



The Use of Positive Incentives In Parent-Child Interaction Therapy (PCIT) The Toy Study

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ABSTRACT

- This study set to investigate whether incentivizing Parent-Child Interaction Therapy participation was associated with better treatment participation and outcomes.
- A total of 36 mother-child dyads participated in PCIT for treatment of their children's disruptive behavior problems. Families were randomly assigned to receive a toy prize either at the start of treatment (CDI) or at mid-treatment (PDI).
- Results showed that dyads receiving a toy incentive at the start of CDI required about the same number of sessions to reach CDI mastery as dyads receiving a toy incentive at the start of PDI. The two groups also had similar rates of attrition and homework completion. However, dyads that received a toy incentive in CDI reported a greater decrease on an ECBI problem behaviors score from pre-treatment to mid-treatment.
- Findings suggest that providing a toy at the beginning of PCIT may help increase family engagement in the treatment process.

INTRODUCTION

- Despite the widespread use of incentives with high-risk clinical populations, the subject of incentivizing mental health treatment is not well-researched. The few existing studies show mixed results (Hayes et al., 2000).
- Positive incentives are used to (1) address barriers to treatment (e.g. bus passes, gas vouchers, etc.), including increasing client engagement (e.g., Pollastri et al., 2005), and (2) reinforce behavior (e.g. reward with gift cards, small prizes, etc.; Bride & Humble, 2008). PCIT is an evidence-based therapeutic treatment based on theories of attachment, social learning, and behavior modification (McNeil, 2010). PCIT aims to decrease problematic behaviors in children and improve parent-child relationship.
- Of the two studies testing the use of incentives on PCIT participation, one used negative reinforcement (Eyberg & Johnson, 1974) such as withdrawal of client support or treatment sessions following treatment non-compliance and found it effective. Another study used positive incentives in PCIT, where being on time to treatment and homework completion were awarded with mystery prize bags, aiming to engage caregivers in treatment. This study found no differences between treatment participation in clients who received incentives and clients who did not (Quetsch, 2018).

PURPOSE

- The current study attempted to use positive incentives to engage both children and adults in PCIT treatment, evaluating the effects of providing \$5-\$8 toy incentive either at the start of CDI or PDI to engage the child and caregiver in PCIT treatment.

HYPOTHESES

To examine treatment adherence with incentives, we had the following hypothesis and research questions:

- Hypothesis 1:** Participants receiving a toy at the start of CDI will be more likely to stay in treatment to MID treatment than those receiving toys at the start of PDI.
- Hypothesis 2:** Participants receiving a toy at the start of CDI will show a higher proportion of daily homework assignments completed per week (e.g. a daily 5-minute play with the child) than participants receiving a toy at the start of PDI
- Research Question:** We were curious to see if participants receiving a toy at the start of CDI or at PDI would show any differences in their outcome measures, specifically examining their behavioral measures (e.g., ECBI scores).

METHOD

Study Design

- The current study used a randomized control trial (RCT) study design in assigning receipt of toys at the start of CDI vs. PDI. Participants were all families with children referred for behavioral problems and received standard in-clinic PCIT treatment to address these issues.

Procedure

- Once assigned, at the CDI didactic session all participant caregivers were told a script outlining the importance of doing daily care homework every day with their child and were told about the toy study.
- Children in the CDI condition were allowed to choose a toy at the first CDI coaching session. Children in the PDI condition were allowed to choose a toy at the first PDI coaching session.

Measures

- Demographic information was obtained by using a questionnaire (Family Life Questionnaire) and through review of clinical case files.
- The information about the status in treatment, number of CDI sessions, and number of homework assignments completed were gathered during standard administration of PCIT.
- The information on children's behavior was collected from the ECBI (Eyberg & Robinson, 1983) intensity and problem scales.

Participants

- Parents and children consented to participate in research and began treatment between February of 2017 and April of 2018.
- Participants were 36 mother-child dyads with children ranging between 2.6 and 8.9 years old ($M=5.42$), 52.8% male, and predominantly Caucasian (46.7%).
- Most children were in treatment with their biological (71.1%) or adoptive (10.5%) mothers. Other caregivers included biological or adoptive fathers, grandmothers, and an aunt.
- Almost one third of the sample (30.6%) were still in treatment at the time of the study, slightly over one third (38.9%) completed treatment, and just under one third (30.6%) dropped out of treatment.

