

Last reviewed: January 2021

Intervention website: <https://www-parentsasfirstteachers.org/>

GUIDEBOOK INTERVENTION INFORMATION SHEET

Parents as First Teachers

Please note that in the ‘Intervention Summary’ table below ‘child age’, ‘level of need’, and ‘race and ethnicities’ information is **as evaluated in studies**. Information in other fields describes the intervention as **offered/supported by the intervention provider**.

Intervention summary	
Description	Parents as First Teachers (PAFT) is a home visiting intervention for disadvantaged families with a child aged 3 and younger. It is delivered by practitioners to individual families in their home on a weekly, fortnightly, or monthly basis depending on the family’s level of need. The intervention typically begins during the child’s first year and then continues until the child’s third birthday. During the visits, parents learn strategies for supporting their child’s early development and school readiness.
Evidence rating	3+
Cost rating	4
Child outcomes	<ul style="list-style-type: none">• Supporting children's mental health and wellbeing<ul style="list-style-type: none">- Improved emotional wellbeing.• Preventing child maltreatment<ul style="list-style-type: none">- Reduced child maltreatment.• Enhancing school achievement and employment<ul style="list-style-type: none">- Improved speech, language and communication- Improved mastery motivation.• Preventing crime, violence and antisocial behaviour<ul style="list-style-type: none">- Improved behaviour- Reduced hyperactivity.• Preventing obesity and promoting healthy physical development<ul style="list-style-type: none">- Improved child self-help skills (including sleep)- Improved developmental milestones.

Foundations Guidebook – Intervention information sheet

Visit the Foundations Guidebook | www.foundations.org.uk/guidebook

Intervention summary	
Child age (population characteristic)	0 to 3 years old
Level of need (population characteristic)	Targeted Selected
Race and ethnicities (population characteristic)	<ul style="list-style-type: none">• African American• White.
Type (model characteristic)	Home visiting
Setting (model characteristic)	<ul style="list-style-type: none">• Home• Early years setting• Community centre.
Workforce (model characteristic)	Home visiting practitioners
UK available?	Yes
UK tested?	No

Model description

Parents as First Teachers (PAFT – also referred to as Parents as Teachers) is a home visiting intervention for disadvantaged families with a child between 0 and 3 years old.

PAFT is delivered by a practitioner who visits the parent and child in their home on a weekly, fortnightly or monthly basis, depending upon the family's needs. PAFT typically begins during the child's first year and then continues until the child's third birthday. Home visits are often augmented by group sessions involving other families enrolled in the intervention, as well as support for parents in networking and signposting to other services.

Foundations Guidebook – Intervention information sheet

Visit the Foundations Guidebook | www-foundations.org.uk/guidebook

During the initial home visits, practitioners form a partnership with the parent to support them in their role as their child's first teacher. During subsequent sessions, practitioners share age-appropriate information about the child's development and are encouraged to recognise their child's developmental milestones. The practitioner also carries out a general health and development screening at least annually.

Practitioners also facilitate parent–child interaction through age-appropriate talk, play and reading activities. Additionally, practitioners work with parents to develop strategies to address developmental and behavioural concerns, as well as concerns about family wellbeing. An ultimate intervention aim is to develop family resilience and promote positive parenting behaviours which will persist after the family's engagement with the intervention has ended, along with improving the home learning environment.

Target population

Age of child	Children aged 3 years old and younger
Target population	Families living in disadvantaged communities.

Please note that the information in this section on target population is as **offered/supported by the intervention provider**.



Theory of change

Why		Who	How	What		
Science-based assumption	Science-based assumption	Science-based assumption	Intervention	Short-term outcomes	Medium-term outcomes	Long-term outcomes
School readiness skills (including vocabulary and early self-regulation) during the preschool years are strongly associated with children's later success in primary and secondary school.	An enriching home learning environment during the early years is known to support young children's school readiness.	Low family income negatively impacts parents' ability to provide an enriching home learning environment.	<ul style="list-style-type: none"> • Parents with a child between 0 and 3 years receive home visits from an early years practitioner • Books, toys, and learning activities are used to support parents' role as their child's first teacher • Advice is tailored to parents' specific concerns about their child's needs and development • Families are signposted to community resources as needed. 	<ul style="list-style-type: none"> • Parents are better able to support their child's school readiness • Parents are better able to understand their child's early developmental and learning needs. 	<ul style="list-style-type: none"> • Improved parent–child interaction • Improved school readiness. 	<ul style="list-style-type: none"> • Improved school achievement in secondary and primary school • Reduced income-related learning gaps • Reduced risk of behavioural and mental health problems as children develop.



