J Child Fam Stud (2011) 20:89–101
DOI 10.1007/s10826-010-9381-8

ORIGINAL PAPER

Improving the Emotional Adjustment and Communication Patterns of Incarcerated Mothers: Effectiveness of a Prison Parenting Intervention

Ann Booker Loper · Elena Hontoria Tuerk

Published online: 16 June 2010

Abstract Incarcerated mothers at a state prison participated in an eight-session parenting class designed to help them manage the stress of separation from children and to improve communication patterns with children and home-caregivers. In comparison to a waitlist control group ($n = 46$), inmates who received immediate intervention ($n = 60$) experienced less parenting distress regarding upcoming visitation experiences; however, waitlist and immediate treatment groups did not differ on other intervention measures. Additional analyses contrasted pre- and post-intervention differences on adjustment measures for inmates from either treatment condition who completed the parenting program ($N = 90$). After intervention, mothers reported reduced parenting stress, improved alliance with home caregivers, increased letter-writing, and reduction of mental distress symptoms. Large drop-out rates in both subgroups may have reduced the benefits of the random assignment used to form groups. Results support the value of interventions for incarcerated mothers that focus on ways to manage the emotional distress and poor communication patterns associated with being a parent in prison.

Keywords Prison parents · Incarcerated mothers · Parent training · Prisoners · Parenting stress · Prisoner adjustment

A. B. Loper (✉)
Curry School of Education, University of Virginia,
405 Emmet Street, Charlottesville, VA 22903, USA
e-mail: ABL2X@virginia.edu

E. H. Tuerk
Medical University of South Carolina, Charleston, SC, USA

Introduction

Between the years 2000 and 2007, the number of incarcerated women in the United States increased by 25%, with female offenders representing approximately 7% of the overall US prison population (West and Sabol 2008). A majority of incarcerated women are parents of minor children (Glaze and Maruschak 2008). Mothers in prison are more likely than fathers to be single parents, necessitating reliance on their own extended family and social service agencies for child care and support (Glaze and Maruschak 2008). Moreover, mothers in prison likely have troubled pre-incarceration histories, including sexual and physical trauma, mental illness, substance abuse, medical disabilities, and homelessness (Glaze and Maruschak 2008; Mumola and Karberg 2006). These myriad negative stressors impact parenting practices during and prior to incarceration and underscore the importance of supportive services for mothers in prison (Green et al. 2005).

For most inmate mothers, the most difficult prison stressors are concerns about their children's wellbeing and sadness about separation (Clark 1995; Harris 1993; Kazura 2001). Moreover, many incarcerated mothers maintain ineffective parenting styles that were developed prior to their imprisonment and struggle to communicate appropriately with their children's caregivers (Clark). Conflict with a child's caregiver can undermine a mother's interest in her child by limiting her involvement in decisions about her child's care. Although most mothers expect to resume custody of their children after incarceration (Banauch 1985; Gaudin and Sutphen 1993), lack of contact disrupts the parent–child relationship and diminishes a mother's authority to make legal and educational decisions for her child from prison (Clark 1995; Johnston and Gabel 1995).

Many correctional institutions provide parenting education as a vehicle for improving inmate knowledge and skills that may generalize to enhanced family functioning (Pollock 2002). However, these educational offerings can vary substantially in content, are rarely evaluated in a systematic way, and may extend to only a minority of inmates (Eddy et al. 2008; Loper and Tuerk 2006; Glaze and Maruschak 2008). Nonetheless, emerging parenting programs are on the rise, and demonstrate that solid gains are possible when parenting intervention is presented during a prison stay (Kennon et al. 2009).

Several training interventions designed for non-incarcerated parents have well-documented evidence of effectiveness, (e.g., Eyberg et al. 2005; Sanders et al. 2003; Webster-Stratton 2001). However, these programs are not easily translated to a correctional setting (Loper and Tuerk 2006). Typically, parenting interventions have an expectation that parents reside with their children and have opportunities to practice behavioral modification strategies (e.g., time out) on a continuous basis. Further, non-incarcerated parents usually seek parenting classes because one or more child in their care is demonstrating problematic behavior. A focus on behavior management has limited relevance to many incarcerated mothers, who have few opportunities to directly parent and who may require greater attention to developing or maintaining an affective bond with their child.

Treatment Objectives for Parenting Intervention for Incarcerated Mothers

As is the case with parenting interventions designed for the non-incarcerated, in-prison interventions may vary depending upon the goal of treatment. For example, an intervention designed for short-term jail offenders who are housed in facilities near home might target behavior management, use of available local resources, and reinforcement for transitional planning that attends to child needs. By contrast, inmates who have lengthy sentences with less opportunity for visitation might benefit from an intervention that provides skill building for better communication with children and caregivers within the prison context.

A treatment goal which is likely to be useful across prison contexts is reduction of the parenting stress and poor emotional regulation associated with the enforced separation from children. The objective of reduced parenting stress and improved emotional regulation is drawn from existing research with non-incarcerated populations showing that parenting stress is associated with negative outcomes such as parent depression, low parenting skill, and problematic child behaviors (Anthony et al. 2005; Crnic et al. 2005; Ortega et al. 2008; Rodgers-Farmer 1999). While relatively little research has examined parenting stress among incarcerated samples, available evidence is consistent with that for non-incarcerated samples. Loper (Houck and Loper 2002; Loper et al. 2009) observed that higher levels of stress regarding competence as a parent was related to elevated mental health symptoms and increased institutional rule-breaking among parents in prison. Along similar lines, Lanier (1993) observed that incarcerated fathers who expressed heightened concerns about relationships with their children were more likely to suffer depressive symptoms. Other studies emphasize the personal stress and adjustment difficulties of incarcerated parents separated from their children (Arditti et al. 2005; Bloom 1996).

Increased parenting alliance with child caregivers is another important goal for prison parenting interventions. Like parenting stress, parenting alliance has largely been investigated with non-incarcerated samples. The construct refers to the cooperation, commitment and shared goals between co-parents (Abidin and Brunner 1995). Loper et al. (2009) reported that inmate parents in state prisons in Ohio and Texas who reported strong co-parenting alliance with caregivers enjoyed more frequent child contact. To our knowledge, there is little published research that links the quality of alliance between incarcerated parents and their children's caregivers to outcomes for children. However, parenting alliance can reasonably be applied to these dyads in an intervention designed to improve communication regarding childrearing issues. Developing a stronger partnership with caregivers may lead to even greater gains in communication with children.

Several evaluations of parenting interventions have included increased contact with children as a desirable outcome (Gonzalez et al. 2007; Robbers 2005; Skarupski et al. 2003). Although increased personal visits with children make sense as evidence of improved parent–child relationships, it may be an unrealistic goal in many institutional contexts. Although most institutions have family visitation opportunities, many inmate parents receive few if any visits from children (Glaze and Maruschak 2008). Letter-writing, phoning children, or consulting with caregivers regarding child issues are more promising avenues of communication that are achievable and under better inmate control (Tuerk and Loper 2006). However, increased contact with children is likely to be beneficial only to the degree that such contact is positive. As such, parenting interventions for incarcerated mothers need to include skills on developing positive communication patterns with children within the limited forms of contact available.

