

Evaluation of the Program for Infant /Toddler Care (PITC): An On-Site Training of Caregivers

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PITC Development and Design

- Training and support for caregivers in both child care centers and family child care homes who work with children under the age of 3
- Developed by WestEd in 1985
- 30 states
- PITC philosophy emphasizes relationship-based care

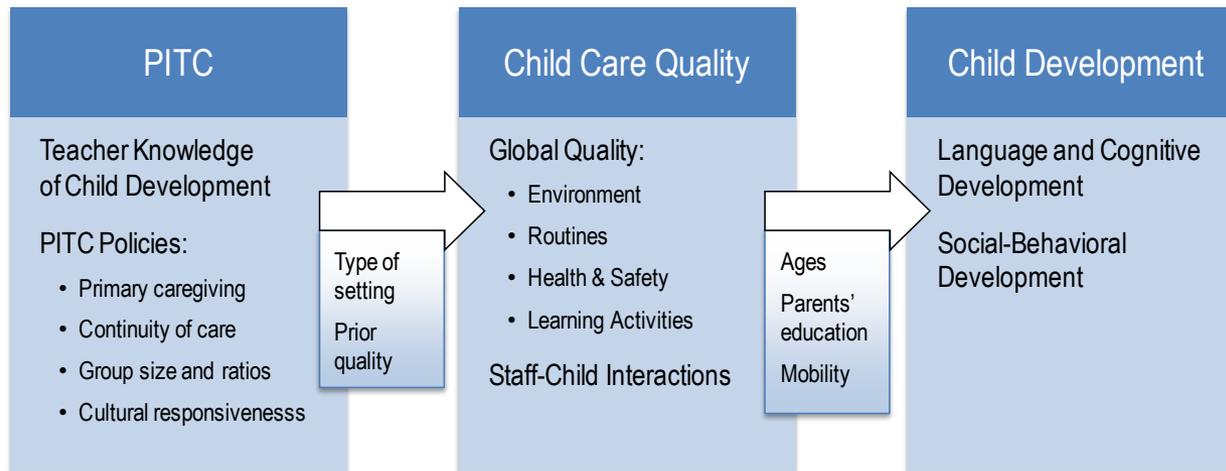
PITC Program Delivery Model

- Intervention includes 4 curriculum modules delivered over 10-14 months
- Training and coaching provided on-site at centers
- Training provided to small groups of family child care providers (4 to 10 programs) at a common location; coaching delivered on-site at each program
- Full intervention includes delivery of 64 hours of training and 40 hours of coaching for centers, 20 for fccs

PITC curriculum and core policies

- Participants are trained in child development and in caregiving practices that emphasize primary caregiving,
- continuity of care, small groups, and cultural responsiveness.

Conceptual Model for PITC Study



Conceptual model assumptions

- Caregivers complete the full PITC program
- Children are exposed to fully trained caregivers

Confirmatory Hypotheses

- PITC increases children's cognitive and language skills (at about 6 months after completion of the PITC intervention.)
- PITC increases children's social and behavioral skills (at about 6 months after completion of the intervention.)
- PITC increases global child care quality (about 4 months after completion of the intervention.)
- PITC increases quality of child care staff-child interactions (about 4 months after completion of the intervention.)

PITC Study Design Overview

- Cluster-based random assignment study
- Unit of RA is child care program
- 251 child care programs –92 child care centers and 159 family child care homes
- 936 children nested in child care programs
- Program quality measured at baseline (pre-RA) and at 2 follow-up points
- Child assessments at 2 follow-up points (timing informed by the conceptual model)
- Study recruitment began in 2007; data collection completed in 2010

Child measures: primary

Follow-Up 2: Age Range: 25-53 Months

Domain	Instrument
Language/Cognitive Composite	
<i>Language</i>	Preschool Language Scale-4
<i>Cognitive</i>	Bracken School Readiness Assessment (BSRA)
Behavior/Socio-Emotional Composite	
	Child Behavior Checklist/1 ½ -5 (CBCL/1 1/2=-5)
	Polit Positive Behavior Scale

Program outcomes (secondary)

Domain	Instrument
Global Child care Quality	
Total Quality Score	ITERS/FCCERS global measure
Quality of Interactions Composite	
Helping Children Understand Language	Infant-Toddler/Family Child Care Environmental Rating Scale (ITERS/FCCERS)
Helping Children Use Language	Infant-Toddler/Family Child Care Environmental Rating Scale (ITERS/FCCERS)
Supervision	Infant-Toddler/Family Child Care Environmental Rating Scale (ITERS/FCCERS)
Discipline	Infant-Toddler/Family Child Care Environmental Rating Scale (ITERS/FCCERS)
Responsiveness and Sensitivity	Program Assessment Rating Scale (PITC-PARS)
Positive Tone and Attentiveness	Program Assessment Rating Scale (PITC-PARS)
Responsive Engagement	Program Assessment Rating Scale (PITC-PARS)
Peer Interactions	National Association for Family Child Care Standards— Peer Interaction Items

Recruitment and Random Assignment

- Sample was recruited in 6 counties of Southern California and 5 counties of Arizona
- Child care centers, English-speaking family child care programs, and Spanish-speaking family child care programs were recruited separately to meet sample targets
- Enrollment, baseline data collection, and RA were conducted on a rolling basis

