Evaluating the early effectiveness of the Preparing for Life programme

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preparing for life
Early Childhood Intervention

'Preparing for Life' programme

- **Community-led initiative**: operated by Northside Partnership in a highly disadvantaged area of Dublin, Ireland
- **Bottom-up approach:** community initiative involving 28 community groups, service providers, & local representatives
- **Evidence of need:** Children scored below the norm on cognitive & non-cognitive skills on school entry (Doyle & McNamara, 2011)
- **Aim:** Improve levels of school readiness by assisting parents in developing skills to prepare their children for school
- **Evaluation Design:** RCT & embedded quasi-experimental design

Design of *Preparing for Life*

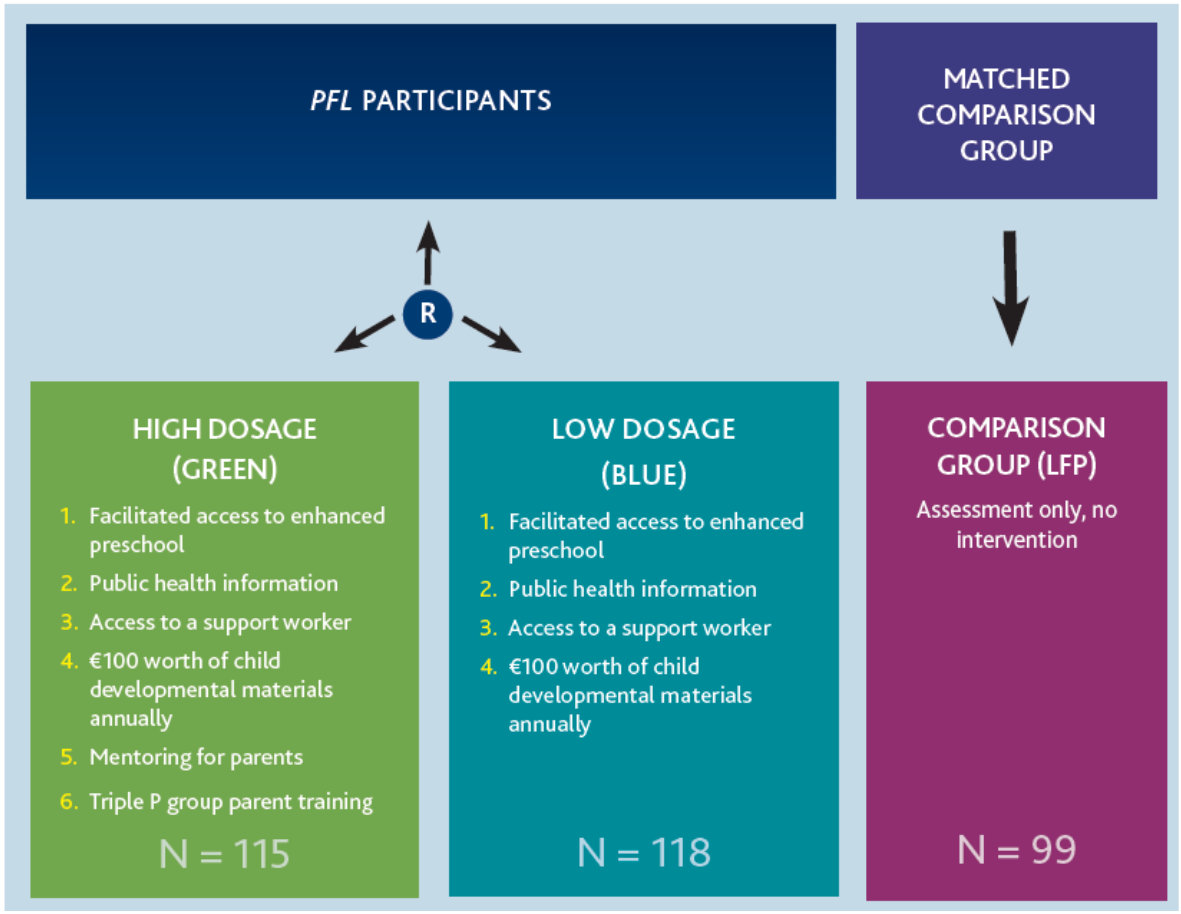
HIGH TREATMENT SUPPORTS

MENTORING

Through regular home visits, *PFL* mentors build good relationships with parents, and provide them with high quality information about parenting and child development.

TRIPLE P

The Triple P Positive Parenting Programme aims to improve positive parenting through the use of videos, vignettes, role play and tip sheets in a group-based setting.