Implementation requirements

Who is eligible?	PAFT is for economically disadvantaged families eligible for income or housing benefits.
How is it delivered?	<ul style="list-style-type: none"> • PAFT is delivered to parents in their home on a weekly, fortnightly, or monthly basis depending on the family's level of need. • The visits begin at the time of enrolment and then continue until the child's third birthday. • The typical length of a visit is one hour, although it can last up to an hour-and-a-half if the parent has more than one child.
What happens during the intervention?	<ul style="list-style-type: none"> • During the home visits, practitioners guide parents in being their child's 'first teacher' by demonstrating strategies that promote children's development (including language development, social-emotional development, sensory-motor development, and intellectual development). • These strategies include shared reading activities and play sessions that encourage children's intellectual development. Practitioners share the activity with parents, modelling as appropriate, and then provide feedback to parents as they practise it with their child. • Parents also learn strategies for discouraging unwanted child behaviour and promoting positive child self-regulation.
Who can deliver it?	The practitioner who delivers this intervention is a practitioner with experience in the early years trained in the PAFT model.
What are the training requirements?	The practitioner receives 35 hours of intervention training. Booster training of practitioners is recommended.
How are practitioners supervised?	It is recommended that practitioners are supervised by one host-agency supervisor with 35 hours of intervention training.
What are the systems for maintaining fidelity?	<ul style="list-style-type: none"> • Newly trained practitioners and their supervisors are invited to a follow-up training day after they have implemented the intervention for six months. • Agencies delivering PAFT are also required to complete an annual report demonstrating that practitioners are delivering the intervention with fidelity.
Is there a licensing requirement?	Yes
Contact details	<p>Organisation: PAFT UK</p> <p>Email address: info@parentsasfirstteachers.org.uk</p> <p>Website: https://www.parentsasfirstteachers.org/</p>



Evidence summary

PAFT's most rigorous evidence comes from one RCT conducted in Switzerland consistent with Foundations' Level 3 evidence strength criteria. Evidence from at least one Level 3 study, along with evidence from other studies rated 2 or better qualifies PAFT for a 3+ rating.

This study observed statistically significant improvements in PAFT children's early language development, behaviour, and developmental milestones in comparison to children not receiving the intervention.

PAFT also has evidence from an RCT conducted in the United States, consistent with Foundations' L2+ evidence strength criteria. This study observed statistically significant improvements in PAFT children's mastery motivation relative to children not exposed to the intervention.

PAFT additionally has evidence from a QED conducted in the United States consistent with Foundations' Level 2 criteria. This study observed a reduction in the number of substantiated cases of child maltreatment amongst PAFT families compared to a similar group of families who did not.

PAFT can be described as evidence-based: it has evidence from at least one rigorously conducted RCT or QED demonstrating a statistically significant positive impact on at least one child outcome.

Child outcomes			
Outcome	Improvement index	Interpretation	Study
Improved child self-help skills	+10	5.76-point improvement using an observational measure of Adaptive Behaviour. (Self-Help Skills) (immediately after intervention)	1
Improved developmental milestones	+11	3.86-point improvement using an observational measure of Adaptive Behaviour (Development Milestones) (immediately after intervention)	1
Improved receptive language	+12	1.20-point improvement on the Bayley Scales of Infant and Toddler Development III (at a 12-month follow-up during the intervention)	1



Improved expressive language	+11	0.65-point improvement on the Bayley Scales of Infant and Toddler Development III (immediately after intervention)	1
Improved vocabulary	+15	8.15-point improvement on the Language Assessment-Brief (SBE-2-KT and SBE-3-KT) (immediately after intervention)	1
Improved problem behaviour	+12	1.27-point improvement on the Child Behaviour Checklist (immediately after intervention)	1

Search and review

	Number of studies
Identified in search	8
Studies reviewed	3
Meeting the L2 threshold	2
Meeting the L3 threshold	1
Contributing to the L4 threshold	0
Ineligible	5



Individual study summary: Study 1

Study 1	
Study design	RCT
Country	Switzerland
Sample characteristics	248 at-risk families with a 2-month infant living in Zurich
Race, ethnicities, and nationalities	<ul style="list-style-type: none"> • 5% Eritrean • 9% Kosovar • 9% Portuguese • 27% Swiss nationals • 9% Turkish. •
Population risk factors	<ul style="list-style-type: none"> • 78% did not speak German as their first language • 74% of the families scored high on the Heidelberg Family Stress Scale • 39% of mothers had no post-compulsory education • 12% of the parents were single.
Timing	<ul style="list-style-type: none"> • Baseline • 12-months old assessment • 24-months old assessment • 36-months old assessment



