

Group Behavioral Parent Training in an Incarcerated Setting

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Abstract

In the correctional field, researchers have increasingly focused on interventions that will reduce recidivism rates, such as parent training programs. Due to inconsistent implementation, parent training in correctional settings have produced varying results; however, behavioral parent training programs (BPTs) have proven most effective. Despite their effectiveness, BPTs have predominantly been used with mothers, even though incarcerated men, and thus incarcerated fathers, are the majority in correctional settings. The current study examines the effectiveness of a Parent-Child Interaction Therapy-based BPT in a rural correctional setting population for both mothers and fathers, as compared to treatment as usual. Results showed that men's and women's experimental groups demonstrated better outcomes in knowledge of behavioral principles and treatment acceptability compared with control groups, and they also exhibited non-inferior outcomes in those same measures when comparing scores of the men's and women's experimental groups.

Keywords: Incarcerated Settings, Behavioral Parent Training, Mothers, Fathers

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Research has established the effect of incarceration on parents in the correctional system, as well as negative outcomes for parents and children post-incarceration (Comfort, 2016; Davis et al., 2013; Glaze & Maruschak, 2008; Hoffman et al., 2010; Houck & Loper, 2002; Kjellstrand & Eddy, 2011; Parke & Clarke-Steward, 2002; Pew Center on the States, 2011; Poehlmann, 2005; Woodward, 2003). Specifically, research suggests adverse effects to child development as a result of parental incarceration (i.e., poorer attachments, increased frequency of internalizing and externalizing behaviors, and more criminogenic behavior in adolescence and adulthood) (Glaze & Maruschak, 2008; Hoffman et al., 2010; Kjellstrand & Eddy, 2011; Parke & Clarke-Stewart, 2002; Poehlmann et al., 2010; Tuerk & Loper, 2006), which may increase the likelihood of a child's future incarceration. In response, researchers have investigated reducing negative outcomes for children through parent training. Studies have shown the best form of parental training for knowledge growth and changes in parent-child interaction are behavioral parent training programs (Beidas et al., 2014; Kaminski et al., 2008). This finding is replicated inside incarcerated settings as well (Scudder et al., 2014).

Behavioral Parent Training and PCIT

The U.S. prison system lacks standardized parental training programs, leading to programs with varying degrees of empirical basis, rigor, and success (Davis et al., 2013; Eddy et al., 2013; Hoffman et al., 2010; Loper & Tuerk, 2006; Scudder et al., 2014; Thompson & Harm, 2000; Tripodi et al., 2011). Parent-Child Interaction Therapy (PCIT) is an evidence-based behavioral parent training program that has been reviewed extensively and boasts medium-to-large treatment effect sizes across several settings for the treatment of many clinical disorders, such as attention deficit hyperactivity disorder and oppositional defiant disorder (Bagner et al.,

2004; Berkovits et al., 2010; Borrego et al., 1999; Chaffin et al., 2004; Eyberg et al., 2014; Hood & Eyberg, 2003; Kumpfer & Alvarado, 2003; Niec et al., 2005; Nixon, 2001; Timmer et al., 2005; Thomas & Zimmer-Gebreck, 2007). Modifications to PCIT have expanded to group modalities (Eyberg, 2005; Scudder et al., 2014), with results demonstrating significant improvements in child adaptive functioning and conduct, decreases in parenting stress, and increases in skills among parents (Niec et al., 2016). Additionally, Scudder et al. (2014) examined the adaptability of PCIT inside of a female correctional facility, which found similar decreases in parental stress, as well as child abuse potential in the experimental and control groups. The experimental group demonstrated higher attainment of parenting skill development and treatment satisfaction, while the control group showed better knowledge of child development (Scudder et al., 2014). Unfortunately, research with fathers occurs less frequently; studies have found fathers are less confident and interested in changes to increase parenting skills, see BPT as less important, and see fewer positive outcomes (Tiano & McNeil, 2005; Tiano et al., 2013).

Purpose of the Present Study

The current study expands upon Scudder et al. (2014) by measuring the effect of a PCIT-based manualized treatment among incarcerated mothers and fathers, while substituting new variables of knowledge of behavioral principles and parental attributions for behavioral coding and child abuse potential to reduce cost and personnel requirements from the first study. Hypotheses include: 1) the PCIT-based experimental group, Parent Enrichment Training (PET), will demonstrate significant differences in parental stress, knowledge of behavioral principles, and child negative behavior attribution following treatment when compared to pretreatment scores; 2) compared to the control groups, the PET men's and women's experimental groups will

demonstrate significantly better outcomes in knowledge of behavioral principles, child negative behavior attribution, and treatment acceptability, but not parental stress; and 3) in the PET groups, when compared to women, men will demonstrate inferior outcomes in parental stress levels, knowledge of behavioral principles, child negative behavior attribution, and treatment acceptability following treatment.