Recruitment, Randomisation & Baseline Assessment

- **Recruitment:**
  - Recruited 233 pregnant women residing in *PFL* catchment area between Jan 2008-August 2010
  - Population-based recruitment rate, *based on all live births during the recruitment phase*, was **52%**

- **Randomisation:** Unconditional probability randomisation strategy
  - 115 allocated to **High** treatment group
  - 118 allocated to **Low** treatment group

- **Baseline assessment:**
  - No statistical differences between the high treatment group and low treatment group on 107/116 measures (92%)

Test for Programme Effects – 0-48 months

- **Test for treatment effects at birth, 6mths, 12mths, 18mths, 24mths, 3yrs, 4yrs, school entry across eight domains**
  - Child development
  - Child health
  - Parenting
  - Home environment
  - Maternal health
  - Social support
  - Childcare & service use
  - Household factors & SES

- **Methods:**
  - **Permutation based hypothesis testing** (Heckman et al. 2010) to deal with small sample inference
  - **Stepdown procedure** (Romano & Wolf, 2005) to deal with multiple hypothesis testing
  - **Inverse Probability Weighting** to deal with differential attrition/missing data

Impact of PFL on Perinatal Outcomes

- **Birth records**
  - 180 of 233 parents gave consent to access hospital records
  - No differences in baseline characteristics of consenting parents in high and low treatment groups

Variable	N (n_{HIGH}/ n_{LOW})	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	Unadjusted p^1	Adjusted p^2
Neonatal Outcomes					
Apgar 1 minute	179 (95/84)	8.73 (1.02)	8.51 (1.34)	0.113	**0.078***
Birth weight (grams)	180 (95/85)	3281.58 (644.76)	3303.88 (611.95)	0.406	0.462
(-) Low BW (<2500grams)	180 (95/85)	0.11 (0.31)	0.06 (0.24)	0.869	0.859
(-) Small for Gestational Age (at 25thpercentile)	174 (93/81)	0.29 (0.46)	0.33 (0.47)	0.272	0.251
(-) Prematurity (<37 weeks gestation)	172 (91/81)	0.07 (0.25)	0.06 (0.24)	0.456	0.464
Labour Outcomes					
Spontaneous Onset of Labour	178 (93/85)	0.68 (0.47)	0.56 (0.50)	**0.061***	**0.058***
(-) Caesarean	178 (93/85)	0.15 (0.36)	0.26 (0.44)	**0.037****	**0.048****
(-) Emergency CS	178 (93/85)	0.06 (0.25)	0.12 (0.32)	0.109	**0.091**
(-) Elective C-Section	178 (93/85)	0.08 (0.27)	0.14 (0.35)	**0.078**	0.117

Impact of PFL on Perinatal Outcomes

- **Labour outcome** results possibly linked to Tip Sheets which specifically focus on preparing the mother for the birth and being aware of the birthing process and possible labour outcomes
- Lack of impact on **neonatal outcomes** possibly linked to the timing of programme delivery (on average treatment started at week 22 of pregnancy)
- Few home visiting interventions find an impact on neonatal outcomes
  - Review of 28 programmes: Little evidence for positive effect on birth-weight and gestational age (Issel et al., 2011)
- Few home visiting interventions report labour outcomes
  - One study found a 'trend' of more spontaneous labours (Oakley et al., 1990)

Summary of 6M, 12M & 18M Results

***PFL* Low – *PFL* High**	Proportion of Measures Significantly Different at **Six Months**		Proportion of Measures Significantly Different at **Twelve Months**		Proportion of Measures Significantly Different at **Eighteen Months**	
	Individual Tests	Multiple Hypothesis Tests	Individual Tests	Multiple Hypothesis Tests	Individual Tests	Multiple Hypothesis Tests
Child Development	0%	0%	7%	20%	16%	0%
Child Health	10%	0%	26%	25%	24%	67%
Parenting	23%	20%	0%	0%	20%	50%
Home Environment	36%	50%	0%	0%	33%	50%
Maternal Health & Wellbeing	5%	25%	4%	25%	5%	0%
Social Support	38%	0%	43%	0%	8%	0%
Childcare	7%	0%	~	~	0%	0%
Household Factors & SES	0%	0%	0%	0%	6%	0%
Total Statistically Different	**14% (23/160)**	**12% (3/25)**	**9% (12/140)**	**13% (3/23)**	**14% (21/152)**	**15% (4/27)**

Impact of PFL on:

Child development @ 6, 12, 18 Months

	6 Months				12 Months				18 Months			
ASQ Scores	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
ASQ Gross Motor Score	40.78 (11.93)	38.50 (12.99)	0.117	0.441[1]	42.07 (18.34)	40.72 (18.27)	0.319	0.721[3]	56.31 (5.44)	53.72 (12.02)	**0.047**	0.204[1]
ASQ Communication	53.07 (7.84)	51.78 (8.49)	0.154	0.483[2]	49.88 (10.74)	50.18 (10.55)	0.575	0.783[5]	45.69 (13.16)	45.34 (13.96)	0.437	0.636[5]
(-)ASQ Social-Emotional Score	14.76 (10.68)	15.17 (13.75)	0.403	0.800[4]	23.48 (21.51)	21.14 (16.05)	0.779	0.779[6]	29.13 (19.92)	29.05 (31.84)	0.506	0.506[6]
ASQ Personal Social Score	46.36 (12.07)	45.94 (13.57)	0.418	0.709[5]	49.88 (8.82)	48.55 (10.46)	0.190	0.559[2]	50.88 (7.91)	49.46 (9.24)	0.160	0.475[2]
ASQ Fine Motor Score	50.85 (9.52)	51.39 (10.17)	0.638	0.816[6]	54.33 (8.63)	51.87 (10.29)	**0.050**	0.219[1]	54.13 (8.26)	53.38 (8.28)	0.291	0.644[3]
ASQ Problem Solving Score	51.87 (9.39)	52.56 (9.92)	0.679	0.679[7]	46.40 (11.71)	46.40 (13.13)	0.499	0.826[4]	45.69 (11.06)	45.07 (10.69)	0.369	0.669[4]