Study 1	
Child outcomes	<p><i>12-month follow-up</i></p> <ul style="list-style-type: none"> Improved receptive language (researcher assessed). <p><i>24-month follow-up</i></p> <ul style="list-style-type: none"> Improved expressive language (researcher assessed) Improved vocabulary (parent report) Reduced attention problems (parent report) Reduced hyperactivity (parent report). <p><i>36-month follow-up</i></p> <ul style="list-style-type: none"> Improved expressive language (research assessed) Improved vocabulary (parent report) Reduced child affective problems (parent report) Improved pervasive development (parent report) Improved adaptive behaviour – self-help skills (paediatrician assessed) Improved adaptive behaviour – developmental milestones (paediatrician assessed).
Other outcomes	<p><i>12-month follow-up</i></p> <ul style="list-style-type: none"> Improved maternal sensitivity (researcher assessed) Improved learning materials (researcher assessed) Improved involvement in children's learning (researcher assessed) Improved variety of learning materials (researcher assessed). <p><i>24-month follow-up</i></p> <ul style="list-style-type: none"> Improved involvement in children's learning (researcher assessed) Improved variety of learning materials (researcher assessed).
Study Rating	3



Study 1

Citations

- Study 1a:** Neuhauser, A., Ramseier, E., Schaub, S., Burkhardt, S. C., Templer, F. & Lanfranchi, A. (2015) Hard to reach families: A methodological approach to early recognition, recruitment, and randomization in an intervention study. *Mental Health & Prevention*. 3 (3), 79–88.
- Study 1b:** Lanfranchi, A., Neuhauser, A., Schaub, S. & Burkhardt, A. (2015) *Preliminary findings from the SNSF study using the 'PAT – Parents as Teachers' programme*. Findings presented at the Interkantonale Hochschule für Heilpädagogik, Zurich Switzerland, 5 June 2015.
- Study 1c:** Neuhauser, A., Ramseier, E., Schaub, S., Burkhardt, S. C. & Lanfranchi, A. (2018) Mediating role of maternal sensitivity: Enhancing language development in at-risk families. *Infant Mental Health Journal*. 39 (5), 522–536.
- Study 1d:** Lanfranchi, A., Neuhauser, A. & Schaub, S. (2019) *Effective early intervention in high-risk families: Evidence from the RCT-Zeppelin 0-3 with intervention 'Parents as Teachers'*. Findings presented at the ISSA conference, Leiden, NL, 19 June 2019.
- Study 1e:** Schaub, S., Ramseier, E., Neuhauser, A., Burkhardt, S. C. & Lanfranchi, A. (2019) Effects of home-based early intervention on child outcomes: A randomized controlled trial of Parents as Teachers in Switzerland. *Early Childhood Research Quarterly*. 48, 173–185.

Brief summary

Population characteristics

This study involved 248 at-risk families with a 2-month infant living in Zurich, representing 261 children (13 were twins). 53% of the children were female.

The families were recruited from Zurich's 14-most disadvantaged communities based on the families having at least two of the following risk factors: parental mental illness, single parenthood, no social network, or confined housing. The mothers were an average of 30 years old.

74% of the families scored high on the Heidelberg Family Stress Scale.

65% of the families lacked social integration, 48% reported a lack of support from families or neighbours, 44% reported having financial problems, 39% had no post-compulsory education, 47% reported living in confined housing, 24% were unemployed, 13% had given birth to two children within 18 months, 13% reported serious conflict within the parent–couple relationship and 12% of the parents were single.

78% of children did not speak German as the primary language in their household and less than half of mothers were rated as having a high level of proficiency.



27% of the mothers were Swiss nationals, 9% Portuguese, 9% Turkish, 9% Kosovar and 5% Eritrean.

Study design

132 families (representing 139 children) were randomly assigned to PAFT and 116 (representing 122 children) to a control group receiving no treatment except services as usual. Randomisation took place on a rolling basis and was managed by an independent statistician through block stratification based on location, family risk, family structure, and whether use of an interpreter to access the intervention.

The groups were equivalent at baseline, with the exception that there were more families who spoke German as a second language in the intervention group.

Measurement

Families participated in assessments at baseline (prior to the start of the intervention, when the child was 2 months), and then again when the child was 12, 24, and 36 months old.

12-month assessment

- **Researcher-led** assessments included the Bayley Scales of Infant and Toddler Development (BSID III), the Home Observation Measurement of the Environment Inventory (HOME), and videotaped observations of 3 to 5 minutes of parent–child interaction, coded with the Infant CARE-Index (ICI). Researchers were blind to group assignment.
- **Paediatrician-led** assessments included questions about children’s health, developmental milestones, and self-help skills (for example, sleep, toilet training).

