The Stronger Families in Australia (SFIA) study of the impact of Communities for Children

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National evaluation consortium

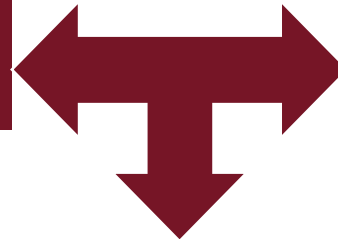Social Policy Research Centre and Australian Institute of Family Studies

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The Communities for Children model

Facilitating Partners ⟷ **CfC Committee**

Develop plans & manage funds
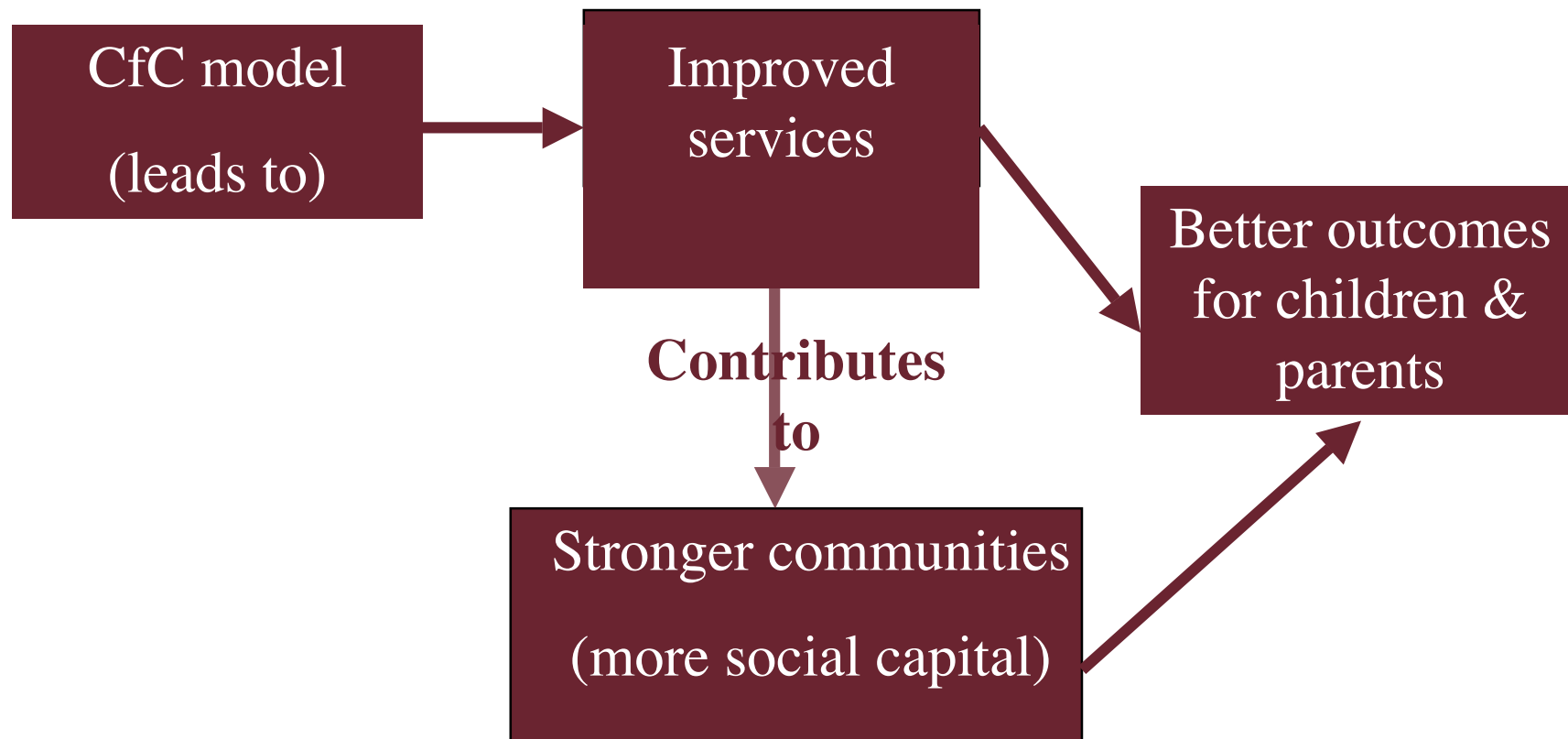
Community Partners deliver services

Logic = provide new services + increased service coordination and cooperation = improved outcomes

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Mechanisms by which CfC may impact upon wellbeing of children and parents

CfC model

(leads to)

Improved services

Contributes to

Better outcomes for children & parents

Stronger communities

(more social capital)