Given the challenges that inmates experience when attempting to parent from prison, both children and incarcerated mothers may be best served by parent education that addresses ways of coping with stressful separation,

mechanisms for achieving positive communication with children and caregivers, and recognition of the inmate's non-traditional role in her child's life.

Parenting from the Inside

Parenting From Inside: Making the Mother–Child Connection (PFI; Loper et al. 2007) was developed in response to inmate feedback during informal parenting groups attended by a group of long-term inmate mothers at a state prison for women. During those groups, mothers reported difficulty communicating with their children, problems collaborating with their children's caregivers, and trepidation about talking with their children about sensitive topics. Inmate mothers also reported intense feelings of depression, anxiety, and difficulty adjusting to prison confinement due to worry and concerns about their children. Further, we observed mothers and their children during multiple day-long visits, and noticed developmentally inappropriate communication with children. During conversations with inmates after the visits, it was apparent that parenting cognitions such as "I will never get respect from my child," often served to justify the poor patterns of interaction.

We accordingly sought to develop a curriculum for mothers during incarceration aimed at reducing parenting stress, increasing alliance with caregivers, developing better patterns of communication with children, and improving inmate emotional well-being. In developing the course, we used the theoretical underpinnings and techniques of cognitive-behavioral therapy. The PFI course proceeds pedagogically from basic cognitive-behavioral skills (e.g., managing physical reactions to stress, recognizing and challenging unrealistic beliefs), to specific skill sets (effective listening, developmentally appropriate communication), to generalization of skills over multiple situations (phone calls, visits, letters), to application of previously learned skills in difficult situations (collaborating with caregivers, discussing offense and drug history with children, communicating with children who are exhibiting behavioral problems).

The Present Study

The current study assessed the effectiveness of PFI in a group of inmate mothers at a state prison assigned to either a waitlist or immediate treatment condition. In keeping with the goals of the intervention, the outcome measures focused on indices of parenting stress, alliance with caregivers, communication with children and caregivers, and emotional well-being. In addition, we collected data on all major variables from the waitlist group after they had received their delayed intervention. This enabled us to supplement our waitlist vs. control analyses with additional analyses that used combined data from individuals in either the immediate or delayed intervention, and we examined pre- vs. post- differences on individual measures.

Method

Design

We conducted two series of analyses. Initially, we utilized a mixed-method ANOVA that evaluated changes on major dependent variables between two treatment groups (Immediate Treatment [IT] vs. Waitlist Control [WLC]). In subsequent analyses, we combined the data from IT and WLC participants who completed treatment in order to assess pre- vs. post-treatment differences, regardless of their group assignment. Women at the institution were invited to participate in the program three separate times during the course of the study (approximately 1.5 years). For each of the three iterations of the program, we intended to assign inmates to either the IT or WLC condition. However, during the third iteration of the intervention, participants could not be allocated to a WLC condition due to program implementation delays. The delay was caused by illness in the institution as well as an unanticipated lockdown, which resulted in insufficient time for a WLC group for this third iteration of the program. There were 22 women who had initially been assigned to participate in the waitlist, but who were later informed of the program cancellation. We apologized to the women and offered to extend priority to them for any future offerings of the program. In all, there were five separate training series during the study period, three of which took place immediately after the initial invitation and description of the study (IT) and two of which were delayed (WLC).

Participants and Assignment to Treatment Conditions

Participants were recruited by fliers posted in residential units of the institution. Inmates were eligible to participate if they had at least one child under 18 years of age and if there were no legal impediments to program involvement (e.g., court order barring child contact). Of approximately 1,100 inmates housed in the facility, 198 attended an initial information session regarding the program during one of the three iterations of the program offering. During the information session, we described the parenting program, invited questions, and asked mothers to sign an informed consent that outlined the design and general content of the program. They were told that they would participate either in a class beginning within the following 2 weeks (IT) or in a class beginning 11 weeks later (WLC). After learning of the program, they were encouraged to take time to decide

whether they wished to participate and, if so, to return for a later scheduled session within the week to fill out a series of measures. The women were informed that they would learn of their class assignment at the subsequent meeting. During the intervening time between the information session and the session for collection of initial information, the women who had signed the informed consent at the initial information session were assigned to either an immediate treatment condition (IT) or to a waitlist intent-to-treat condition (WLC), determined by an SPSS random number generator. The inmates who returned for the testing session filled out measures and subsequently learned of their group assignment. No exceptions to the random assignments were allowed.

Measures were collected at one of three time periods for each of the iterations of the program: Time 1 measures were collected at the initial testing session for all participants of the program iteration. Time 2 measures were collected from all participants following the conclusion of the IT classes. The Time 2 measures constituted the after-treatment data for the IT condition as well as the after-waiting period data for the WLC. In order to enable additional pre- vs. post-intervention analyses for any of the mothers who completed treatment, we also collected Time 3 measures after the completion of the intervention by those in the WLC. The Time 2 data were then used as the WLC pre-treatment scores and contrasted to the Time 3 measures of performance after they received the intervention. Thus, in the separate pre-post analyses of any individual who received the intervention (regardless of initial group assignment), data from measures collected immediately before intervention were contrasted to measures collected immediately after the intervention. We had intended to also collect Time 3 measures from the IT group to asses maintenance of effects; however, very few of the inmates from the IT conditions returned to complete these follow-up measures. Consequently this aspect of the design was eliminated from planned analyses.

Table 1 summarizes the random assignment and attrition patterns for each of the three program iterations as well as for the group as a whole. We initially described the program to a total of 198 inmates who had volunteered for the program. There were 22 women who had been assigned to the third iteration waitlist group that was cancelled, effectively reducing our total possible *N* to 176 inmates. There was an initial attrition of 32 individuals who did not complete the Time 1 series of measures after receiving information regarding the design of the program or their condition assignment, as well as 8 individuals whose data were not usable. The unusable data included 5 individuals who became ill during their assigned session and were allowed to switch groups, as well as data from three individuals who provided very incomplete information on measures. Consequently, there were 136 women with at least some usable data. From the group that provided usable data, 40 women dropped out during the intervention, and 6 dropped out during the waiting period. Not including the women who had been assigned to the cancelled waitlist group, attrition included 18.2% of the sample who elected not to participate after receiving information regarding the

Table 1 Attrition of participants after random assignment to groups

Group and series	Random assignment sample size	No show first testing	Excluded data	Available data for analyses	Dropout during intervention	Dropout during wait period	Available for waitlist/control comparison	Available for pre-post comparison
Three iterations of program offerings								
IT- 1	23			23	(8)		15	15
WLC-1	23		(7)	16	(10)	(1)	15	5
IT-2	52	(18)	(1)	33	(10)		23	23
WLC-2	50	(14)		36	(6)	(5)	31	25
IT-3	28			28	(6)		22	22
WLC-3	22	(Wait list group cancelled due to time limitations)						
Whole sample								
IT	103	(18)	(1)	84	(24)		60	60
WLC[a]	73	(14)	(7)	52	(16)	(6)	46	30
Total	176	(32)	(8)	136	(40)	(6)	106	90