24-month assessment

- **Parent report** measures included the Active Vocabulary Assessment (SBE-2-KT) and the Child Behaviour Checklist (CBCL).
- **Researcher-led** assessments included the Bayley Scales of Infant and Toddler Development (BSID III), the Home Observation Measurement of the Environment Inventory (HOME), and videotaped observations of 3 to 5 minutes of parent–child interaction, coded with the Infant CARE-Index (ICI). Researchers were blind to group assignment.
- **Dentist-led** assessments were carried out of children’s dental hygiene.
- **Paediatrician-led** assessments included questions about children’s health, developmental milestones, and self-help skills (for example, sleep, toilet training).

36-month assessment

- **Parent report** measures included an Active Vocabulary Assessment (SBE-2-KT) and the Child Behaviour Checklist (CBCL).
- **Researcher-led** assessments included the Bayley Scales of Infant and Toddler Development (BSID III), the Snijders-Oomen Non-verbal Intelligence Test (SON-R 26 –7), and coded observations of children’s effortful control during a dinky toy and gift delay task. Researchers were blind to group assignment.



- **Paediatrician-led** assessments included non-validated questions about children's health, developmental milestones, and self-help skills (for example, sleep, toilet training).

Study retention

12-month assessment

100% (248) families completed at least one assessment at the 12-month follow-up. There was no differential attrition between the groups.

- 95% (248) of the children were assessed with the BSID III, including 94% (130) from the in PAFT group and 97% (118) allocated to the control.
- 94% (244) of the families underwent a HOME assessment, representing 91% (127) of the PAFT families and 96% (117) allocated to the control.
- 91% (225) mothers were assessed with the ICI. The representation of mothers from the intervention and control group was not reported.
- 95% (247) of the children underwent a health assessment with a paediatrician.

24-month assessment

- 93% (228) of the children were assessed with the BSID III.
- 90% (222) of the mothers completed an Active Vocabulary Assessment (SBE-2-KT) for their toddlers.
- 82% (203) of the mothers completed assessments on their children with the CBCL.
- 89% (220) of the families underwent a HOME assessment, representing 122 from the PAFT group and 110 from the control group.
- 86% (214) mothers were assessed with the ICI. The representation of mothers from the intervention and control group was not reported.
- 87% (226) of the children underwent a health assessment with a paediatrician.

36-month assessment

85% (211) of the families completed assessment at the 36-month follow-up and 84% (208) of the families completed all three waves. However, there was considerable variation in the number of assessments completed with each measure.

- 82% (213) of the children were assessed with the BSID III.
- 72% (189) of the mothers completed an Active Vocabulary Assessment (SBE-2-KT) for their toddlers.
- 74% (193) of the mothers completed the Child Behaviour Checklist (CBCL) for their children.
- 69% (177) of the children were assessed with the Snijders-Oomen nonverbal intelligence test (SON-R).
- 64% (167) of the children participated in the effortful control videotaped observation.

The groups were equivalent post-attrition, except for the sample retained for the effortful control assessments – which suggested potential confounds being introduced through differences in child language.



Results

Data-analytic plan

The findings involving the reported child and parent outcomes were analysed at multiple time points. Chi-squares and t-tests were used to analyse the 12- and 24-month comparisons reported in the outcomes table below. At the 36-month assessment, generalised estimating equations were used to compare group x time interactions, while controlling for key demographics and previous scores. Single item outcomes were analysed using binary logistic regression, t-tests, or χ^2 -tests. Intervention was analysed with and without imputation for missing values.

Findings

At the 12-month assessment, statistically significant improvements were observed favouring PAFT children's receptive language. PAFT parents were also significantly more likely to provide a more enriching home environment including improved learning materials, greater parental involvement in their children's learning and the variety of children's learning experiences. Additionally, PAFT mothers were assessed as more sensitive in comparison to those allocated to the control group.

At the 24-month assessment, statistically significant improvements were observed in PAFT children's receptive language, vocabulary, and attention regulation in comparison to children whose families did not receive the intervention. Statistically significant improvements were also observed for PAFT parents' involvement in their children learning, as well as the variety of their children's learning experiences. There were no between-group differences in maternal sensitivity, however.

At the 36-month assessment, statistically significant improvements favouring PAFT children were observed in their vocabulary, expressive language, mood (CBCL Affect), and pervasive development. Statistically significant improvements favouring the PAFT children were also observed in their effortful control, but missing data analyses suggest that observed benefits could have been influenced by differences in attrition, so these findings do not contribute to the study rating.