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+ Impact of PFL on:

Child development @ 6, 12, 18 Months

	6 Months				12 Months				18 Months			
Instrument	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
Communicative Development Inventory												
First Signs of Understanding	-	-	-	-	2.97 (0.16)	2.96 (0.20)	0.308	0.508[1]	2.99 (0.11)	2.94 (0.37)	0.178	0.300[1]
First Communicative Gestures	-	-	-	-	9.01 (2.23)	9.78 (1.96)	0.986	0.986[2]	11.27 (1.37)	11.41 (1.26)	0.740	0.740[2]
Brief Infant-Toddler Social and Emotional Assessment												
BITSEA Competence Score	-	-	-	-	15.44 (3.41)	14.88 (3.57)	0.154	0.274[1]	17.85 (2.61)	17.59 (3.45)	0.305	0.461[1]
(-)BITSEA Problem Score	-	-	-	-	8.82 (5.74)	8.90 (6.49)	0.466	0.466[2]	9.44 (6.63)	9.14 (7.18)	0.606	0.606[2]
Other Measures												
(-)Difficult Temperament	11.70 (5.71)	12.21 (5.50)	0.275	-	12.60 (5.54)	13.30 (5.76)	0.216	-	-	-	-	-
DP3: Cognitive development standardised score	-	-	-	-	116.20 (13.66)	115.13 (16.03)	0.323	-	119.01 (15.83)	114.57 (17.81)	**0.053**	**-**

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Impact of PFL on:

Child Health @ 6, 12 & 18 Months

	6 Months				12 Months				18 Months			
Child Health in Last 6 Months	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
(-)Age (in days) left hospital	3.23 (7.03)	3.16 (3.72)	0.495	0.965[1]	-	-	-	-	-	-	-	-
(-)Birth weight (grams)	3319 (589)	3338 (613)	0.587	0.948[2]	-	-	-	-	-	-	-	-
Child has Good Health	0.93 (0.26)	0.93 (0.25)	0.553	0.905[3]	0.94 (0.24)	0.92 (0.28)	0.280	0.591[3]	0.94 (0.24)	0.84 (0.37)	**0.025**	0.109[2]
(-)Stayed in Hospital	0.10 (0.30)	0.09 (0.29)	0.569	0.891[4]	0.06 (0.24)	0.06 (0.24)	0.512	0.512[5]	0.01 (0.11)	0.09 (0.29)	**0.007**	**0.060[1]**
(-) No. of Health Problems	1.37 (1.62)	1.28 (1.09)	0.671	0.827[5]	1.31 (1.41)	1.46 (1.25)	0.238	0.555[2]	1.34 (1.30)	1.43 (1.28)	0.325	0.557[5]
(-)Problem Breathing	0.22 (0.41)	0.14 (0.35)	0.902	0.910[6]	-	-	-	-	-	-	-	-
(-)Had Asthma	-	-	-	-	0.11 (0.31)	0.13 (0.34)	0.332	0.544[4]	0.14 (0.35)	0.19 (0.39)	0.199	0.508[3]
(-)Had Chest Infection	-	-	-	-	0.24 (0.43)	0.34 (0.48)	**0.097**	0.315[1]	0.29 (0.46)	0.32 (0.47)	0.313	0.631[4]
(-)Had an Accident	-	-	-	-	-	-	-	-	0.08 (0.27)	0.05 (0.23)	0.679	0.679[6]

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Impact of PFL on:

Child Health @ 6, 12 & 18 Months

	6 Months				12 Months				18 Months			
Appropriate Food	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
How often child eats grains	-	-	-	-	6.36 (1.01)	6.01 (1.39)	**0.033**	0.185[1]	6.26 (0.87)	6.45 (0.86)	0.905	0.905[7]
How often child eats dairy	-	-	-	-	6.57 (1.31)	6.20 (1.22)	**0.032**	0.164[2]	6.85 (1.20)	6.55 (1.21)	**0.066**	0.322[2]
(-)How often child eats sugary foods & fats	-	-	-	-	4.37 (1.88)	4.72 (1.82)	0.114	0.421[3]	5.14 (1.38)	5.31 (1.27)	0.208	0.623[4]
How often child eats protein	-	-	-	-	5.63 (1.09)	5.47 (1.32)	0.196	0.503[4]	5.90 (1.01)	5.47 (1.31)	**0.012**	**0.081[1]**
How often child eats vegetables	-	-	-	-	6.04 (0.84)	6.02 (0.92)	0.463	0.796[5]	6.14 (1.09)	6.00 (0.91)	0.200	0.655[3]
Appropriateness of drinks	-	-	-	-	0.63 (0.49)	0.63 (0.49)	0.499	0.749[6]	-	-	-	-
How often the child eats fruits	-	-	-	-	6.20 (1.35)	6.20 (1.42)	0.516	0.516[7]	6.36 (1.60)	6.51 (1.35)	0.735	0.984[5]
How often the child drinks formula/breastmilk	-	-	-	-	-	-	-	-	6.26 (0.87)	6.45 (0.86)	0.879	0.991[6]

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+ Impact of PFL on: Parenting @ 6 Months

	6 Months			
Maternal Attachment (CMAS)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
Quality of Attachment	4.69 (0.30)	4.68 (0.37)	0.459	0.772[1]
Pleasure in Interaction	4.33 (0.38)	4.34 (0.43)	0.578	0.805[2]
Absence of Hostility	4.39 (0.53)	4.41 (0.53)	0.613	0.613[3]
Parental Stress Inventory (PSI)				
(-)Parent-Child Dysfunctional Interactions	16.94 (4.81)	18.40 (5.71)	**0.041**	**0.082[1]**
(-)Difficult Child	19.45 (5.00)	20.19 (5.50)	0.174	0.277[2]
(-)Parental Distress	26.02 (7.98)	25.71 (7.47)	0.603	0.603[3]
PACOTIS				
Baby Comparison Score	7.52 (1.92)	7.04 (1.90)	**0.047**	0.228[1]
(-)Parental Hostile-Reactive Behaviour	0.80 (1.13)	1.04 (1.21)	**0.077**	0.335[2]
Parental Self-Efficacy	8.80 (1.11)	8.67 (1.24)	0.255	0.665[3]
Parental Impact	7.25 (2.00)	7.07 (2.23)	0.304	0.664[4]
(-) Parental Over-Protection	6.18 (2.19)	6.14 (1.99)	0.535	0.835[5]
Parental Warmth	9.18 (1.17)	9.24 (1.27)	0.649	0.649[6]

	6 Months			
Parental Locus of Control (PLOC)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
(-)Parental Control of Child's Behaviour	6.92 (2.82)	7.22 (2.64)	0.273	0.713[1]
(-)Child Control of Parent's Life	8.43 (3.36)	8.74 (3.11)	0.281	0.705[2]
(-)Parental Responsibility	12.57 (3.18)	12.86 (3.02)	0.253	0.608[3]
(-)Parental Belief in Fate	9.70 (3.65)	9.97 (3.32)	0.330	0.502[4]
(-)Parental Efficacy	6.65 (2.43)	6.76 (2.43)	0.399	0.399[5]
All Parenting Measures				
Interaction with Baby	2.79 (0.61)	2.66 (0.53)	**0.081**	0.238[1]
(-)Overall Parental Locus of Control	44.27 (8.38)	45.54 (7.44)	0.148	0.310[2]
(-)Total Parental Stress Score	62.41 (14.25)	64.30 (16.18)	0.186	0.304[3]
Condon Maternal Score	85.86 (5.24)	85.92 (5.73)	0.536	0.536[4]
Non Step-down Measures				
(-)PSI Stress cut-off	0.01 (0.11)	0.06 (0.23)	**0.079**	-

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+ Impact of PFL on: Parenting @ 12 Months

	12 Months			
AAPI Standardised Scores	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
Realistic parental expectations of children	6.62 (1.91)	6.46 (1.89)	0.291	0.668[1]
Belief in the use of appropriate punishment	4.33 (0.38)	6.29 (1.47)	0.287	0.610[2]
Promoting children's power and independence	4.39 (0.53)	5.27 (2.13)	0.394	0.673[3]
Appropriate parent-child roles	16.94 (4.81)	6.07 (2.22)	0.453	0.591[4]
Parental empathy	16.94 (4.81)	4.92 (2.00)	0.498	0.498[5]
AAPI Cut-offs				
(-)Belief in the use of inappropriate punishment – At risk cut-off	0.00 (0.00)	0.02 (0.15)	0.106	0.336[1]
(-)Oppressing children's power and independence – At risk cut-off	0.23 (0.42)	0.28 (0.45)	0.256	0.636[2]
(-) Inappropriate parent-child roles – At risk cut-off	0.12 (0.33)	0.12 (0.33)	0.517	0.790[3]
(-)Unrealistic parental expectations of children roles – At risk cut-off	0.06 (0.24)	0.05 (0.22)	0.607	0.802[4]
(-)Parental lack of empathy – At risk cut-off	0.34 (0.48)	0.24 (0.43)	0.917	0.917[5]