METHOD Cont.

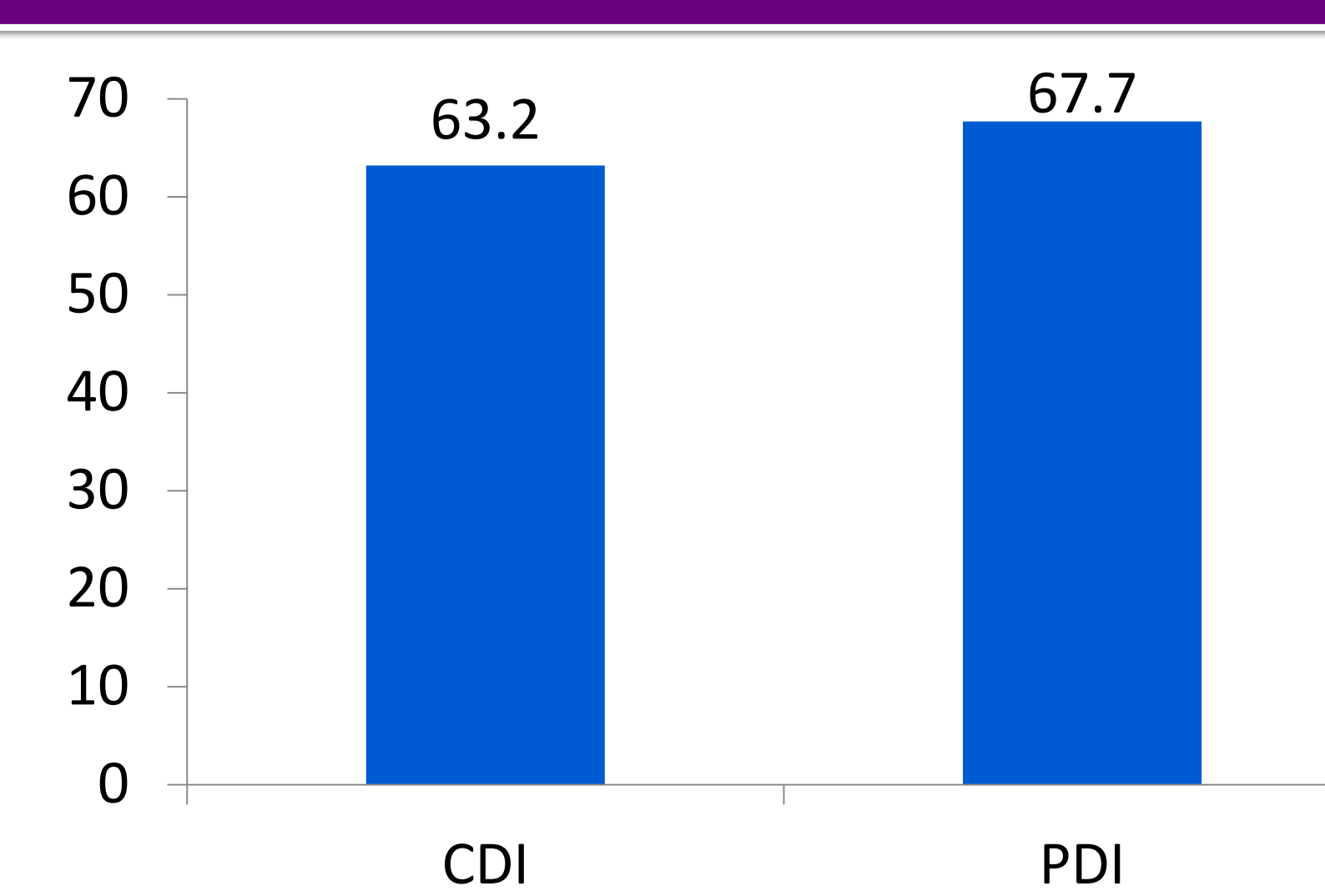
Table 1. Participant Demographics

	CDI (N = 21)	PDI (N = 15)
	M (SD)	M (SD)
CAREGIVER		
Age	37.81 (10.28)	36.13 (9.14)
Income	5.56 (3.58)	3.13 (2.90)**
Education (years)	13.5 (2.28)	12.25 (2.69)
CHILD		
Age	5.58 (1.39)	5.21 (1.25)
CAREGIVER		
Relationship (Bio Parent)	76 %	87 %
Ethnicity (%)		
Caucasian	60.0	29.4
African-American	10.0	6.3
Latino	25.0	56.3
Other	5.0	6.3
Married (yes)	50.0	50.0
CHILD		
Ethnicity (%)		
Caucasian	58.8	30.8
African-American	17.6	7.7
Latino	17.6	61.5
Other	5.9	0.0
Gender (male)	47.4	52.6

- The group that received a toy incentive in CDI had a higher mean income (with yearly incomes of \$25,000-\$30,000 a year) than the group that received a toy incentive in PDI (with median yearly income of \$15,000-\$20,000 a year) $F(1, 30) = 4.49, p=.043$.
