children, the targeted skills are relevant to other at-risk populations. Emotion regulation deficits are hypothesized to be a significant component of a broad range of psychopathology (e.g., Gross & Munoz, 1995) and to emerge as sequelae to a similarly broad range of adverse life circumstances, including domestic violence and child maltreatment. Hence, the Emotions Program has the potential for broad application. Further studies are needed on the efficacy of programs like the Emotions Program with other highly vulnerable populations.

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Table 1

Demographic and Criminal Characteristics at T1

Characteristic	Comparison <i>n</i> = 18	Intervention <i>n</i> = 29	Sample <i>N</i> = 47	Group effect size
Child age (in years)	6.39 (2.28)	7.79 (2.83)	7.26 (2.70)	<i>d</i> = .53
Child racial or ethnic minorities	50%	45%	47%	$\phi = -.05$
Child gender				
Boys	61%	62%	62%	$\phi = -.01$
Girls	39%	38%	38%	
Mother age (in years)	30.65 (5.67)	34.20 (7.39)	32.84 (6.94)	<i>d</i> = .52
Mother racial or ethnic minorities	33%	31%	32%	$\phi = -.02$
Mother marital status				
Single, never married	44%	27%	34%	$V = .17$
Married or in a relationship	11%	14%	13%	
Separated, divorced, or widowed	45%	59%	53%	
Mother employment before incarceration				
Full or part time	56%	45%	49%	$\phi = -.10$
Unemployed	44%	55%	51%	
Mother education				
11th grade or less	50%	65%	60%	$V = .16$
High school	22%	14%	17%	
Some college/training	28%	21%	23%	
Mother legal guardianship of child before incarceration	89%	90%	89%	$\phi = -.01$
Mother legal guardianship of child during incarceration	50%	59%	55%	$\phi = -.08$
Mother lived with child before incarceration	78%	72%	74%	$\phi = -.06$
Mother contact with child in past month	72%	41%	53%	$\phi = -.30$
Mother juvenile arrest	50%	54%	53%	$\phi = .04$
Mother arrested five or more times	58%	65%	63%	$\phi = .07$
Mother length of sentence (in months)	36.72 (22.16)	47.86 (26.47)	43.60 (25.26)	$d = .44$
Mother time incarcerated to date (in months)	22.13 (21.66)	31.64 (22.77)	28.00 (22.60)	$d = .42$

Note. Group moderate effects highlighted in bold. Cohen's *d* .2 = small, .5 = medium, .8 = large effect; ϕ = effect size for chi square; V = Cramer's effect size for chi square; ϕ/V .10 = small, .30 = medium, .50 = large effect.

Table 2

Mother Outcomes: Means and Standard Deviations With Effect Sizes

Outcome variable	Comparison group (<i>n</i> = 12 out of 18)			Emotion group (<i>n</i> = 26 out of 29)			Effect size (Cohen's <i>d</i>)
	T1	T2	T3	T1	T2	T3	
Emotion regulation							
Dysregulation	70.08 (21.39)	65.08 (20.95)	65.67 (20.92)	75.81 (23.23)	68.15 (19.16)	61.96 (19.99)	.82 .48
Effortful control	4.45 (.99)	4.33 (1.02)	4.36 (1.00)	4.25 (.97)	4.42 (1.03)	4.62 (1.24)	.36 .65
Emotion socialization							
Emotion coaching	4.25 (.58)	4.25 (.60)	4.23 (.58)	4.35 (.48)	4.52 (.46)	4.43 (.48)	.33 .32
Emotion dismissing	3.17 (.62)	3.38 (.58)	3.45 (.56)	3.70 (.60)	3.57 (.79)	3.66 (.66)	.47 .68
Adjustment							
Depressive symptoms	15.00 (9.74)	12.00 (7.30)	12.33 (11.85)	18.96 (11.52)	12.96 (8.32)	11.19 (11.21)	.82 .35
Mental health symptoms	.60 (.61)	.48 (.42)	.57 (.66)	.78 (.51)	.57 (.45)	.56 (.53)	.67 .27
Criminal behavior	5.58 (5.80)		2.25 (4.20)	7.65 (6.62)		.42 (.90)	1.74 .64

Note. T × G = time by group interaction; T × G moderate effects highlighted in bold. Cohen's *d* .2 = small, .5 = medium, .8 = large effect.