Note: No Show category represents individuals who did not participate in initial testing. Excluded category represents individuals whose data was too incomplete for analysis ($n = 3$) or who changed groups in the course of the series ($n = 5$)

IT immediate treatment group, *WLC* waitlist/control group. Group numbers represent one of the three program iterations

[a] WLC and total figures for whole sample do not include the 22 individuals assigned to the cancelled WLC-3 group

program, 4.5% excluded due to problematic data, 22.7% who dropped out during the course of intervention, and 3.4% who dropped out during the waiting period, or a total attrition of 48.8%. As can be seen in Table 1, this attrition pattern resulted in a sample size of 106 for the comparison of the WLC ($n = 46$) and IT ($n = 60$) groups. A sample of 90 individuals provided the data for the additional analyses that contrasted the pre-versus post-performance scores of any individual from either the immediate treatment or the waitlist group who completed the intervention. All inmates were scheduled to receive the full eight sessions of the intervention. Among these 90 inmates, 7.7% attended 2–3 sessions, 24.4% attended 4–5 sessions, 56.7% attended 6–7 sessions, and 11.2% attended 8 sessions. There were no statistically significant relationships between the number of sessions attended and changes on intervention measures, indicating that there was no apparent dosage effect associated with the number of sessions attended. There were no differences between the patterns of attendance of the group initially assigned to the IT condition in comparison to those initially assigned to the WLC condition.

In order to evaluate the differences between the 40 individuals who dropped out at some point during the intervention to those who completed the program, we contrasted pre- intervention scores on all of the major variables for those who completed the intervention vs. those who did not complete the intervention. There were no statistically significant differences between dropouts and completers on any of the pre-treatment measures.

There were no evident differences between the IT and WLC groups on demographic characteristics. Although there were proportionately more women with violent and property offenses within the experimental group, and more women with drug offenses within the waitlist group, the differences did not reach conventional significance ($\chi^2(3, N = 96) = 5.91$, $p = .12$). Table 2 provides descriptive information regarding groups.

Table 2 Demographic and criminal characteristics of participants

	IT group Frequency (%)	WLC group Frequency (%)
Race		
Caucasian	33 (55.9%)	18 (39.1%)
African-American	23 (39.0%)	20 (43.5%)
Other	3 (5.1%)	8 (17.4%)
Education		
No high school or GED	15 (26.3%)	14 (33.3%)
High school or GED	35 (61.4%)	17 (40.5%)
Some college	7 (12.3%)	11 (26.2%)
Marital status		
Never married	22 (37.9%)	16 (38.1%)
Married or long-term relationship	19 (32.8%)	14 (33.3%)
Divorced/widowed	17 (29.3%)	12 (28.6%)
Most serious offense		
Violent	23 (41.1%)	11 (27.5%)
Property	19 (33.9%)	11 (27.5%)
Drug	8 (14.3%)	14 (35.0%)
Other	6 (10.7%)	4 (10.0%)
Child gender		
Male	28 (49.1%)	21 (50.0%)
Female	29 (50.9%)	21 (50.0%)
	M (SD)	M (SD)
Mother age (years)	32.57 (6.49)	34.17 (6.29)
Child age (years)	9.55 (4.62)	10.49 (4.75)
Sentence length (years)	8.29 (8.73)	6.65 (6.02)

Study Procedures

Procedures were approved by the Institutional Review Boards of both the State Department of Corrections and the University of Virginia. Additionally, the National Institutes of Health provided a certificate of confidentiality.

Measures

Parenting Stress Index-Modified

A modified version of the Parenting Stress Index (PSI; Abidin 1995) was administered to assess three domains of parent functioning, including the Parental Attachment Scale from the PSI, The Sense of Competence Scale from the PSI, and a Visitation Stress Scale that was created specifically for inmate mothers. The Parental Attachment Scale includes 7 items concerning motivation and investment in the parenting role. The Sense of Competence scale contains 13 items about beliefs regarding parenting skills and abilities. In addition, the PSI-M included a seven-item, incarceration-specific Visitation Stress Scale regarding prison visitation experiences with the child (Houck and Loper 2002). For each of these subscales, participants rated their level of agreement with scale items on a 5-point scale. (Mothers with more than one eligible child were instructed to select the youth whose birthday falls earlier in the year.) For the present sample, the alpha reliabilities for the PSI-M were .64, .80, and .75 for the Attachment, Sense of Competence, and Visitation stress scales, respectively. Abidin (1995) reported alpha reliabilities for Parental Attachment and Sense of Competence to be .75 and .83, respectively.

Child-Contact

The PSI-M also includes three items that assess level of contact that inmates have with children or contact with

caregivers regarding children. Inmates reported their monthly level of mail contact with children, phone contact with children, and consultation with caregivers regarding children using a 5-point scale : 1 = "Every Day"; 2 = "Several times a week"; 3 = "Once a week"; 4 = "Once a month"; 5 = "No such contact in the last month."

Parenting Alliance Measure (Abidin and Konold 1999)

The parenting alliance measure (PAM) is a 20-item self-report measure of the alliance between two parental figures. Higher scores indicate a more positive perceived alliance between caregivers. In order to adapt the measure for the incarcerated population, "your child's other parent" was replaced with "your child's caretaker" on all items. The alpha reliability for the present sample was .96. Abidin and Konold reported alpha reliability at .97 and test–retest reliability at .80.

Brief Symptom Inventory (Derogatis 1993)

In order to assess possible changes in inmate emotional well-being, we included the Brief symptom inventory (BSI), a 53-item self-report inventory of mental health symptoms. Items are rated on a 5-point scale of distress regarding a particular symptom ranging from "not at all" to "extremely." The symptom dimensions include somatization, obsessive–compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. In addition, the measure provides a summary Global Severity Index (GSI) representing the average item distress level across subscales. The measure also provides a measure of clinical severity or "caseness," marked by GSI with a T-score above 63. Derogatis summarized studies of the measure's reliability, which ranged from .71 to .85 for individual subscales. In the present study, individual alpha reliabilities for subscales ranged from .70 to .88 and the GSI summary alpha reliability was .97.

MOM-OK Usage

Throughout the intervention (described below), women were encouraged to use a specific skill, termed MOM-OK, as a technique to deal with stress by reducing immediate emotional responding and cognitively re-evaluating the source of stress. On a weekly questionnaire, inmates were asked, "How many times did you use MOM-OK this past week?" Based on a four-point rating item (value 1 = none; value 2 = 1–3 times; value 3 = 4–6 times; value 4 = 7 or more times), ratings were summarized by an average weekly value.

Facilitators

One of three advanced doctoral students in clinical psychology led the didactic component of each session, assisted by inmate co-facilitators. The doctoral students each had previously observed at least one complete series of classes taught by the author of the intervention, and were in their third or fourth year of doctoral training in a clinical psychology program accredited by the American Psychological Association. After each session, the doctoral student met with the author of the intervention to receive supervision and feedback regarding the class progress. Inmate co-facilitators had successfully completed the course during pilot testing and had participated in additional training on therapeutic group processes. The inmate facilitators took leadership in small-group discussions. In some cases, doctoral students in clinical psychology also assisted in the small-group discussions.