Study 1: Outcomes table

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child outcomes					
Cognitive skills	BSID III (researcher led)	Not reported	No	244	12 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Receptive Language	BSID III (researcher led)	$d = .31$	Yes	244	12 months old
Expressive language	BSID III (researcher led)	Not reported	No	244	12 months old
Motor skills	BSID III (researcher led)	Not reported	No	244	12 months old
Cognitive skills	BSID III (researcher led)	Not reported	No	228	24 months old
Receptive Language	BSID III (researcher led)	Not reported	No	228	24 months old
Expressive language	BSID III (researcher led)	$d = .28$	Yes	228	24 months old
Motor skills	BSID III (researcher led)	Not reported	No	228	24 months old
Cognitive skills	BSID III (researcher led)	Not reported	No	213	36 months old
Receptive Language	BSID III (researcher led)	Not reported	No	213	36 months old
Expressive language	BSID III (researcher led)	$d = .32$	Yes	213	36 months old
Motor skills	BSID III (researcher led)	Not reported	No	213	36 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child has bottle in bed	Developmental assessment (paediatrician led)	Not reported	Yes	226	24 months old
Child can play outside unsupervised	Developmental assessment (paediatrician led)	Not reported	Yes	226	24 months old
Child sleeps through the night	Developmental assessment (paediatrician led)	Not reported	Yes	226	24 months old
Child brushes teeth	Dental assessment	Not reported	Yes	215	24 months old
Self-help skills	Developmental assessment (paediatrician led)	Not reported	Yes	211	36 months old
Developmental Milestones	Developmental assessment (paediatrician led)	Not reported	Yes	211	36 months old
Assessment of additional health support	Developmental status (paediatrician led)	Not reported	No	211	24 months old
Active vocabulary	SBE-2-KT (parent report)	$d = .34$	Yes	222	24 months old
Active vocabulary	SBE-2-KT (parent report)	$d = .41$	Yes	189	36 months old
Attention problems	CBCL (parent report)	$d = .37$	Yes	203	24 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Hyperactivity	CBCL (parent report)	$d = .38$	Yes	203	24 months old
Affective problems	CBCL (parent report)	Not reported	Yes	193	36 months old
Anxiety	CBCL (parent report)	Not reported	No	193	36 months old
Pervasive developmental problems (autism related)	CBCL (parent report)	Not reported	Yes	193	36 months old
ADHD	CBCL (parent report)	Not reported	No	193	36 months old
Oppositional Defiant	CBCL (parent report)	Not reported	No	167	36 months old
Effortful control	Dinky toy task (researcher observation)	Not reported	Yes*	167	36 months old
Impulse control	Gift delay (researcher observation)	Not reported	No	167	36 months old
Intelligence Total score	SON-R (researcher assessment)	Not reported	No	189	36 months old
Performance	SON-R (researcher assessment)	Not reported	No	189	36 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Reasoning	SON-R (researcher assessment)	Not reported	No	189	36 months old
Maternal Sensitivity	ICI (researcher observation)	Not reported	Yes	225	12 months old
Maternal Sensitivity	ICI (researcher observation)	Not reported	No	214	24 months old
Parental Responsivity	HOME-Inventory (researcher led)	Not reported	No	244	12 months old
Parental Acceptance	HOME-Inventory (researcher led)	Not reported	No	244	12 months old
Organisation	HOME-Inventory (researcher led)	Not reported	No	244	12 months old
Learning materials	HOME-Inventory (researcher led)	Not reported	Yes	244	12 months old
Parental Involvement	HOME-Inventory (researcher led)	Not reported	Yes	244	12 months old
Variety	HOME-Inventory (researcher led)	Not reported	Yes	244	12 months old
Parental Responsivity	HOME-Inventory (researcher led)	Not reported	No	220	24 months old
Parental Acceptance	HOME-Inventory (researcher led)	Not reported	No	220	24 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Organisation	HOME-Inventory (researcher led)	Not reported	No	220	24 months old
Learning materials	HOME-Inventory (researcher led)	Not reported	No	220	24 months old
Parental Involvement	HOME-Inventory (researcher led)	Not reported	Yes	220	24 months old
Variety	HOME-Inventory (researcher led)	Not reported	Yes	220	24 months old
*High level of bias associated with differential attrition means that this finding does not meet the L3 assessment criteria.					

Individual study summary: Study 2

Study 2	
Study design	RCT
Country	United States
Sample characteristics	459 families with infants between 0 and 9 months of age, living in disadvantaged communities in the vicinity of Cleveland, Ohio
Race, ethnicities, and nationalities	<ul style="list-style-type: none"> • 29% African American • 6% Other • 66% White.
Population risk factors	29% had incomes below the poverty line and 65% were assessed as having low socioeconomic status
Timing	<ul style="list-style-type: none"> • Baseline



Study 2	
	<ul style="list-style-type: none"> • 12-months old assessment • 18-months old assessment • 24-months old assessment • 36-months old assessment.
Child outcomes	Improved task persistence (researcher assessed)
Other outcomes	None
Study Rating	2+
Citations	Drotar, D., Robinson, J., Jeavons, L. & Lester Kirchner, H. (2009) A randomized, controlled evaluation of early intervention: the Born to Learn curriculum. <i>Child: Care, Health and Development</i> . 35 (5), 643–649.