Method

Participants

Participants were incarcerated at a minimum-security correctional facility in a rural Midwestern town. The study included male and female participants with the following inclusion criteria: (1) age 18-years or older, (2) the parent of at least one child between infancy and age 8, (3) not already participating in the facility's parent training classes, (4) and no prior sexual offense convictions.

One hundred twenty-seven participants were administered pretest data. Of those, 96 participants completed pre- and post-test measures. Participant dropouts were primarily due to the discontinuation of one experimental group cycle because of the COVID-19 pandemic (18 of 31 drop out cases). With the exception of two voluntary cases, all other dropouts were due to unsuccessful discharges from the facility.

The experimental group had 54 participants over three cycles of male and female groups, with 27 participants in each group. The control group had 42 participants over three cycles of male and female groups, with 21 participants each (Figure 1). The average age of participants was 30.64 years old (SD= 6.513; Table 1). Participants who completed treatment reported their ethnicity as White (91.7%), bi-racial (5.2%), and American Indian or Alaskan Native, Black or African American, and Native American or Pacific Islander (1% each). Participants averaged

having 2-3 children (\bar{x} =2.53; SD =1.312). Participants' reported educational levels include 37.5% with some high school education, 29.2% completed high school, 28.1% with some college education, 2.1% completed an Associates degree, 2.1% completed their Bachelors degree, and one respondent did not provide this information. Participants stated that they were single (32.3%), in a relationship (33.3%), married (22.9%), widowed (1%), or divorced (10.4%).

Design

Participants completed pre-treatment measures prior to the first group session. Participants in the experimental and control groups self-selected or were randomly assigned, with the latter used when cycle recruitment included more than twelve willing participants. The study measures included the demographic information sheet, the Parent Stress Index-4th Edition, the Knowledge of Behavioral Principles as Applied to Children, and the Parent Attribution for Child Behavior Measure at pre-treatment. Participants were asked to answer questions based upon the child who displayed the most difficulty within the age range (1-8 years old). Post-treatment measures were the same, in addition to the Therapy Attitude Inventory and Qualitative Feedback Form. Pre- and post-test measures were assessed nine weeks apart.

PET Intervention

PET was based on the PCIT protocol (Eyberg & Funderburk, 2011). The nine weekly sessions were 90 minutes in length and the groups held a 12-participant maximum. Each intervention was followed by a supervised behavioral rehearsal and role-play session (see appendix B). An integrity checklist was completed for two randomized sessions per cycle by a research assistant to ensure treatment fidelity. The research assistant was not blind to the group assignment as they only completed fidelity checks for the PET intervention group.

Control Groups

The facility parenting classes, 24/7 Dad (Lewin-Bizan, 2015) and Partners in Parenting program (Knight et al., 2007), served as control groups. Both classes implement didactics and role plays to teach skills for child interactions and developmental knowledge. 24/7 Dad is an evidence-based program that consists of twelve 90-minute sessions led by an instructor within the facility. Partners in Parenting is an evidence-based program that aims to improve family functioning through the implementation of eight, one-hour sessions. Test batteries were administered to participants in the control groups approximately one week before classes began and within one week of completion.

Measures

Demographic Information sheet.

A questionnaire was designed to acquire participant demographic information, based on literature demonstrating significant differences in results based on certain demographic and contact factors (Tuerk & Loper, 2006).

Parent Stress Index- Fourth Edition-Competence Subscale (PSI-4).

The PSI-4 assesses parental stress across several settings, including incarcerated settings (Abidin, 1995; Landreth & Lobaugh, 1998). With 120-item Likert scale with 15 domains categorizing children- or parent-based stressors, research shows the PSI-4 to be one of the only parental assessments to be normed (Črnčec et al., 2010). Scores of the PSI-4 remain stable over time with correlation coefficients holding at .91 across a 1–3-month interval and .7 after one year (Hamilton, 1980). The “Competence” scale was selected for data analyses as a measure of parental competence.

Knowledge of Behavioral Principles as Applied to Children-Short Form (KBPAC-SF).