- There were no other differences between the groups.

RESULTS

Graph 1. Treatment Retention from Pre to Mid Assessment



Overall, there were no significant differences in treatment retention from Pre assessment to Mid assessment between the CDI incentive group and the PDI incentive group, ($\chi^2=.04, df=1, p=.04$).

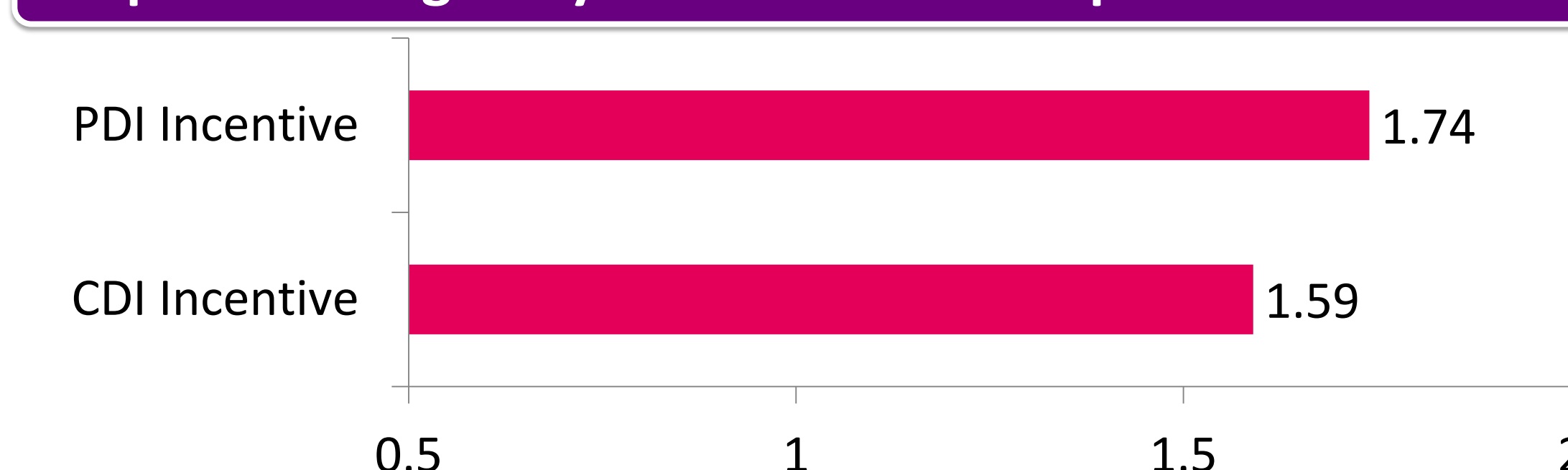
Table 2. Number of CDI Sessions to get to MID treatment

CDI Incentive	PDI Incentive
8.5 sessions	9.2 sessions

On average for those who completed CDI, it took the CDI incentive group a little over 8 sessions to reach MID and the PDI incentive group a little over 9 sessions to reach MID. There were no significant differences between the two groups, ($n = 21, z = -.45, p = .69, 2$ -tailed).