While treatment fidelity was not measured in the current study, doctoral students who led sessions were trained by the program developers and required to co-facilitate an iteration of the training prior to leading groups independently. Further, doctoral students attended enhanced visitation sessions through an affiliated program at the institution in order to observe and interact with mothers, youth, and caregivers.

Program Description

The program used multi-modal teaching materials. The didactic portion of each class was facilitated using computer presentation software. All inmates were provided with a handbook that included each of the presentation images well as additional commentary and questions. Videotaped vignettes provided depictions of inmate parenting behaviors and their solutions, and were the basis of group discussion. All sessions emphasized the importance of cognitive-behavioral strategies to reduce emotional reactivity to stressful situations (MOM-OK), and examples of participant usage of MOM-OK between sessions were elicited at the beginning of every class. An initial introductory session acquainted the facilitators and participants and provided an overview of the program. The primary course content was covered in eight subsequent 2-hour sessions. Session content included:

Session 1. "Taking Care of Feelings" introduced the concept that thoughts, feelings, and physical reactions influence one another. Content emphasized the particular stressors that inmate mothers experience and usage of the MOM-OK cognitive-behavioral strategy. MOM-OK stands for: **M**ellow **O**ut (use calming techniques before reacting in stressful situations), **M**ind (recognize unrealistic or unhelpful cognitions), **O**ther thoughts (challenge cognitions with more realistic or adaptive thoughts), and **K**id

(remember that the child's needs are of primary importance). The emphasis in this session was directed toward the program objective of providing inmate mothers with specific skills to deal with parenting stress and emotional disregulation (Arditti et al. 2005; Houck and Loper 2002; Loper et al. 2009).

Session 2. "Smart Listening" covered supportive listening to enhance mothers' relationships with their children, observing cues such as tone of voice and facial expressions, listening for children's underlying feelings, and considering a child's developmental stage and personality. This session, as well as Session 3, was directed toward the program objective of enhancing positive communication with children by teaching the parents how to better understand the developmental needs of children, and better assess their child's emotional states and affective needs (Bowlby 1988).

Session 3. "Conversations that Connect" emphasized empathic questioning in order to increase a child's comfort and interest during conversations. Mothers were encouraged to ask open-ended, "friendly connection" questions, such as those that allow for a range of possible responses and that ask about a child's interests and feelings. Participants were discouraged from question "traps," such as eliciting information about others (e.g., a father's new girlfriend), using questions that conceal criticism (e.g., "Why are you dressed like that?"), or other negative questioning styles.

Session 4. During *"Communicating with Your Child through Letters,"* participants applied skills learned in the first three sessions to their most frequently used mode of communication—letters. Mothers discussed difficult situations including not receiving letters, reading upsetting letters, and writing letters to estranged children or caregivers. Inmates received a colorful booklet with ideas and examples of letters for children of different ages. This session, as well as the two that follow, were directed toward the program objective of improving the quality and frequency of mother–child contact. The emphasis in Session 4 regarding letter-writing drew from research which highlights the positive outcomes of letter-writing for inmate parents (Tuerk and Loper 2006) and children (Dallaire et al. in press).

Session 5. "Telephone Visits" focused on using previously learned skills to meet the challenges of phone conversations from prison. Content emphasized the need to plan ahead when making calls, to set reasonable expectations for brief conversations, and to decide whether a phone call is the best mode of communication for a given situation. Participants also learned skills to enhance conversations with young or uncommunicative children. Mothers received a "calling card" for use while on the phone with their children that provided a visual reminder of the MOM-OK and of the skills learned during that session. Phone contact was emphasized because, next to letter-writing, it represents the most frequent medium of contact between inmate mothers and children (Glaze and Maruschak 2008).

Session 6. "Connecting with Your Child's Caregiver" emphasized perspective-taking, experiencing empathy for the caregiver, developing a team approach to problem-solving and managing disagreement appropriately. This session was directed toward the program objective of improving communication patterns between inmates and child caregivers.

Session 7. "Talking to Your Child about Your Offense" focused on managing anxiety and selecting developmentally appropriate content when discussing the mother's offense. Mothers were encouraged to listen carefully to their child's questions in order to respond to underlying concerns and to consider appropriate modes of communication. We stressed the need to identify the important components to discussion of the offense, including developmentally-sensitive and honest explanations of the crime, feelings of remorse, positive changes made in prison, and future plans. Sessions 7 and 8 addressed two issues that were identified as extremely stressful by mothers who were interviewed during the pilot stages of the intervention. The sessions intentionally included concepts covered in previous classes. The content touched on all of our program objectives, including reducing parenting stress, improving caretaker alliance, and providing skills for communicating with children.

Session 8. During *"Giving Guidance When Your Children Are in Trouble,"* mothers used skills to communicate with their child in times of stress at home. Topics included child drug use, managing accusations of hypocrisy from children, and demonstrating authoritative parenting despite incarceration. Mothers discussed challenging situations such as children fighting to "defend their mothers' honor" and acting out in the school setting. Participants were encouraged to help their children think through alternative options that would result in better outcomes, to engage in collaborative problem-solving with their child, and to demonstrate respect for child.

Treatment Participation

Active participation was encouraged by direct questioning (e.g., "What do you think was happening in that video clip?"), elicitation of examples or concerns from less active participants, and use of debate, "devil's advocate" and other provocative strategies to increase dialogue. Although some participants had to be encouraged to participate verbally, in general, most mothers participated spontaneously during group discussions in most sessions. Mothers were requested to monitor their use of the MOM-OK strategy during the week, and report on their experiences at the subsequent session.

Results

Groups significantly differed on initial distress for some outcome measures. Specifically, relative to the WLC group, the IT group reported higher initial levels of parenting stress regarding visitation, $t(103) = 2.32$, $p < .05$; obsessive compulsive symptoms, $t(104) = 2.08$, $p < .05$; anxiety symptoms, $t(104) = 3.10$, $p < .01$; hostility $t(104) = 2.21$, $p < .05$; and phobic anxiety $t(104) = 2.08$, $p < .05$. Table 2 provides descriptive information regarding the sample.

Immediate Treatment vs. Waitlist-Control Groups

Primary Analyses

A series of mixed-model ANOVAs evaluated the differences between the WLC and IT groups at the initial assessment in contrast to the repeated assessment at the completion of the experimental group's intervention and the waiting period. There was a significant time by group interaction for the combination of the three PSI measures ($F(1, 102) = 6.58$, $p < .05$, ${}_{p}\eta^2 = .06$), indicating that the IT group members reported lowered levels of parenting stress after intervention in contrast to the WLC. There was also a significant three-way interaction indicating that differences varied according to the stress measure ($F(2, 101) = 3.38$, $p < .05$, ${}_{p}\eta^2 = .06$). Post-hoc analyses indicated that improvement among the IT group relative to the WLC group was apparent only the Visitation Stress scale ($F(1, 102) = 9.13$, $p < .01$, ${}_{p}\eta^2 = .08$).