	12 Months			
Non Step-down Measures	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
Total AAPI score	124.18 (14.25)	125.71 (12.68)	0.125	-
(-)AAPI – total number of scales at risk	0.76 (0.85)	0.76 (1.09)	0.353	-
KIDI %	70.19 (7.82)	69.72 (6.78)	0.496	-
(-) KIDI cut-off (lowest 10%)	0.10 (0.30)	0.10 (0.30)	0.489	-
Mother reads to child	0.90 (0.30)	0.90 (0.30)	0.510	-
Mother reads to child daily	0.46 (0.50)	0.53 (0.50)	0.511	-
Worried about child's behaviour	0.07 (0.26)	0.07 (0.26)	0.766	-
Worried about child's language development	0.06 (0.24)	0.02 (0.15)	0.809	-

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+ IMPACT OF PFL ON: PARENTING @ 18 MONTHS

	18 Months			
Parenting Daily Hassles (PDH)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
(-)PDH Frequency Scale Score	33.61 (7.98)	34.14 (8.21)	0.345	0.526[1]
(-)PDH Challenging Behaviour Score	11.46 (4.74)	11.41 (4.06)	0.531	0.640[2]
(-)PDH Intensity Scale Score	31.54 (11.52)	30.43 (9.86)	0.740	0.782[3]
(-)PDH Parenting Tasks Score	12.38 (4.82)	11.65 (4.20)	0.840	0.840[4]
All Parenting Measures				
Interaction with Child	3.21 (0.48)	3.05 (0.47)	**0.016**	**0.047[1]**
Mother reads to child daily	0.24 (0.43)	0.53 (0.50)	0.376	0.586[2]
Mother reads to child	0.94 (0.24)	0.95 (0.23)	0.551	0.551[3]
Non Step-down Measures				
Worried about child's language development	0.18 (0.38)	0.08 (0.27)	**0.040**	-
Worried about child's behaviour	0.10 (0.30)	0.08 (0.27)	0.345	-
(-)Maternal Separation Anxiety Scale	22.13 (5.93)	22.03 (5.24)	0.540	-

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+ IMPACT OF PFL ON: HOME ENVIRONMENT @ 6 & 18 MONTHS

Instrument	6 Months				18 Months			
HOME Scores	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)	M_{HIGH} (*SD*)	M_{LOW} (*SD*)	*P(i)*	P(ii)
Variety	3.54 (1.12)	3.11 (1.01)	**0.005**	**0.030**[1]	4.08 (1.00)	3.99 (1.05)	0.309	0.493[5]
Learning Materials	6.88 (1.65)	6.26 (1.72)	**0.021**	**0.097**[2]	8.24 (0.97)	8.04 (1.12)	0.176	0.467[3]
Responsivity	8.83 (1.73)	8.55 (2.32)	0.276	0.690[3]	9.50 (1.59)	9.07 (2.08)	0.144	0.455[2]
Acceptance	6.36 (0.56)	6.36 (0.60)	0.484	0.856[4]	6.12 (0.80)	5.66 (1.45)	**0.035**	0.176[1]
Organisation	5.57 (0.64)	5.58 (0.66)	0.543	0.768[5]	5.52 (0.69)	5.45 (0.78)	0.290	0.590[4]
Involvement	4.28 (1.25)	4.40 (1.25)	0.697	0.697[6]	3.88 (1.47)	4.23 (1.56)	0.872	0.872[6]
HOME & SHIF Scores								
Childcare	4.19 (0.59)	3.94 (0.82)	**0.013**	**0.095**[1]	3.84 (0.77)	3.77 (0.79)	0.299	0.692[5]
Toys and Books	7.75 (1.75)	7.28 (1.80)	**0.042**	0.314[2]	9.36 (0.92)	9.32 (1.03)	0.399	0.603[7]
Daily Routines	7.36 (1.40)	7.13 (1.23)	0.129	0.527[3]	8.14 (1.31)	8.11 (1.20)	0.437	0.437[8]
Play	7.24 (1.62)	7.03 (1.44)	0.191	0.584[4]	7.22 (1.60)	7.13 (1.75)	0.369	0.687[6]
Interaction	11.50 (1.99)	11.26 (2.75)	0.338	0.822[5]	12.13 (2.08)	11.43 (2.91)	0.101	0.453[2]
Physical Environment	6.16 (1.11)	6.08 (1.13)	0.343	0.777[6]	6.39 (1.35)	6.02 (1.44)	0.107	0.439[3]
Outings	4.76 (0.46)	4.80 (0.43)	0.683	0.866[7]	4.78 (0.53)	4.69 (0.60)	0.172	0.557[4]
Restrictions/Not Items	5.97 (0.18)	5.99 (0.12)	0.781	0.781[8]	5.61 (0.64)	5.33 (1.21)	**0.089**	0.453[1]
Other Measures								
Total HOME SHIF	16.94 (1.38)	16.61 (1.31)	**0.099**	-	17.40 (1.98)	17.04 (2.08)	0.209	-
Framingham Safety Survey	7.37 (0.77)	7.46 (0.68)	0.782	-	8.32 (0.98)	8.33 (0.93)	0.505	-