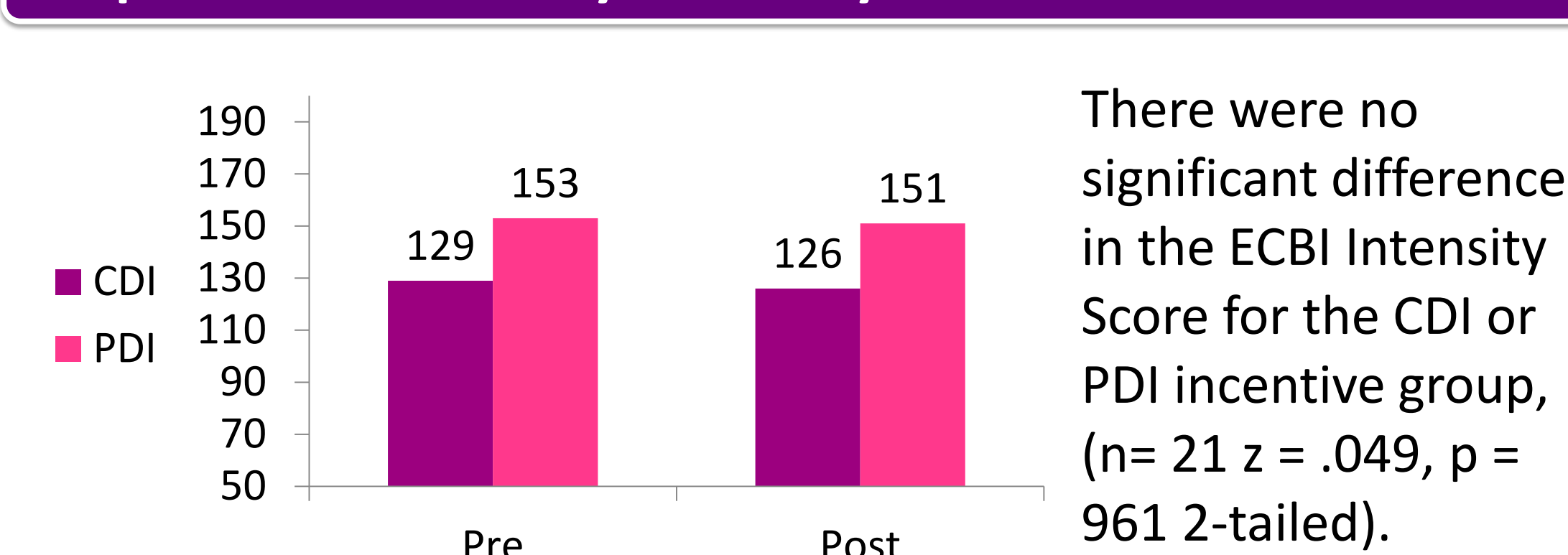
DISCUSSION

Graph 3. Average Days Homework done per week



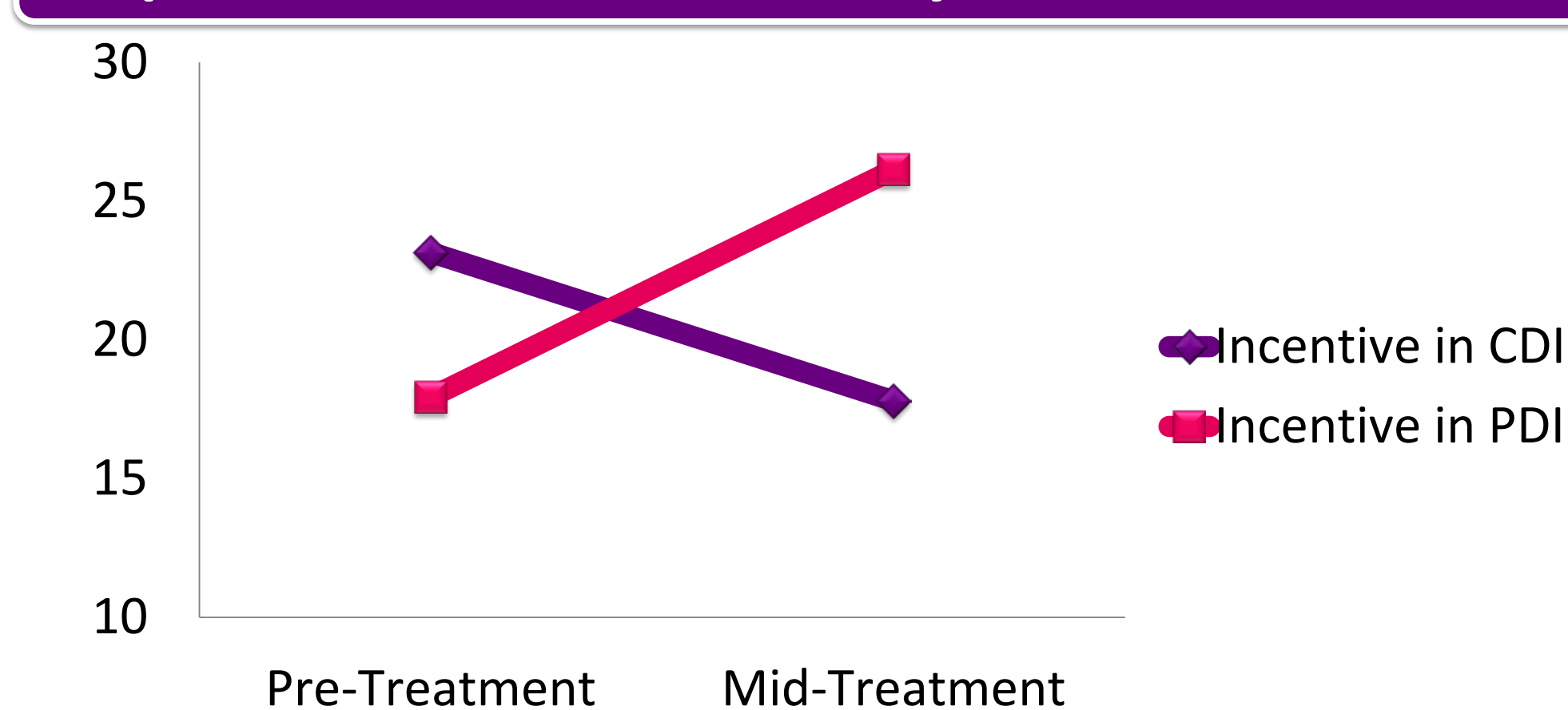
On average, the rate at which homework was completed by the CDI and PDI incentive groups was less than 2 days per week. There were no significant differences between the two groups, ($n = 21, z = -.448, p = .689, 2$ -tailed).

Graph 4. ECBI Intensity Scores by Time in Treatment



There were no significant differences in the ECBI Intensity Score for the CDI or PDI incentive group, ($n=21, z = .049, p = .961, 2$ -tailed).

Graph 5. ECBI Problem Score by Time in Treatment



- There was a greater reduction of ECBI Problem scores between the pre-treatment and the mid-treatment in the CDI incentive group than in the PDI incentive group, ($n = 12, z = -2.017, p = .043, 2$ -tailed).

DISCUSSION and LIMITATIONS

- The study aimed to contribute to a better understanding of the role of positive incentives in therapeutic progress. Initial analyses showed no differences between children who received a toy at the start of treatment and those who did not. The two groups were equally likely, statistically speaking, to stay in treatment, took similar numbers of sessions to reach mid-treatment, and completed homework at similar rates.
- While the major strength of this study is its RCT design, one notable limitation is the small sample size, which undermines power and makes reliable interpretation or generalization of the results impossible.
- Nonetheless, the study contributes to the limited research on the use of incentives in clinical settings, although the preliminary results are equivocal. It highlights the importance of treating children as active agents in receiving PCIT with their parents and establishing evidence-based engagement practices that would focus on both members of a dyad in treatment.
- Overall, however more research is needed to establish whether positive incentives in PCIT offered either at the beginning or mid-treatment to improve adherence to treatment.