Similar mixed-method ANOVAs were undertaken for the combination of the three contact measures, the PAM, as well as the combination of the BSI mental illness scores. In each of these series of analyses, there were no detected differences between the IT and WLC groups in terms of improvements after the IT treatment. Because of the marked pre-test differences between groups on several measures, we also conducted a parallel series of ANCOVA's which contrasted groups on post-test scores while controlling for individual pre-test levels. However, these analyses essentially confirmed the previously observed patterns using the Mixed-Method ANOVAs.

In addition to scores for each mental illness measure, the BSI provides clinical guidelines for interpretation of scale scores, or detection of "caseness" indicating clinical significance that merits additional individual diagnostic procedures (Derogatis 1993). There was a significant difference in the distribution of clinically significant cases during Time 1 and Time 2 for the IT and WLC groups, $\chi^2(3, N = 104) = 7.80$, $p < .05$, Cramer's $V = .27$. Approximately half of the IT group (58.4%, $n = 35$) in contrast with 38.6% ($n = 17$) of the WLC group evidenced clinically elevated GSI scores at the beginning of treatment. The general pattern indicated greater clinical improvement and less clinical decline for the immediate treatment group relative to the waitlist group. For the IT group, 21.7% ($n = 13$) improved from the clinical to non-clinical range and one individual (1.7%) declined from the non-clinical to the clinical range. For the WLC group, 15.9% ($n = 7$) improved from the clinical to non-clinical range and six individuals (13.6%) declined from the non-clinical to clinical range.

Additional Exploratory Analyses

As previously described, multivariate analyses indicated that, with the exception of parenting distress relative to upcoming visitation experiences, the treatment did not afford improved adjustment patterns in comparison to a non-treated cohort. However, inspection of means for the individual subtests suggested that the interventions may have achieved some undetected effects that would have been evident with either increased sample size or possibly better equalization of initial distress levels between groups. To further explore the overall pattern of effects, we undertook a series of paired-samples *t*-tests. Table 3 depicts the patterns of change for: (a) the IT group before and after the intervention; (b) the WLC before and after the waiting period; and (c) the WLC group before and after receiving intervention. The post-waiting period measures for the WLC were also used as the pre-intervention measure in assessing the change among the WLC participants after they received the intervention. The differences between the WLC Time 2 measures described in Table 2 therefore reflect different sample size resulting from drop-outs during the WLC intervention. In order to reduce the likelihood of Type I error on the multi-scale BSI, only the summary Global Symptom Index Score was interpreted.

In comparison to their pre-treatment scores, the IT group evidenced significantly reduced parenting stress concerning competency as a parent, reduced parenting stress regarding visitation, and improved alliance with the caregiver. The IT group also demonstrated significantly increased phone calls, caregiver consultations, and marginally increased letter-writing. Further, the IT group showed reduced mental distress symptoms on the BSI after intervention. During the no-intervention waiting period, the WLC group evidenced no changes on any of the observed measures. However, after receiving the intervention, the WLC group evidenced a pattern of improvement that was similar to that evident in the IT group. After intervention, the waitlisted inmates reported reduced parenting stress regarding competency as a parent and stress regarding visitation. Similar to the immediate treatment group, the waitlisted inmates after treatment evidenced increased contact with children, and reduced levels of psychological distress on the BSI. Thus, while our primary multivariate analyses did not reveal significant

Table 3 Descriptive information for dependent variables

	Immediate treatment pre and post intervention ($n = 60$)		Waitlist pre and post waiting period ($n = 46$)		Waitlist pre and post intervention ($n = 30$)	
	Time 1	Time 2	Time 1	Time 2	Time 2	Time 3
Parenting stress index						
Attachment	1.57 (0.52)	1.56 (0.56)	1.59 (0.58)	1.58 (0.51)	1.61 (0.57)	1.55 (0.55)
Competence	2.36 (0.61)	2.22 (0.53)	2.15 (0.48)	2.11 (0.49)	2.10 (0.49)	1.93 (0.45)
Visitation	3.17 (0.94)	2.76 (0.74)	2.76 (0.84)	2.87 (0.84)	2.99 (0.89)	2.74 (0.85)
Contact						
Letters	3.00 (0.92)	2.80 (0.96)	3.09 (0.96)	3.09 (0.91)	3.20 (0.96)	2.82 (1.06)
Phone	3.80 (1.13)	3.52 (1.16)	3.57 (1.30)	3.57 (1.31)	3.67 (1.40)	3.93 (1.21)
Caregiver consult	3.65 (1.12)	3.42 (1.14)	3.39 (1.43)	3.28 (1.33)	3.43 (1.45)	3.79 (1.23)
Parenting alliance	75.56 (19.91)	79.7 (17.49)	76.69 (19.87)	81.79 (17.37)	79.42 (18.05)	77.29 (17.61)
Brief symptom inventory						
Somatization	0.85 (0.92)	0.73 (0.84)	0.60 (0.76)	0.54 (0.78)	0.71 (0.91)	0.76 (0.81)
Obsessive–compulsive	1.57 (1.10)	1.27 (1.14)	1.13 (1.05)	1.02 (0.88)	1.19 (0.95)	1.13 (1.16)
Interpersonal sensitivity	1.23 (1.17)	0.94 (1.11)	0.97 (1.02)	0.94 (1.14)	0.99 (1.15)	0.72 (0.86)
Depression	1.30 (0.93)	1.04 (1.05)	0.97 (0.86)	0.80 (0.76)	0.89 (0.84)	0.70 (0.68)
Anxiety	1.07 (0.96)	0.91 (1.10)	0.56 (0.64)	0.57 (0.75)	0.68 (0.78)	0.65 (0.85)
Hostility	0.89 (0.85)	0.78 (0.93)	0.57 (0.53)	0.60 (0.65)	0.66 (0.72)	0.42 (0.52)
Phobic anxiety	0.59 (0.82)	0.48 (0.87)	0.30 (0.56)	0.30 (0.55)	0.29 (0.59)	0.28 (0.77)
Paranoid ideation	1.57 (0.95)	1.17 (1.08)	1.26 (0.77)	1.13 (0.93)	1.13 (0.92)	0.87 (0.88)
Psychoticism	1.67 (1.14)	1.22 (1.21)	1.27 (1.11)	0.91 (0.88)	0.97 (0.93)	0.99 (0.99)
Global severity	1.16 (0.79)	0.96 (0.89)	0.82 (0.63)	0.76 (0.63)	0.85 (071)	0.76 (0.71)

Note: PSI scores represent average item scores for five-point scales (1–5); higher scores indicate higher stress. PAM scores represent summary score for 20-item five-point; higher scores indicated greater alliance. Contact scores represent average item scores for five-point scale (1–5); lower scores indicate higher contact levels. BSI scores represent average item scores for dichotomous items (1–2); higher values represent higher symptom endorsement

Table 4 Exploratory analyses: paired samples t-tests for dependent variables

	Immediate treatment pre vs. post intervention		Waitlist pre vs. post wait period		Waitlist pre vs. post intervention	
	N	*t*-value	*N*	*t*-value	*N*	*t*-value
Parenting stress and alliance						
Attachment stress	60	<1.0	46	<1.0	30	<1.0
Competence stress	60	2.53**	46	<1.0	30	2.61**
Visitation stress	60	3.63**	46	<1.0	30	2.86**
Parenting alliance	48	2.56**	43	1.84	28	1.08
Contact						
Letters	59	1.76	44	<1.0	29	2.02*
Phone	60	3.18*	44	<1.0	29	1.84
Caregiver consult	60	2.18*	44	<1.0	29	2.71*
Mental distress						
GSI	60	2.29*	44	<1.0	27	2.35*

* $p < .05$. ** $p < .01$. *Note*. Variations in sample sizes reflect missing data due to incompletion of individual measure

improvement that was attributable to the intervention, these additional exploratory analyses suggest that the intervention may have resulted in some undetected effects. Table 4 summarizes these results.