Challenges for evaluation

- **Broad set of outcomes**

- **Community is the target of intervention**

- **CfC is implemented in 45 disadvantaged areas nationally**

- **Content, target groups and specific objectives differs in each CfC site**

- **Short run effects (approximately 12-months after program started)**

Hypothetical example of the impact of CfC
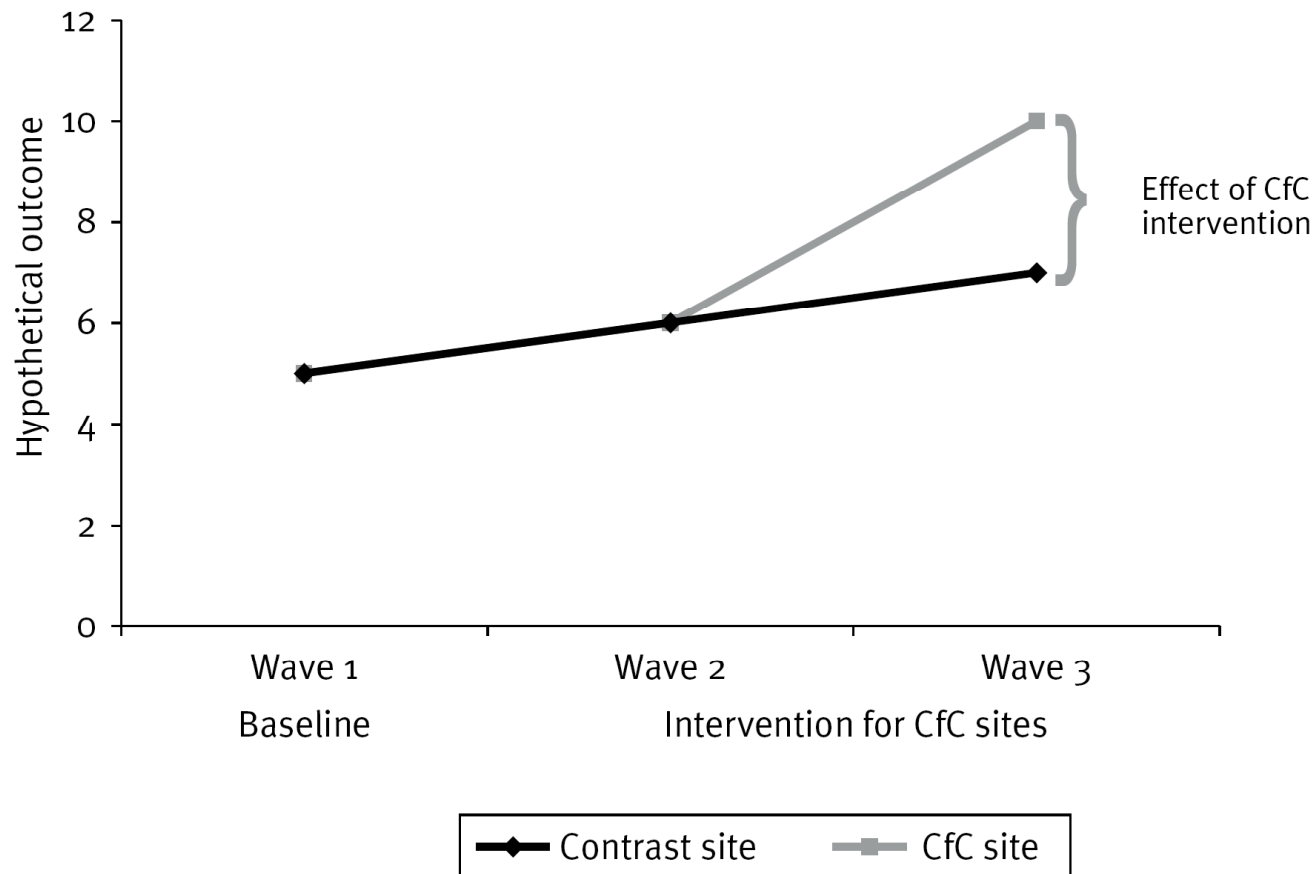
How to estimate the impact of CfC?