Brief summary

Population characteristics

This study involved 459 families with an infant between 0 and 9 months old, living in disadvantaged communities in the vicinity of Cleveland, Ohio. Infants were normal term and birthweight with no medical or pre-existing developmental impairments. 50% of the children in the sample were boys.

66% of the population was White, 29% African American, and 6% other ethnic group. 29% had an income below the US poverty line at the time (<\$30,000) and 65% were assessed as having low socioeconomic status on the Hollingshead Two-Factor Scale.

Study design

227 families were randomly assigned to PAFT and 232 families to a control group. Block stratification, based on families' socioeconomic status, was carried out by a biostatistician.

The PAFT and control groups were equivalent at baseline on key demographic characteristics.

Families in the control group received handouts about children's development at various ages and were invited to a series of parenting group discussions throughout the course of the study.



Measurement

Families participated in assessments at baseline (prior to the start of the intervention), and then again when the child was 12, 18, 24, and 36 months old. Demographic characteristics were collected at baseline.

12-month assessment

- **Researcher-led** assessments included the Bayley Scale of Mental Development (BSMD), the Bayley Behavioural Rating Scale (BBRS), and coded videotaped observations of children's mastery motivation (persistence, pleasure, and competence) while playing with novel toys. Researchers were blind to group assignment for all assessments.

18-month assessment

- **Researcher-led** assessments included the Security of Attachment Q-Sort (SAT). Researchers were blind to group assignment for all assessments.

24-month assessment

- **Researcher-led** assessments included the Bayley Scale of Mental Development (BSMD), the Bayley Behavioural Rating Scale (BBRS), Child Behaviour Rating Scale (CBRS), coded videotaped observations of children's mastery motivation (persistence, pleasure, and competence) while playing with novel toys. Researchers were blind to group assignment for all assessments.

36-month assessment

- **Parent-led** assessments included the Social Skills Rating System (SSRS).
- **Researcher-led** assessments included the Kaufman Assessment Battery (KAB), the Bayley Behavioural Rating Scale (BBRS), coded videotaped observations of children's mastery motivation (persistence, pleasure, and competence) while playing with novel toys, an audio recording of children's spontaneous language during a mother–child play session, coded with the Systematic Analysis of Language Transcripts (SALT), the Bracken Basic Concept Scale – Revised (BBCS-R), and the Test of Early Reading Ability-2 (TERA-2). Researchers were blind to group assignment for all assessments.
- **Teacher-led** assessments included the Social Skills Rating System (SSRS).

Study retention

12-month assessment

- 82% (377) of the children were assessed with the BSMD/BBRS, including 84% (190) from the PAFT group and 81% (187) allocated to the control.
- 43% (199) of the children participated in the mastery motivation task, including 44% (100) of the PAFT families and 43% (99) allocated to the control.

24-month assessment

- 75% (344) of the children were assessed with the BSMD, including 73% (166) from the PAFT group and 77% (178) allocated to the control.



- 77% (354) of the children were assessed with the BBRs, including 74% (169) from the PAFT group and 80% (185) allocated to the control.
- 64% (293) of the children participated in the mastery motivation task, including 61% (138) of the PAFT children and 67% (155) allocated to the control.

36-month assessment

- 72% (331) of the children were assessed with the KAB, including 71% (161) from the PAFT group and 73% (170) allocated to the control.
- 75% (342) of the children were assessed with the BBRs, including 73% (165) from the PAFT group and 76% (177) allocated to the control.
- 69% (319) of the children participated in the mastery motivation task, including 67% (152) of the PAFT children and 72% (167) allocated to the control.
- 71% (326) of the children were assessed with the SALT, including 67% (152) of the PAFT children and 75% (174) from the control.
- 73% (336) children participated in Bracken assessments, including 70% (160) of the PAFT children and 76% (176) from the control.
- 73% (333) of the children were assessed with the TERA-2, including 71% (161) of the PAFT children and 74% (172) from the control.
- 73% (336) of the parents completed SSRS on their children, including 71% (162) of the PAFT parents and 75% (174) of the control parents.
- 30% (137) of the children had teachers who completed SSRS, including 21% (64) from the PAFT group and 31% (73) from the control.

Results

Data-analytic plan

A mixed linear model using restricted maximum likelihood estimation with an unstructured covariance matrix and controlling for socioeconomic status and blocking compared the intervention and control group at each time point with the retained sample. Intention-to-treat was used, meaning that all participants were retained in the analyses, regardless of their level of intervention participation. Missing data was handled with listwise deletion.

Findings

No statistically significant impacts involving the entire group were observed at the 12- and 24-month assessments. At 36 months, PAFT children demonstrated significantly greater mastery motivation on one subscale (task persistence) in comparison to children allocated to the control group.