Pre-Intervention vs. Post-Intervention

We conducted a second series of analyses aimed at examination of the pre-intervention vs. post-intervention adjustment

patterns of the 90 women (IT $n = 60$, WLC $n = 30$) who received parenting training and completed the needed measures. As stated previously, the two conditions were combined for this set of analyses, using assessments taken immediately before and after participating in intervention (i.e., Time 1 and 2 for IT condition, Time 2 and 3 for WLC condition).

Parenting Stress

A repeated measures ANOVA indicated significant change between the three parenting stress scale scores after the intervention, $F(1, 88) = 20.61$, $p < .001$, ${}_p\eta^2 = .19$). Follow-up ANOVAs revealed that the changes were apparent on the Sense of Competence scale, $F(1, 89) = 12.49$, $p < .01$, ${}_p\eta^2 = .12$, as well as on the Visitation scale, $F(1, 88) = 20.07$, $p < .001$, ${}_p\eta^2 = .18$. No differences were evident on the Attachment scale.

Contact with Children

Repeated measures ANOVAs of the PSI-M contact items evaluated differences between amount of contact with children (by phone, letter, and caregiver communication) in the month before each assessment. There was no evident change in amount of phone contact or conversations with the caretakers regarding child-related issues. However, after the intervention, inmates reported writing letters more frequently to children, $F(1, 86) = 7.04$, $p < .01$, ${}_p\eta^2 = .08$.

Parenting Alliance with Caregiver

An initial examination of the differences on PAM scores pre- and post-intervention indicated no changes. However, further inspection of the data indicated that a large number of the mothers initially endorsed high levels of connection with caregivers and maintained this connection through the intervention. Approximately one-fourth of the participants ($n = 24$, 27.3%) endorsed both an initial and post-test parenting alliance between 98 and 100 points out of a 100 point scale. This raised the possibility of a ceiling effect which could flatten change projections over time. Accordingly, we re-ran analyses but eliminated results from inmates who evidenced high levels of parenting alliance on both the pre- and post-intervention (PAM scores of 98–100). With this selection, there was evident improvement in levels of parenting alliance with the caregiver after the intervention, $F(1, 63) = 5.42$, $p < .05$, ${}_p\eta^2 = .08$.

Psychiatric Symptoms on the BSI

There were significant positive changes on the BSI Global Symptom Index, which includes all measure items ($F(1, 87) = 9.96$, $p < .01$, ${}_p\eta^2 = .10$). Examination of subscales indicated significant differences on the following domains: BSI Obsessive Compulsive Scale, $F(1, 87) = 7.75$, $p < .01$, ${}_p\eta^2 = .08$; Interpersonal Sensitivity Scale, $F(1, 87) = 8.64$, $p < .01$, ${}_p\eta^2 = .09$; Depression Scale, $F(1, 87) = 8.39$, $p < .01$, ${}_p\eta^2 = .09$; Anxiety Scale, $F(1, 87) = 4.914$, $p < .05$, ${}_p\eta^2 = .05$; Hostility Scale, $F(1, 87) = 4.32$, $p < .05$, ${}_p\eta^2 = .05$; Paranoid Ideation Scale, $F(1, 87) = 21.02$, $p < .001$, ${}_p\eta^2 = .20$; and Psychoticism Scale, $F(1, 87) = 11.05$, $p < .01$, ${}_p\eta^2 = .11$.

Use of MOM-OK as Potential Mediator

Ratings on the 4-point MOM-OK questionnaire were averaged across sessions for each participant; the average rating value for participants in the intervention was 1.63 (SD = .59). In order to assess the importance of this therapeutic element in gain scores, we re-ran the repeated measures ANOVA for each of the previously reported positive pre-post changes, but with statistical control for the inmate report of frequency of use of MOM-OK. As expected, previously observed significant differences in parenting stress, parenting alliance, and frequency of letter-writing were no longer significant with inclusion of the MOM-OK score as a covariate. For the Sense of Competence scale, the initial observed effect size (${}_p\eta^2 = .12$) was reduced to .00, while the Visitation Stress scale effect size (${}_p\eta^2 = .18$) was reduced to .03. The initial effect size for frequency of letter-writing (${}_p\eta^2 = .08$) was likewise reduced (${}_p\eta^2 = .01$). Although the parenting alliance measure was no longer significant with statistical control for usage of the MOM-OK strategy, the effect size change was negligible (Non-controlled: ${}_p\eta^2 = .08$ vs. Controlled ${}_p\eta^2 = .05$).

Similar analyses with the BSI scales provided ambiguous support for the MOM-OK as an effect mediator. Inmate distress as measured on the Global Severity Index scale remained significantly lower at post-test with the inclusion of the MOM-OK covariate, $F(1, 85) = 5.95$, $p < .05$. ${}_p\eta^2 = .07$; the effect size change from the previous level (${}_p\eta^2 = .10$) was minimal. Inspection of individual subscales indicated that two scales, also robust to MOM-OK as potential mediator, may account for effects with the Global Severity Index score: Paranoid Ideation, ($F(1, 85) = 12.67$, $p < .01$, ${}_p\eta^2 = .13$; Interpersonal Sensitivity, $F(1, 8) = 4.1$, $p < .05$, ${}_p\eta^2 = .05$. Scores on the Depression, Anxiety, Hostility, and Psychoticism subscales were no longer significant with inclusion of the MOM-OK covariate; effect sizes were reduced to less than .01.

Discussion

After participation in the PFI curriculum, mothers reported reduced parenting stress and improvements in emotional

adjustment, increased alliance with children's caregivers, as well as increased communication with children through letters. These changes are consistent with program goals of equipping inmate mothers with skills for controlling emotional reactivity and stress regarding separation from children, as well as increasing communication with family.

On the PSI-M, inmate improvement was apparent on the Sense of Competency and the Visitation stress scales. There were no changes on the Attachment stress scale, on which inmates reported substantially lower levels of concern than on the other PSI-M scales. This pattern is consistent with other investigations using this measure with incarcerated mothers (Houck and Loper 2002; Loper et al. 2009; Tuerk and Loper 2006). The mothers in the current study believed that they had strong relationships with their children and that they were loved in return; this belief was not impacted by the intervention. The other two parenting stress scales showed changes as predicted, implying that inmates gained confidence in their ability to competently parent from prison and to handle the stress associated with face-to-face visits.