The KBPAC has shown satisfactory psychometric validity and internal consistency of parental knowledge of child behavior (O'Dell et al., 1979; Sturmey et al., 1987). This 25-item multiple choice short form, based on the original 50-item test, also demonstrated internal consistency (Cronbach's $\alpha=.42-.84$) upon revisions. The assessment measures examinee knowledge of behavioral principles (i.e., reinforcement and punishment) when responding to children.

Parent Attribution for Child Behavior Measure (PACBM).

The PACBM evaluates parent's attribution of children's behavior (Pidgeon & Sanders, 2002). The measure includes six situations with four Likert scale items ranging from 1 (disagree strongly) to 6 (agree strongly). The measure has shown adequate psychometric properties (Pidgeon, 2006).

Therapy Attitudes Inventory (TAI).

The TAI (Eyberg & Johnson, 1974) is a 10-item self-report measure using a five-point Likert scale to assess therapy satisfaction following training. Higher scores indicate higher levels of treatment satisfaction. The TAI demonstrates internal consistency (Cronbach's $\alpha=.91$) and test-retest reliability ($r=.85$; Brestan et al., 1999). As the TAI was originally devised for traditional BPT programs, questions three and five through seven were removed; however, internal consistency and the reliability are not affected. Ratings for each category are summed providing an overall score for post-test comparisons between control and experimental groups.

Qualitative Feedback Form (QFF).

The QFF was developed to gather qualitative feedback from participants. The three items asked participants to 1) identify the most helpful parts of the course, 2) areas to change for improvements, and 3) provide any additional comments.

Results

Data Analysis

Preliminary analyses were conducted to ensure that there were no violations in homogeneity of variance, normalized distributions, multicollinearity, linearity, univariate and multivariate outliers for the data. The initial 2x2 MANOVA demonstrated no significant differences between the pretest measures of treatment completers and non-treatment completers.

A 2x2x2 mixed MANOVA analysis was performed to determine the influence of the independent variables of treatment group (experimental group vs. control group) and participant sex (male vs. female), as well as one within-subjects factor of time (pre-treatment vs. post-treatment) on parental aptitude (i.e., child behavior knowledge [KBPAC], child behavior attribution [PACBM], and parental competence [PSI-4]). Preliminary analyses showed one violation on the assumption of normality for the pre-test KBPAC measure in both sex and type of treatment group. This finding is not unexpected based upon the population and the average skew of the KBPAC measure. To be conservative, Pillai's Trace was utilized instead of Wilk's Lambda for the test of discriminant functioning. All other preliminary analyses ensured no other parametric assumption violations. There was a statistically significant difference between the type of treatment group, $F(3, 86) = 41.424, p < 0.05$, Pillai's Trace = 0.01, partial eta squared = .325 (large effect size), on child behavior knowledge. An inspection of the mean scores shows that the experimental groups scored significantly higher on the post-test child behavior knowledge scores ($M = 39.096, SD = 1.394$) when compared with post-test scores of the control groups ($M = 24.969, SD = 1.614$). The analysis showed significant differences in post-test scores based on the variable of sex, with females scoring higher than males.

A 2x2 ANOVA analysis examined the influence of treatment group (experimental group vs. control group) and participant sex (male vs. female) on treatment acceptability ratings at the post-treatment phase of the study. Values on measure items were summed for an overall score. Preliminary analyses verified no violations of parametric assumptions and Levene's Test of Equality of Error Variance was not significant. There was no interaction effect for sex and group on therapy attitude scores; however, each independent variable had a main effect. There was a statistically significant main effect for sex, $F(1, 96), p < 0.05$, partial eta squared = .074 (medium effect size). Comparisons of female and male mean scores show that females ($M = 26.25, SD = 2.914$), regardless of group, demonstrated higher treatment acceptance than males ($M = 24.73, SD = 4.062$). Additionally, there was a significant main effect for treatment group type on TAI scores, $F(1, 96), p < 0.05$, partial eta squared = .296 (large effect size). Comparisons of experimental and control groups show experimental groups ($M = 27.15, SD = 2.645$) demonstrated higher treatment acceptance than control groups ($M = 23.36, SD = 3.560$). Means and standard deviations of scores on all pre- and post-test measures are reported in Table 2.