Limitations

Statistical corrections were not used to adjust the significance levels based on the number of comparisons made. As there was only one statistically significant benefit for the 24 comparisons, it is possible that this finding occurred by chance, so should be considered with caution.



Study 2: Outcomes table

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child outcomes					
Early Cognitive skills	BSMD (researcher assessment)	$d = .08$	No	376	12 months old
Early Cognitive skills	BSMD (researcher assessment)	$d = .05$	No	344	24 months old
Sequential processing	KABC (researcher assessment)	$d = .06$	No	298	36 months old
Simultaneous processing	KABC (researcher assessment)	$d = .11$	No	331	36 months old
Mental processing	KABC (researcher assessment)	$d = .02$	No	295	36 months old
Behaviour	BBRS (researcher assessment)	$d = .02$	No	377	12 months old
Behaviour	BBRS (researcher assessment)	$d = .06$	No	354	24 months old
Behaviour	BBRS (researcher assessment)	$d = .14$	No	342	36 months old
Behaviour	CBRS (researcher assessment)	Not reported	No	Not reported	24 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Attachment security	SAT Q-Sort (researcher assessed)	Not reported	No	Not reported	18-months old
Task persistence	Mastery motivation task (researcher observation)	$d = .12$	No	199	12 months old
Task pleasure	Mastery motivation task (researcher observation)	$d = .07$	No	199	12 months old
Task competence	Mastery motivation task (researcher observation)	$d = .10$	No	199	12 months old
Task persistence	Mastery motivation task (researcher observation)	$d = .10$	No	293	24 months old
Task pleasure	Mastery motivation task (researcher observation)	$d = .09$	No	293	24 months old
Task competence	Mastery motivation task (researcher observation)	$d = .20$	No	293	24 months old
Task persistence	Mastery motivation task (researcher observation)	$d = .20$	No	318	36 months old
Task pleasure	Mastery motivation task (researcher observation)	$d = .03$	No	319	36 months old



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Task competence	Mastery motivation task (researcher observation)	$d = .20$	Yes	319	36 months old
Language	SALT (researcher assessed)	$d = .08$	No	326	36 months old
Cognitive development	Bracken Basic Concept Scale (researcher assessed)	$d = .07$	No	336	36 months old
Pre-reading skills	TERA-2 (researcher assessed)	$d = .04$	No	333	36 months old
Social skills	SSRS (parent report)	$d = .18$	No	336	36 months old
Social skills	SSRS (teacher report)	$d = .13$	No	137	36 months old

Individual study summary: Study 3

Study 3	
Study design	QED
Country	United States
Sample characteristics	4,560 socially high-risk families with a child between 0 and 4 years old living in the US state of Connecticut, and eligible for state-funded home visiting



Study 3	
Race, ethnicities, and nationalities	Not reported
Population risk factors	<ul style="list-style-type: none"> • 89% of the families were separated or divorced • 38% had a high-school education or lower • 24% had a history of psychiatric care • 8% had been diagnosed as depressed • 15% had a substance misuse problem • 26% reported having marital or family problems • 12% were living in unstable housing circumstances.
Timing	Child protection records between 1 January 2008 to 31 December 2013
Child outcomes	<ul style="list-style-type: none"> • Reductions in substantiated cases of child maltreatment (administrative records) • Reductions in substantiated cases of neglect (administrative records) • A greater amount of time between the child's birth and a substantiated case of child maltreatment (administrative records).
Other outcomes	None
Study Rating	2
Citations	Chaiyachati, B. H., Gaither, J. R., Hughes, M., Foley-Schain, K. & Leventhal, J. M. (2018) Preventing child maltreatment: Examination of an established statewide home-visiting program. <i>Child Abuse & Neglect</i> . 79, 476–484.

Brief summary

Population characteristics

This study involved 4,560 socially high-risk families with a child between 0 and 4 years old living in the US state of Connecticut and eligible for state-funded home visiting. All children were born between 1 January 2008 and 31 December 2011.

The mothers' average age was 22 years; 30% were under the age of 18. The ethnicities reached were not reported.

Families were identified as at risk if they had three or more risk factors (out of 17) on the Revised Early Identification (REID) screening instrument. 90% of the families were separated or divorced, 42% had a high-school education or lower, 22% had a history of psychiatric care, 37% had been



diagnosed as depressed, 15% had a substance misuse problem, 36% reported having marital or family problems, and 11% were living in unstable housing circumstances.

Study design

Propensity score matching was used to match families who received PAFT through Connecticut's home visiting to a comparable group of non-PAFT recipients, based on children's birth date, mother's age, and the family's REID screening scores.