Inmates also perceived improved parenting alliance with caregivers after the intervention. The PAM includes multiple items that provide a measure of confidence in the co-parent, as well as shared goals regarding children. The improved confidence in the caregiver is consistent with the emphasis on developing empathy and honest communication with caregivers.

Inmates increased their level of letter-writing after intervention participation. Letter writing is a significant form of communication for inmate parents due to its easy availability. In contrast, visitation by children is a relatively rare occasion for most women in prison, and is generally outside of the inmate's personal control. Long distances to the prison often make such trips burdensome and expensive for family members. Similarly, although phone calls are more readily under inmate control, telephone usage in prison can be prohibitively expensive. Although electronic communication (e.g., email, blogging) is ubiquitous outside of prison, it is generally restricted by security policies in prison. However, an inmate can write a letter whenever she wishes, at a low cost, and can review content before sending it on. The PFI curriculum's training module on letter-writing was specifically geared to encourage this communication and to provide skills for dealing with stressors that inhibit performance, such as resentment at not receiving letters, difficulties in creating letter content.

Consistent with evidence of reduced parenting stress and improved sense of alliance with caregivers, mothers reported at post-treatment fewer mental health symptoms on the BSI. This change reflects improved emotional functioning that is consistent with the repeated use of a cognitive-behavioral strategy for dealing with parenting distress. The MOM-OK was integrated throughout all sessions, and repeatedly used as a framework for dealing with difficulties by first dealing with the mother's own automatic thoughts and feelings. This element was an important component of treatment which, when statistically controlled, reduced previously significant pre-post improvement effects regarding parenting stress and parenting alliance, as well as changes in symptoms suggestive of depression, anxiety, psychoticism, and hostility. However, usage of the strategy had less impact on symptoms measured by the Paranoid Ideation and Interpersonal Sensitivity subscales. These two scales contain items that mark feelings of distrust or victimization by others in prison. It is possible that other unmeasured features of the program, such as the affiliation between mothers during small group discussion, mediated changes regarding these feelings.

In contrast to the favorable pre-post comparisons, the comparison of an immediate treatment group to a waitlist control group was less positive. With the exception of the Visitation Parenting Stress scale, there were no differences in change patterns between the IT and WLC groups. Observation of individual mean scores revealed that, in many cases, the IT group evidenced worse initial functioning but "improved" over the course of treatment to eventually match the measures for the WLC group after the waiting period. One possible explanation for the observed patterns is that a regression to the mean occurred, and that the initially higher distressed IT group measures gravitated toward the mean score at post-treatment. However, our additional exploratory analyses of individual mean score changes are not consistent with this explanation, as the WLC scores were essentially unchanged during the waiting period. Improvement for the WLC group was only observed after intervention. Moreover, the pattern of improvements across the varying measures for the WLC group after intervention nearly identically mirrored the pattern of improvements for the IT group.

It is not clear why our groups were not more comparable in terms of initial levels of stress. The dropout rates for the two groups were similar, and groups were randomly assigned. There were no statistically significant differences in change patterns between groups in terms of demographic or criminal characteristics. Nonetheless, the lack of statistical differences between the change patterns of the two groups, as evaluated in multivariate analyses, raises questions regarding the specific benefits from the program and calls for additional research.

The use of a well-standardized measure of psychological distress afforded the opportunity to examine not only statistical differences in inmate mental well-being, but to frame these differences in terms of meaningful clinical change. Our examination of changes in clinical significance revealed that the IT group had a larger proportion of

inmates who moved from the clinical to non-clinical range during the intervention period than was the case for the WLC group during the waiting period. These results were not surprising and likely reflect the larger number of individuals in the IT group with initial high levels of pathology. However, it is noteworthy that among the 25 individuals in the IT group who began treatment in the non-clinical range, only one worsened during the interval to the clinical range. By contrast, among the 27 individuals in the WLC group who began treatment in the non-clinical range, six worsened over the course of the interval. A possible benefit of intervention geared toward better emotional functioning in the context of parenting distress may be in heading off impending depressive or other dysfunctional episodes. Given the high levels of depression, anxiety, and other mental disability among women in prison (Warren et al. 2002), this is an important potential benefit to providing treatment during incarceration.

Study Limitations

Approximately 40% of the women who came to an initial information session either declined to attend the subsequent testing session or dropped out during the course of the study. While this rate is high, it is consistent with other evaluations of parenting interventions in prison (e.g., Sandifer 2008; Skarupski et al. 2003). There are many factors that can disrupt programming in correctional settings that are outside of the control of the inmate participants and treatment providers. Inmates may be shifted to other institutions with little advance notice, work schedule changes may preclude further participation, and inmate infractions may lead to restrictions that bar program enrollment. However, the dropout rate still represents a limitation of the current study, particularly in light of the differences between pre-test scores for the two groups. It is plausible that with less program attrition the random selection process would have operated more consistently to ensure more comparable groups. Future studies may need to consider alternate assignment methods (e.g. alternate ranks design, Bonate 2000) to reduce error associated with non-equivalence in groups.

All of the current measures are based on self-report. While this is typical of parenting interventions in prison (Loper and Tuerk 2006), it represents a limitation, particularly in terms of the measures of parenting alliance and child contact. Inmate mothers may have experienced a sense of enhanced communication with caregivers that was not shared by the caregivers. Likewise, mothers' perception that they increased child communication over the course of the intervention may not have mirrored the actual number of letters and phone calls to children. While we invited communication with home caregivers regarding these issues, too few responded to allow reliable analyses of differences between inmate and caregiver perspectives.

Although the pre-post intervention changes were in the expected direction and partially accounted for by use of the MOM-OK strategy, effect sizes were small, and leave considerable room for program improvement. One potential area for enhancement of the program is to intensify efforts to measure and provide feedback to inmates about specific skill development. For example, it would be beneficial to examine changes in the content of letters that may have resulted from the instruction on better methods for written communication.

There were no explicit measures of treatment fidelity. We sought to ensure consistency by weekly supervision meetings as well as by the use of structured presentation materials (computer presentation of didactic information, inmate handbook, and filmed vignettes). However, it would be useful to develop an observational measure of instructor behaviors in order to measure and assure consistency in the application of the treatment.

The present study examined changes only from the perspective of the inmate mother. No child or caregiver change measures were obtained. Future studies are needed to evaluate the assumption that the skills learned during training improve interpersonal patterns and behaviors with children.

The present study provided limited support for PFI. Although the intervention was followed by improved functioning in terms of parenting stress, caregiver alliance, emotional well-being, and contact with children, effects were typically not statistically different from those in a waitlist condition. Future studies that provide better comparability across conditions are needed.

With the large and increasing number of mothers behind bars there is a clear need for interventions that directly address the distress and emotional dysregulation associated with separation from children. Inmate mothers need prison-contextual support to develop strategies for healthy communication with children and caregivers, confidence in their ability to have a meaningful parent–child relationship, and skills for handling the intense feelings associated with lost time with children. Increased research is needed to evaluate interventions, such as PFI, to find effective solutions.