Conclusion

Discussion

The BPTd experimental group, PET, demonstrated statistically significant differences in knowledge of behavioral principles when compared with controls, even when for research-based confounding variables. Treatment acceptability after intervention was higher when comparing the experimental and control groups data. Compared to the control groups, the PET experimental groups demonstrated better outcomes in knowledge of behavioral principles and treatment acceptability. However, against study hypotheses, there were no reported differences in parental stress and child negative behavior attribution. Men in both experimental and control

groups reported slightly lower treatment acceptability when compared with women; however, while the men's control groups showed no differences in measures when compared to women's control groups, men's experimental groups displayed equivalent improvements in knowledge of child behavior as the women's experimental groups.

Regarding equivalent increases in women's and men's understandings of basic behavioral principles from pre-treatment to post-treatment, it was observed that PET group participants received low scores on the measures and achieved moderate scores during post-treatment assessment. Absence of improvement in competence and attribution may be due to the lack of the parents' skill implementation with their children because of limited contact during incarceration. Research shows that parents who practice their skills at home with their children after participating in BPT report lower levels of parental stress and a reduction of parental perception of child behavior problems (Ros et al., 2016).

There were significant differences in satisfaction ratings between experimental and control groups. Parents that completed PET reported greater satisfaction, higher attainment of parenting skills, and more confidence in parenting skills when compared to the facility's existing parenting classes. Females in PET and the facility's existing course reported a higher course satisfaction compared to males in the same courses. Females in both conditions also reported gaining more parenting skills and higher perceived competence. Despite sex-based difference in perception on outcomes, the data suggests that both males and females retained equal knowledge of behavioral principles, making this study among the first to show the effectiveness of BPTs between male and female parents. While there were no significant score changes on the PSI-4 competence scale within experimental groups, self-report findings demonstrated parent confidence in new skills.

The outcomes of this study are similar to those of Scudder et al. (2014) in that BPT classes improved parenting skills of incarcerated mothers, but it also demonstrates that BPT classes are equally effective in improving parenting skills of fathers. These findings were unexpected as fathers in previous research reported fewer positive outcomes after BPT. Despite having similar designs, PET may be more easily implemented. While Scudder used behavioral observation data, it also required assistants to be trained to code behaviors and attend throughout sessions. The course design and measures administered in PET may be more practical for facility daily use.

Limitations and Further Directions

There are inherent limitations with quasi-experimental designs because of the increased opportunity for confounding variables. For example, it is possible participants across conditions differed in their motivation for treatment. There is also variability within the control groups, as different parent training programs were used to facilitate male and female classes. There are several significant differences between the control groups and experimental groups, including the duration, class frequency, formal instruction, and training level among the instructors.

Due to a two-year data collection, there is an increased likelihood of confounding variables, especially when considering that data collection began before and ended during the COVID-19 pandemic. Another limitation of the experimental groups is that the men's and women's skill attainment is based on self-report. Within manualized PCIT treatment, the behavioral coding system is an objective measure of parental skill attainment and progress through treatment. PET would also benefit from obtaining objective data related to skill attainment through a manualized coding system.

Additionally, this study's participants were incarcerated at a largely homogenous minimum-security correctional facility. Without further research, effect sizes cannot be generalized to higher security correctional settings and longer prison sentences. A final limitation is the lack of racial and ethnic diversity among participants. Although participant demographics are consistent with the rural Midwest, it is not representative of the incarcerated population as a whole.

Future research is needed to determine whether parental skills and understanding of behavioral principles can be maintained over time when parents reenter the community and whether increased parental skills and parent-child interaction have an effect on recidivism rates. Considerations could include whether parent training could be implemented within the final years of an individual's prison sentence, thereby increasing the likelihood of skill retention.

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Appendix A

Table 1

Demographic Characteristics of Participants

Characteristic	Mothers				Fathers				Full sample	
	PET		TAU		PET		TAU		Overall	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Race										
White	24	89	20	95	25	93	19	90	88	92
Black or African American	0	0	0	0	1	4	0	0	1	1
American Indian or Alaska Native	0	0	0	0	1	4	0	0	1	1
Native American or Pacific Islander	0	0	0	0	0	0	1	5	1	1
Bi-racial	3	11	1	5	0	0	1	5	5	5
Marital Status										

Single	8	30	8	38	9	33	6	29	31	32
In a relationship	11	41	5	24	10	37	6	29	32	33
Married	6	22	4	19	7	26	5	24	22	23
Widowed	1	4	0	0	0	0	0	0	1	1
Divorced	1	4	4	19	1	4	4	19	10	10
Education Level										
Some High School	8	30	4	19	15	56	9	43	36	38
High School	7	26	10	48	4	15	7	33	28	29
Some College	11	41	4	19	8	30	4	19	27	28
Associate degree	0	0	2	10	0	0	0	0	2	2
Bachelor's Degree	1	4	0	0	0	0	1	5	2	2