Group assignment and equivalence

- 124 child care programs were assigned to the treatment group and 127 to the control group
- 480 children were nested in treatment programs and 456 in control programs
- Baseline equivalence analysis found no significant differences between treatment and control programs or children

Response rates

Outcome measure	Overall	
	Number	Percent
Total Number of Children Enrolled in Study	936	100
<i>Completed Child Assessment Follow-Up 1</i>	791	84
<i>Completed Child Assessment Follow-Up 2</i>	800	85
Total Number of Centers Enrolled in Study	92	100
<i>Completed Child Care Program Observations Follow-Up 1: Centers</i>	85	92
<i>Completed Child Care Program Observations Follow-Up 2: Centers</i>	82	89
Total Number of Family Child Care Programs Enrolled in Study	159	100
<i>Completed Child Care Program Observations Follow-Up 1: Family Child Care</i>	109	69
<i>Completed Child Care Program Observations Follow-Up 2: Family Child Care</i>	90	57

Study attrition analysis

- Attrition analysis was conducted by comparing treatment and control programs and children on demographic and other baseline characteristics at both follow-up points.
- Of the final retained samples, there were no statistically significant differences between treatment and control groups.

Implementation

- 107 of 124 treatment programs completed the full PITC treatment
- 11 programs (3 centers, 8 family child care programs) declined any treatment after random assignment
- 6 programs dropped out in mid-course
- 41% of staff (directors, teachers, caregivers in both centers and fccs) in study received “professional growth incentives” (cash, credit or resource awards) for full completion of the entire PITC program.
- 49.5% of children stayed in programs long enough to receive full treatment; 17% of children received no exposure.

Treatment children's exposure to PITC

Months Between PITC Start Date and Date of Final Interview or Date Child Left Program, If Earlier*	Treatment Sample at Final Child/Parent Interview	
Months	N	%
0*	73	17.0%
1--3	14	3.3%
4--6	20	4.7%
7--9	14	3.3%
10--12	20	4.7%
13-15	28	6.5%
16-18	43	10.0%
19-21	167	38.9%
22+	42	9.8%
Missing	8	1.9%
Total	429	100.0%

*30 children had no exposure because their programs declined treatment and never participated in PITC. 43 children had no exposure because they left their original child care programs before the start date of PITC training.

Source: Parent 22-month interview on child care changes; PITC staff-provided treatment dates.

Impact Analysis Model: Child Outcomes

- Child Outcome Measures: Language and Cognitive Development (Composite), Problem Behavior (Composite)
- Two-Level Hierarchical Model
 - First Level: Child
 - Second Level: Program
- Model includes child- and program-level covariates

Impact Analysis Model: Program Outcomes

- Program Quality Outcome Measures: Global Quality Measure, Staff-Child Interactions Composite
- Single-Level Linear Regression Model
- Model includes program-level covariates

Sensitivity Analyses

- Test sensitivity of program impacts to exclusion of PARS measure in interaction composite.
- Test sensitivity of impacts to models with fewer covariates.
- Test sensitivity of impacts to missing data imputation methods (listwise deletion, dummy variable and multiple imputation).
- Tested impacts using no-show adjustments.

Impact Analysis Results: Child Outcomes (Follow-Up 2)

Child outcome	Adjusted means		Difference (standard error)	Adjusted <i>p</i> -value	Effect size	Treat- ment sample size	Control sample size
	Treat- ment	Control					
<i>Language and cognitive development</i>							
Language and cognitive development (composite of PLS-4 and BSRA)	-0.184 (0.729)	-0.116 (0.816)	-0.068 (0.058)	.241	-0.083	402	394
<i>Positive behavior</i>							
Positive behavior (composite of Polit Positive Behavior Scale and CBCL 1½-5)	-0.050 (0.899)	0.070 (0.751)	-0.121 (0.062)	.106	-0.161	425	408

Impact Analysis Results: Child Care Quality (Follow-Up 2)

Program outcome	Adjusted means		Differnc (standar d error)	Adjusted <i>p</i> -value	Effect size	Treat- ment sample size	Control sample size
	Treat- ment	Control					
Global quality (ITERS-R/FCCERS- R)	3.351 0.993	3.198 0.914	0.154 (0.134)	-.254	0.169	82	90
Staff-child interactions composite w/ interaction items from ITERS- R/FCCERS-R and PITC-PARS	0.034 0.693	-0.129 0.692	0.163 (0.102)	.220	0.236	82	90

Findings of confirmatory impact analysis

- The PITC did not have a statistically significant effect on the composite measure of children's cognitive/language, nor on the composite measure of behavior scores, 6 mos after treatment.
- The PITC did not have a statistically significant effect on global program quality, nor on the composite measure of staff-child interactions.

Findings of Exploratory Analysis

- No impacts on children or programs at first follow-up.
- No impacts were found on the program subgroups.
- Potential negative effects were found on children's behavior for children older than 18 months, for children in centers, and for children of parents with more education.
- PITC impacts did not differ between children with longer (16 months or more) and shorter (less than 16 months) durations in their original child care settings.
- Children who left the programs before the end of the study were different demographically than those who stayed.

Implications/Questions

- Would the PITC have impact in a more condensed format, or with more intensive on-site coaching?
- Are there more sensitive measures of staff-child language interactions that should be used in future impact studies of the PITC?
- Larger samples for important subgroups would have greater power to detect effects.
- Non-experimental analyses of outcomes variation by dosage could inform the discussion.

Full report can be accessed at:

- <http://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=90>