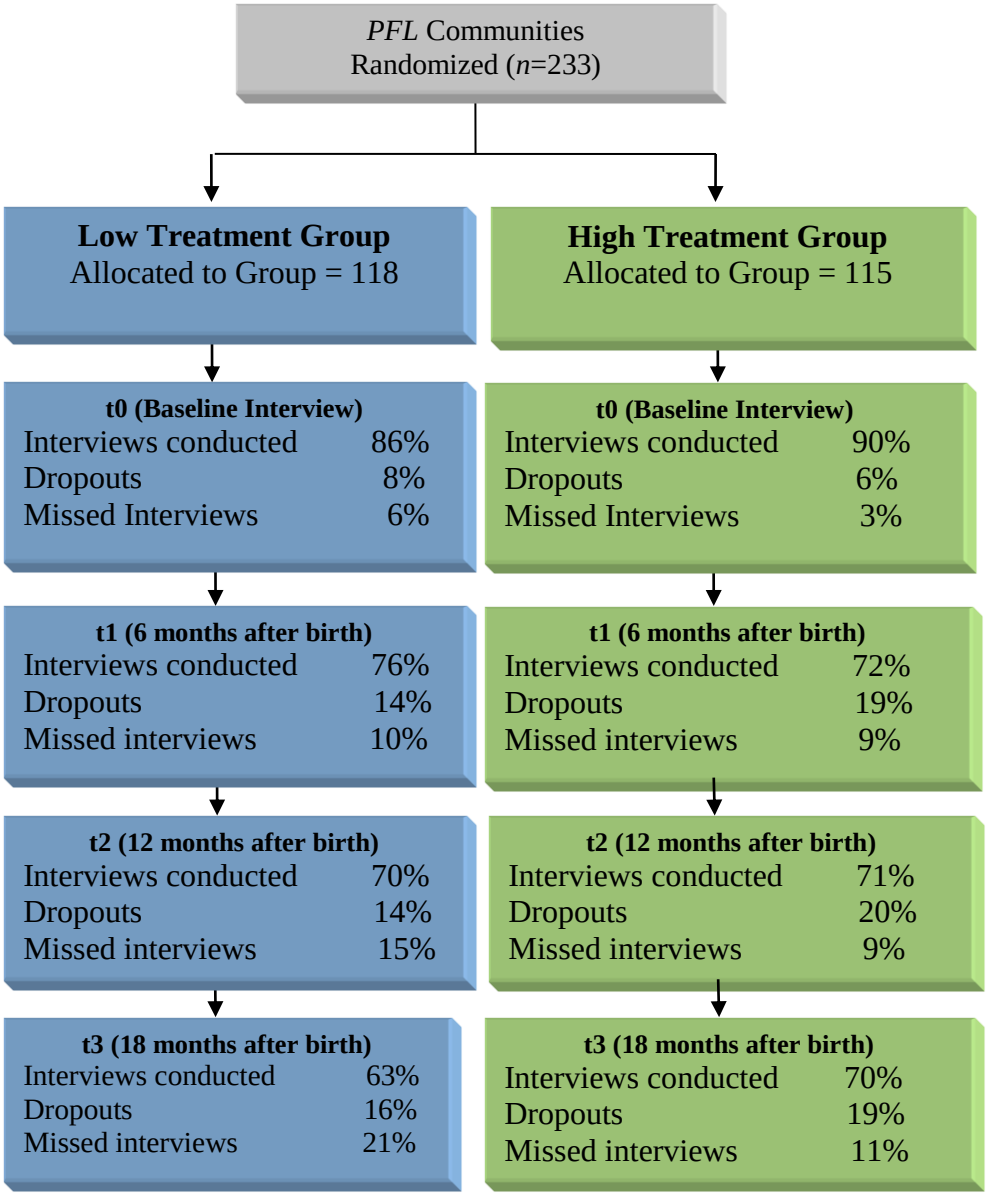
Summary of Results to date

- None or very few effects on child development
- Consistent effects on some dimensions of child health
- Some effects of certain dimension of parenting
- Consistent effects on the quality of the home environment
- We can link many of the effects to information on the PFL Tip Sheets
- Results consistent with the home visiting literature up to 18 months

Testing for Biases

- Attrition
- Engagement/Dosage
- Contamination

Attrition & Disengagement up to 18M



Factors Associated with Attrition & Disengagement up to 18M

Variables	High Treatment Group	Low Treatment Group
Weeks in preg. at programme entry	ns	ns
Mother's age	ns	ns
Partnered	ns	ns
Married	ns	ns
Living with parent(s)	ns	ns
First time mother	ns	ns
Low education	ns	ns
Mother employed (-)	**p<.05**	ns
Saves regularly	ns	ns
Social housing	ns	ns
Cognitive Resources (WASI) (-)	**p<.10**	**p<.05**
Physical Health Condition	ns	ns
Mental Health Condition	ns	ns
Smoking during pregnancy	ns	ns
Drinking during pregnancy (-)	**p<.05**	ns
Drug ever used	ns	ns
Vulnerable attachment (VASQ) (+)	ns	**p<.05**
Positive parenting attitudes (AAPI)	ns	ns
Self efficacy (Pearlin) (-)	ns	**p<.05**
Self esteem (Rosenberg)	ns	ns
Knowledge of infant development (-)	ns	**p<.05**