Number of Children

KBPAC-SF ^c	30.67 (12.99)	45.93(14.78)	27.4 (7.49)	30.05 (13.10)	29.19 (10.43)	47.41 (17.07)	22.10 (10.48)	24.57 (10.38)
PACBM ^d	61.19 (13.92)	61.70 (12.87)	59.00 (13.11)	56.40 (13.90)	59.41 (14.72)	63.41 (13.92)	55.14 (12.48)	59.95 (12.77)
PSI-4-Competence ^e	49.89 (7.83)	48.00 (7.24)	49.95 (7.59)	46.15 (8.58)	49.70 (7.45)	50.15 (7.80)	49.95 (7.59)	51.29 (9.12)
TAI ^f	-	27.44 (1.97)	-	24.71 (3.24)	-	26.85 (3.12)	-	22.00 (3.41)

Note. ^aPET = Parent Enrichment Training, ^bTAU = Treatment as usual, ^cKBPAC-SF = Knowledge of Behavioral Principles as Applied to Children-Short Form, ^dPACBM = Parent Attribution for Child Behavior Measure, ^ePSI-4-Competence = Parent Stress Index- Fourth Edition-Competence Subscale, ^fTAI = Therapy Attitudes Inventory

Figure 1

Distribution of participants

Appendix B

Intervention Phase

Session 1

The objectives of the first session include the administration of the assessments, the establishment of group rapport, the orientation of participants to the intervention structure, and an explanation of curriculum course and content.

Session 2

The objectives of the second session include the establishment of group rapport, and an extensive, yet interactive, didactic of the child-directed interactions as outlined in PET curriculum. Specifically, this includes a discussion of child behavior analysis, where participants learn how to interpret child behavior and then respond to it. It also teaches participants about how to be strategic about what they give attention to regarding child behavior and what behavior are best ignored. The session also discusses some adult behaviors to avoid when interacting with children during times of play.

Session 3

The third session continues with the same objectives as the previous session: establishing rapport, teaching the child-directed interaction skills while providing examples and rationale for each component. It also gives them time to begin practicing these skills. It begins with a review of previous content. It then provides instructions on PRIDE skills. These skills help the parent learn how to respond with children in a productive way that develops trust. The session also discusses the play therapy environment.

Session 4

The fourth session is devoted to practicing the skills learned in the previous sessions. The facilitator models special play time with a volunteer before asking for the participants to break into groups of two to practice these skills together. The facilitator will move about the room providing feedback and encouragement to the group members. After this, the group discusses their experiences with practice. Finally, a review concludes the session.

Session 5

The fifth session is the second of two sessions devoted to practicing the child-directed skills learned in the previous sessions. The facilitator models special play time with a volunteer before asking for the participants to break into groups of two to practice these skills together. The facilitator will move about the room providing feedback and encouragement to the group members. After this, the group will discuss their experiences with practice. Finally, a review concludes the session.

Session 6

The sixth session is a didactic on parent-directed interactions as outlined in the PET curriculum. These skills include commands, effective and safe repercussions to disobedience, time-out, and other safe discipline alternatives to time-out. Finally, a review of the didactic is completed at the end of the section.

Session 7

The seventh session is devoted to practicing the skills learned in the parent-directed didactic session. The facilitator will model commands and time-out procedures with a volunteer before asking for the participants to break into groups of two to practice these skills together. The members are not permitted to touch each other during skill practices and are given a procedure to symbolically mimic the procedure. The facilitator moves about the room providing feedback and

encouragement to the group members. After this, the group discusses their experiences with the practice. Finally, a review concludes the session.

Session 8

The eighth session is devoted to practicing the skills learned in the child-directed and parent-directed didactic sessions. The facilitator models integrated child-directed and parent-directed procedures with a volunteer then asks for the participants to break into groups of two to practice these skills together. The members are not permitted to touch each other during skill practices and are given a procedure to symbolically mimic the procedure. The facilitator moves about the room providing feedback and encouragement to the group members. After this, the group will discuss their experiences with practice. Finally, a review concludes the session and the intervention component of the study.

Session 9

The final session focuses on when members should seek more professional assistance with their parenting skills. It also reviews the concepts and skills from the training. Finally, the same assessments as those administered at the pre-treatment meeting are given to the group member, in addition to the TAI and QFF at post-treatment.