References

Abidin, R. R. (1995). *Parenting stress index: Professional manual* (3rd ed.). Odessa, FL: Psychological Assessment Resources.

Abidin, R. R., & Brunner, J. F. (1995). Development of a Parenting Alliance Inventory. *Journal of Clinical Child Psychology, 24*, 31–40.

Abidin, R. R., & Konold, T. (1999). *Parenting alliance measure: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.

Anthony, L. G., Anthony, B. J., Glanville, D. N., Naiman, D. Q., Waanders, C., & Shaffer, S. (2005). The relationships between parenting stress, parenting behaviour and preschoolers' social competence and behaviour problems in the classroom. *Infant and Child Development, 14*, 133–154.

Arditti, J., Smock, S., & Parkman, T. S. (2005). "It's been hard to be a father": A qualitative exploration of incarcerated fatherhood. *Fathering, 3*, 267–288.

Banauch, P. J. (1985). *Mothers in prison*. New Brunswick, NJ: Transaction Books.

Bloom, B. (1996). Imprisoned mothers. In K. Gabel & D. Johnston (Eds.), *Children of incarcerated parents*. New York: Lexington Books.

Bonate, P. L. (2000). *Analysis of pretest-posttest designs*. Boca Raton: Chapman & Hall.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.

Clark, J. (1995). The impact of the prison environment on mothers. *The Prison Journal, 75*(3), 306–329.

Crnic, K., Gaze, C., & Hoffman, C. (2005). Cumulative parenting stress across the preschool period: Relations to maternal parenting and child behaviour at age 5. *Infant and Child Development, 14*, 117–132.

Dallaire, D. H., Ciccone, A., & Wilson, L. (in press). Teachers' experiences with and expectations of children with incarcerated parents. *Journal of Applied Developmental Psychology*.

Derogatis, L. (1993). *Brief symptom inventory (BSI): Administration, scoring, and procedures manual* (3rd ed. ed.). Minneapolis, MN: National Computer Systems.

Eddy, M. J., Martinez, C. R., Schiffman, T., Newton, R., Olin, L., Leve, L., et al. (2008). Development of a multisystemic parent management training intervention for incarcerated parents, their children and families. *Clinical Psychologist, 12*, 86–98.

Eyberg, S. M., Nelson, M. M., Duke, M., & Boggs, S. R. (2005). *Manual for the dyadic parent-child interaction coding system (3rd edn.)*. Available on-line at www.PCIT.org.

Gaudin, J. M., & Sutphen, R. (1993). Foster care vs. extended family care for children of incarcerated mothers. *Journal of Offender Rehabilitation, 19*, 129–147.

Glaze, L., & Maruschak, L. (2008). *Parents in prison and their minor children*. Washington, DC: U. S. Department of Justice Bureau of Justice Statistics.

Gonzalez, P., Romero, T., & Cerbana, C. B. (2007). Parenting education for incarcerated mothers in Colorado. *Journal of Correctional Education, 58*, 357–373.

Green, B. L., Miranda, J., Daroowalla, A., & Siddique, J. (2005). Trauma exposure, mental health functioning, and program needs of women in jail. *Crime & Delinquency, 51*, 133–151.

Harris, J. W. (1993). Comparison of stressors among female vs. male inmates. *Journal of Offender Rehabilitation, 19*, 43–56.

Houck, K. F., & Loper, A. B. (2002). The relationship of parenting stress to adjustment among mothers in prison. *American Journal of Orthopsychiatry, 72*, 548–558.

Johnston, D., & Gabel, K. (1995). Incarcerated parents. In K. Gabel & D. Johnston (Eds.), *Children of incarcerated parents* (pp. 3–20). New York: Lexington Books.

Kazura, K. (2001). Family programming for incarcerated parents: A needs assessment among inmates. *Journal of Offender Rehabilitation, 32*, 67–83.

Kennon, S., Mackintosh, V., & Myers, B. (2009). Parenting education for incarcerated mothers. *Journal of Correctional Education, 60*, 10–30.

Lanier, C. (1993). Affective states of fathers in prison. *Justice Quarterly, 10*, 49–65.

Loper, A. B., Carlson, W., Levitt, L., & Scheffel, K. (2009). Parenting stress, alliance, child contact and adjustment of imprisoned mothers and fathers. *Journal of Offender Rehabilitation, 48*, 483–503.

Loper, A. B., Thompson, C., Tuerk, E., Daoust, S., Kramer, M. E., & Komarovskaya, I., et al. (2007). *Parenting from the inside: Making the mother-child connection inmate manual.* University of Virginia.

Loper, A. B., & Tuerk, E. (2006). Parenting programs for incarcerated parents: Current research and future directions. *Criminal Justice Policy Review, 17*, 407–427.

Mumola, C. J., & Karberg, J. C. (2006). *Drug use and dependence, state and federal prisoners*. Washington, DC: US Department of Justice Bureau of Justice Statistics.

Ortega, S., Beauchemin, A., & Kaniskan, R. (2008). Building resiliency in families with young children exposed to violence: The Safe Start Initiative pilot study. *Best Practices in Mental Health, 4*, 48–64.

Pollock, J. M. (2002). Parenting programs in women's prisons. *Women & Criminal Justice, 14*, 131–154.

Robbers, M. L. (2005). Focus on family and fatherhood: Lessons from Fairfax County's responsible fatherhood program for incarcerated dads. *Justice Policy Journal*, 2. Retrieved February 24, 2009 from http://www.cjcj.org/files/focus_on.pdf.

Rodgers-Farmer, A. Y. (1999). Parenting stress, depression, and parenting in grandmothers raising their grandchildren. *Children and Youth Services Review, 21*, 377–388.

Sanders, M. R., Cann, W., & Markie-Dadds, C. (2003). The triple P-positive parenting program: A universal population-level approach to the prevention of child abuse. *Child Abuse Review, 12*, 155–171.

Sandifer, J. L. (2008). Evaluating the efficacy of a parenting program for incarcerated mothers. *The Prison Journal, 8*, 423–445.

Skarupski, K. A., Bullock, C. J., Fitch, C., Johnson, A. L., Kelso, L. M., & Fox, E. R., et al. (2003). *Outcomes evaluation of the Long Distance Dads© program*. Penn State Erie: Center for Organization Research. Retrieved January 8, 2009 from http://nicic.org/Library/020833.

Tuerk, E., & Loper, A. B. (2006). Contact between incarcerated mothers and their children: Assessing parenting stress. *Journal of Offender Rehabilitation, 43*, 23–43.

Warren, J. I., Hurt, S., Loper, A. B., Bale, R., Friend, R., & Chauhan, P. (2002). Psychiatric symptoms, history of victimization, and violent behavior among incarcerated female felons: An American perspective. *International Journal of Law and Psychiatry, 25*, 129–149.

Webster-Stratton, C. (2001). The incredible years: Parents, teachers, and children training series. *Residential Treatment for Children & Youth, 18*, 31–45.

West, H. C., & Sabol, W. (2008). *Prisoners in 2007*. Washington, DC: US Department of Justice Bureau of Justice Statistics.