- **Robustness check:** re-estimated results using Inverse Probability Weighting (IPW)
- Results largely similar
  - Similar results for child development
  - Weaker results for HOME

Programme Dosage

- Varying levels of treatment, thus varying levels of programme effectiveness
- Collected detailed implementation data

	Prenatal-Birth	Birth-6 Months	6 Months-12 Months	12 Months-18 Months	Total
Prescribed no. of home visits (based on bi-weekly visits)	10	13	13	13	49
Delivered no. of home visits	6.2 (4.3) 0-21	7.6 (4.2) 0-19	6.9 (4.3) 0-17	6.3 (4.1) 0-21	27.0 (14.5) 1-66
% of prescribed home visits delivered	67.3 (45.5) 0-350	58.0 (32.0) 0-146	53.0 (33.2) 0-131	48.2 (31.8) 0-162)	55.1 (28.8) 2-137
Mean duration of home visits (mins)	55.1 (17.6) 5-110	59.1 (11.9) 33-91	57.8 (12.5) 15-90	59.9 (11.0) 36-105	56.5 (11.1) 5-82
N	96	96	96	96	

- Participants have received 27 visits between BL & 18 months
- Dosage less than planned (55%)
- No. & duration of visits constant over time

Factors associated with Dosage

Dependant Variables	Frequency of Visits Prenatal -18M
Weeks in preg. at programme entry (-)	**p<.10**
Mother's age	ns
Partnered	ns
Married	ns
Living with parent(s)	ns
First time mother	ns
Low education	ns
Mother employed	ns
Saves regularly	ns
Social housing	ns
Cognitive Resources (WASI) at 3MO (+)	**p<.05**
Mental well-being (WHO5)	ns
Vulnerable attachment (VASQ) (+)	ns
Self efficacy (Pearlin)	ns
Self esteem (Rosenberg) (+)	ns
Knowledge of infant development (KIDI)	ns
Positive parenting attitudes (AAPI)	ns
Physical Health Condition	ns
Mental Health Condition	ns
Smoking during pregnancy (-)	ns
Drug ever used	ns
Child is a girl	ns

- **Estimate dosage models which control for non-random dosage**
  - How much of the programme is needed to generate an effect?
  - Experimenting with PSM and selection models

Contamination in RCTs

- Contamination occurs when the control group either actively or passively receive the intervention intended for the treatment group
- Contamination **bad** for the evaluation, but **good** for the programme
  - May bias results by changing the magnitude in point estimates between treatment and control
  - Wider distribution at lower cost
- Potential for contamination is high in *PFL*
  - Members of the treatment and control groups may be friends, neighbours, colleagues, same family!
- Community comparison group used to safeguard against contamination (~7km away)
- Included a range of indirect & direct ('blue-dye') contamination measures in each survey

Contamination: Indirect measures

	M_{HIGH} (SD)	M_{LOW} (SD)	M_{LFP} (SD)	High-Low	*High-LFP*	*Low-LFP*
Knows neighbours taking part in PFL **(6m)**	0.67 (0.47)	0.56 (0.50)	0.07 (0.26)	ns	p<0.01	p<0.01
Knows neighbours taking part in PFL **(12m)**	0.58 (0.49)	0.69 (0.47)	0.10 (0.30)	p<0.01	p<0.01	p<0.01
Knows neighbours taking part in PFL **(18m)**	0.66 (0.48)	0.62 (0.49)	0.11 (0.32)	ns	p<0.01	p<0.01
Shares PFL material with others **(6m)**	0.68 (0.47)	0.60 (0.49)	~	ns	~	~
Shares PFL material with others **(12m)**	0.74 (0.44)	0.56 (0.50)	~	p<0.01	~	~
Shares PFL material with others **(18m)**	0.80 (0.40)	0.64 (0.48)	~	p<0.05	~	~
Received booklets/guides about parenting (other than PFL) **(12m)**	0.33 (0.47)	0.28 (0.45)	0.61 (0.49)	ns	p<0.01	p<0.01
Received professional advice on parenting (other than PFL) **(12m)**	0.09 (0.28)	0.06 (0.24)	0.07 (0.26)	ns	ns	ns

- Potential for contamination is high among high & low groups
- Low treatment group are not seeking parenting advice elsewhere, but comparison group are

Contamination: 'blue-dye questions'

- Ask all 3 groups questions their knowledge of child development terms & if contamination DID NOT take place:
  - High & Low treatment group will differ in their responses
  - High treatment group will differ from the comparison group
  - Low treatment group will not differ from comparison group