A matched set of families was identified from a pool of 2,662 PAFT recipients and 4,724 similar families who did not receive PAFT. Those in the comparison group included families 1) who declined home visiting services, 2) who were unable to enrol because the social worker could not engage them, or 3) for whom there was no opening in the family's local home visiting programme.

There were notable imbalances between the PAFT and comparison groups prior to the propensity score matching. All imbalances were rectified through propensity score matching, resulting in a set 2,280 PAFT families who were comparable to 2,280 families who did not receive PAFT on key demographics and risk factors.

Measurement

The study sample was linked to child protection records between 1 January 2008 to 31 December 2013 through the child's birthdate.

- **Administrative records** included child protection investigations, substantiated cases of child maltreatment, out-of-home placements, length of out-of-home placements, and family reunifications. For children with substantiated cases of child maltreatment, the type of maltreatment was compared, as was the number of days of the child's life to the first substantiation.

Results

Data-analytic plan

The study compared the percentages of children in the intervention and control group identified as having a child protection investigation, a substantiated case, out-of-home placement, family reunification, and the rates of neglect and rates of abuse. Cox proportional hazards of time to event were used to compare days since the child's birth to a substantiated case of child maltreatment and days since the child's birth to first out-of-home placement.

Findings

The study observed that children whose families received PAFT were significantly less likely to have a substantiated case of child maltreatment in comparison to the families not receiving the intervention. PAFT children were also less likely to have been neglected and experience a greater length of time before a substantiated case.



Limitations

Confidence in these findings is limited by the fact that the study is retrospective in nature and the comparison group was not generated at random. This means that biases may have driven these findings, including those associated with home visiting refusal in the comparison group. Additionally, demographics, including race and ethnicity, were not included in the propensity score matching.

Study 3: Outcomes table

Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
Child outcomes					
Percentage of child maltreatment investigations	Child protection records	Not reported	No	4,560	01/01/2008 – 31/12/2013
Percentage of substantiation cases of child maltreatment	Child protection records	Not reported	Yes	4,560	01/01/2008 – 31/12/2013
% of Out-of-home placements	Child protection records	Not reported	No	4,560	01/01/2008 – 31/12/2013
Length of out-of-home placement	Child protection records	Not reported	No	4,560	01/01/2008 – 31/12/2013
% of Family reunification	Child protection records	Not reported	No	4,560	01/01/2008 – 31/12/2013
% of cases involving neglect	Child protection records	Not reported	Yes	4,560	01/01/2008 – 31/12/2013



Outcome	Measure	Effect size	Statistical significance	Number of participants	Measurement time point
% of cases involving abuse	Child protection records	Not reported	no	4,560	01/01/2008 – 31/12/2013
Time to a substantiated case of child maltreatment	Child protection records	Not reported	yes	4,560	01/01/2008 – 31/12/2013
Days to first out-of-home placement	Child protection records	Not reported	no	4,560	01/01/2008 – 31/12/2013

Other studies

The following studies were identified for this intervention but did not count towards the intervention's overall evidence rating. An intervention receives the same rating as its most robust study or studies.

Cahill, A. G., Haire-Joshu, D., Cade, W. T., Stein, R. I., Woolfolk, C. L., Moley, K. ... & Klein, S. (2018) Weight control program and gestational weight gain in disadvantaged women with overweight or obesity: A randomized clinical trial. *Obesity*. 26 (3), 485–491. **This reference refers to a randomised control trial, conducted in the USA.**

Lahti, M., Evans, C. B., Goodman, G., Schmidt, M. C. & LeCroy, C. W. (2019) Parents as Teachers (PAT) home-visiting intervention: A path to improved academic outcomes, school behavior, and parenting skills. *Children and Youth Services Review*. 99, 451–460. **This reference refers to a quasi-experimental design, conducted in the USA.**

Jonson-Reid, M., Drake, B., Constantino, J. N., Tandon, M., Pons, L., Kohl, P. ... & Auslander, W. (2018) A randomized trial of home visitation for CPS-involved families: The moderating impact of maternal depression and CPS history. *Child Maltreatment*. 23 (3), 281–293. **This reference refers to a randomised control trial, conducted in the USA.**

Wagner, M. M. & Clayton, S. L. (1999) The parents as teachers program: Results from two demonstrations. *The Future of Children (Home Visiting Program Evaluation)*. 9, 91–115. **This reference refers to a randomised control trial, conducted in the USA.**

Wagner, M. M., Spiker, D. & Linn, M.I. (2002) The effectiveness of the parents as teachers program with low-income parents and children. *Topics in Early Childhood Special Education*. 22, 67–81. **This reference refers to a randomised control trial, conducted in the USA.**



—

Note on provider involvement: This provider has agreed to Foundations' terms of reference (or the Early Intervention Foundation's terms of reference), and the assessment has been conducted and published with the full cooperation of the intervention provider.