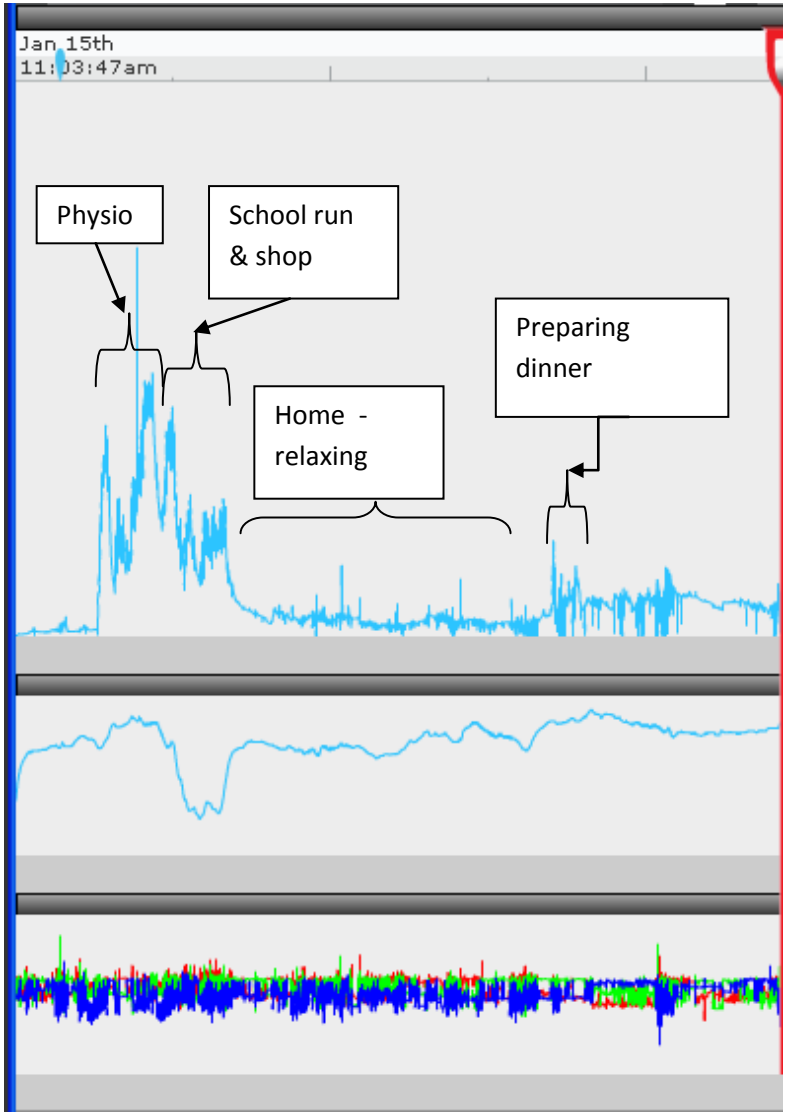
Heard the phrase?	M_{HIGH} (SD)	M_{LOW} (SD)	M_{LFP} (SD)	High-Low	*High-LFP*	*Low-LFP*
Mutual Gaze **(6m)**	0.59 (0.49)	0.08 (0.27)	0.04 (0.19)	p<0.01	p<0.01	ns
Circle of Security **(6m)**	0.49 (0.50)	0.12 (0.33)	0.05 (0.21)	p<0.01	p<0.01	ns
Triple P **(12m)**	0.45 (0.50)	0.04 (0.19)	~	p.<0.01	~	~

- Direct measure suggests contamination is minimal at 6 & 12 months
- Evidence of absorption of *PFL* knowledge among high treatment group

A Day in the Life of a *PFL* Parent

- **Aim**
  - To investigate the impact of PFL on parenting-related stress
  - To compare subjective and physiological indicators of well-being
- **Method**
  - Each consenting parent wears a wrist-mounted biosensor device (Q sensor which measures electro dermal activity recorded via skin conductance) for 1 day
    - EDA increases during states of emotional arousal and decreases during calm, quiet states
  - Next day, participants complete an adapted version of the Day Reconstruction Method.
    - DRM measures emotion, activities, and time use
  - Q-sensor output will be linked to each DRM episode
- **Hypothesis**
  - The high treatment group will be less likely to show physiological signs of strain when interacting with their children than low treatment group

A Day in the Life of a PFL Parent



Interpreting Q sensor data

The large graph is EDA (i.e. changes in skin activity)
The smaller graph shows skin temperature.
The final graph shows motion.

The information provided in the diary task can be mapped on to some of the changes in the graphs.

Fieldwork started February 2013

87 conducted to date

Summary to date

- Few significant effects up to 18M, yet consistent with literature
- Attrition & disengagement between 12 & 18 months very low
- Engagement below prescribed dosage
- 24 results will be available soon

Programme website: www.preparingforlife.com
Evaluation website: http://geary.ucd.ie/preparingforlife/

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