- **10 CfC and 5 Contrast sites**
- **Longitudinal study of 2,202 families with a 2-year child**
- **3-waves of data collected**
  - **1st wave pre-intervention (baseline)**
  - **2nd wave around time of implementation of intervention**
  - **3rd wave post-intervention**
- **Random sample of from families receiving FTB Part A or B**
- **42% of the target population participated at wave 1**

Design of the longitudinal survey

Wave 1 (Baseline)	Wave 2	Wave 3 (Post-intervention)
June - Aug 2006	March - July 2007	Feb - End May 2008
2 years of age	3 years of age	4 years of age
2,202 respondents	2,026 respondents	1,836 respondents

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Evaluation methodology

Impact of CfC estimated using two methods:

1. Difference-in-difference

2. OLS or logistic regression

Key assumption contrast sites are a valid counterfactual, that is, in the absence of CfC the children and families in CfC sites would, on average, have done the same as those in the contrast sites

Validity of evaluation methodology

- Contrast sites are a valid counterfactual
  - **Few differences at wave 1 and no statistically significant differences once demographic and SES controlled for**
- Low attrition that was not systematic at longitudinal follow-up
- Appropriately matched comparison group
- Interviewers "blind" to who received the intervention

Covariates in statistical models

The covariates were:

- **the gender and age of the child;**
- **whether the child was of Aboriginal or Torres Strait Islander origin;**
- **maternal age,**
- **Maternal education**
- **maternal labour force status.**
- **Household income**
- **At least one of the parents was born overseas.**
- **Whether the father was 'present and working', 'present and not working' or 'absent' was included.**

Given that CfC and contrast sites were matched on the Socio-Economic Index for Areas (SEIFA), which comprises over 30 area-level variables, it was not necessary to include area characteristics as control variables.

Wave 3 cross-sectional model

$$Y_i = \alpha + \beta_0 CfC + \beta_1 Z_i + e_i$$

Where:

Y_i =   outcome for individual i post the CfC intervention

α =   constant term

CfC =   1 if individual i lived in a CfC site pre-intervention and 0 if individual i lived in a contrast site pre-intervention

Z_i =   a vector of individual family/child characteristics

e_i =   random error term.

Difference-in-difference model

The Wave 1 to Wave 3 difference-in-difference (DD) estimate of the effects of the CfC intervention were given by:

$$DD = (\overline{Y_{CfC}^{Wave3}} - \overline{Y_{CfC}^{Wave1}}) - (\overline{Y_{Contrast}^{Wave3}} - \overline{Y_{Contrast}^{Wave1}}) \tag{2}$$

Where:

$(\overline{Y_{Contrast}^{Wave3}} - \overline{Y_{Contrast}^{Wave1}})$ = the average rate of change from Wave 1 to Wave 3 in contrast sites

$(\overline{Y_{CfC}^{Wave3}} - \overline{Y_{CfC}^{Wave1}})$ = the average rate of change from Wave 1 to Wave 3 in CfC sites.

The difference-in-difference estimates included the same set of control variables as the Wave 3 cross-sectional analysis. The model estimated was:

$$Y_{it} = \alpha + \beta_1 Z_{it} + \beta_2 T_2 + \beta_3 T_3 + \beta_4 CfC + \beta_5 T_2 CfC + \beta_6 T_3 CfC + e_{it} \tag{3}$$

Where:

Y_{it} =   the outcome for individual i at time t

α =   constant term

Z_{it} =   a vector of individual family/child characteristics that are time varying

T_2 =   indicator for Wave 2

T_3 =   indicator for Wave 3

CfC =   indicator for living in a CfC site at Wave 1

e_{it} =   random error term that is normally distributed.

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Outcomes: Health

The child outcomes included:

- *Number of child injuries* requiring medical attention in the past year
- Parental reports of *child physical functioning*, using the 8-item Pediatric Quality of Life Inventory (PedsQL) (Varni et al. 2003)
- *Child emotional and behavioural problems*, as assessed by Strengths and Difficulties Questionnaire (SDQ) (Goodman 1997)
- *Child prosocial behaviour*, using the 5-item Prosocial subscale of the SDQ
- *Child overweight*, (BMI), (Wave 3 only).

The parent outcomes included:

- *Parent self-rated physical health*
- *Parent mental health*, Kessler-6 scale (K-6) (Kessler et al. 2003).

Outcomes: Families & Early learning and care

Parenting :

- **Parent self-ratings of hostile/irritable parenting, from LSAC and the National Longitudinal Survey of Children and Youth (Statistics Canada & Human Resources Development Canada 1995)**
- **A single-item measure of *parenting self-efficacy (LSAC)*.**

Parental relationship conflict, **assessed through a 5-item scale of the frequency of verbal and physical arguments derived from the LSAC study**

Children's receptive vocabulary achievement and verbal ability **were assessed using the LSAC Short-Form of the Peabody Picture Vocabulary Test (PPVT) at Wave 3.**

The quality of the *home learning environment* was based on a 4-item scale developed for LSAC.

Outcomes: Child-friendly communities

- *Support in raising children, (LSAC)*
- *Parent involvement in community service activities*
- *Neighbourhood as a place to bring up children*
- *Community social cohesion, (Sampson, Raudenbush & Earls 1997)*
- *Community facilities, (LSAC)*
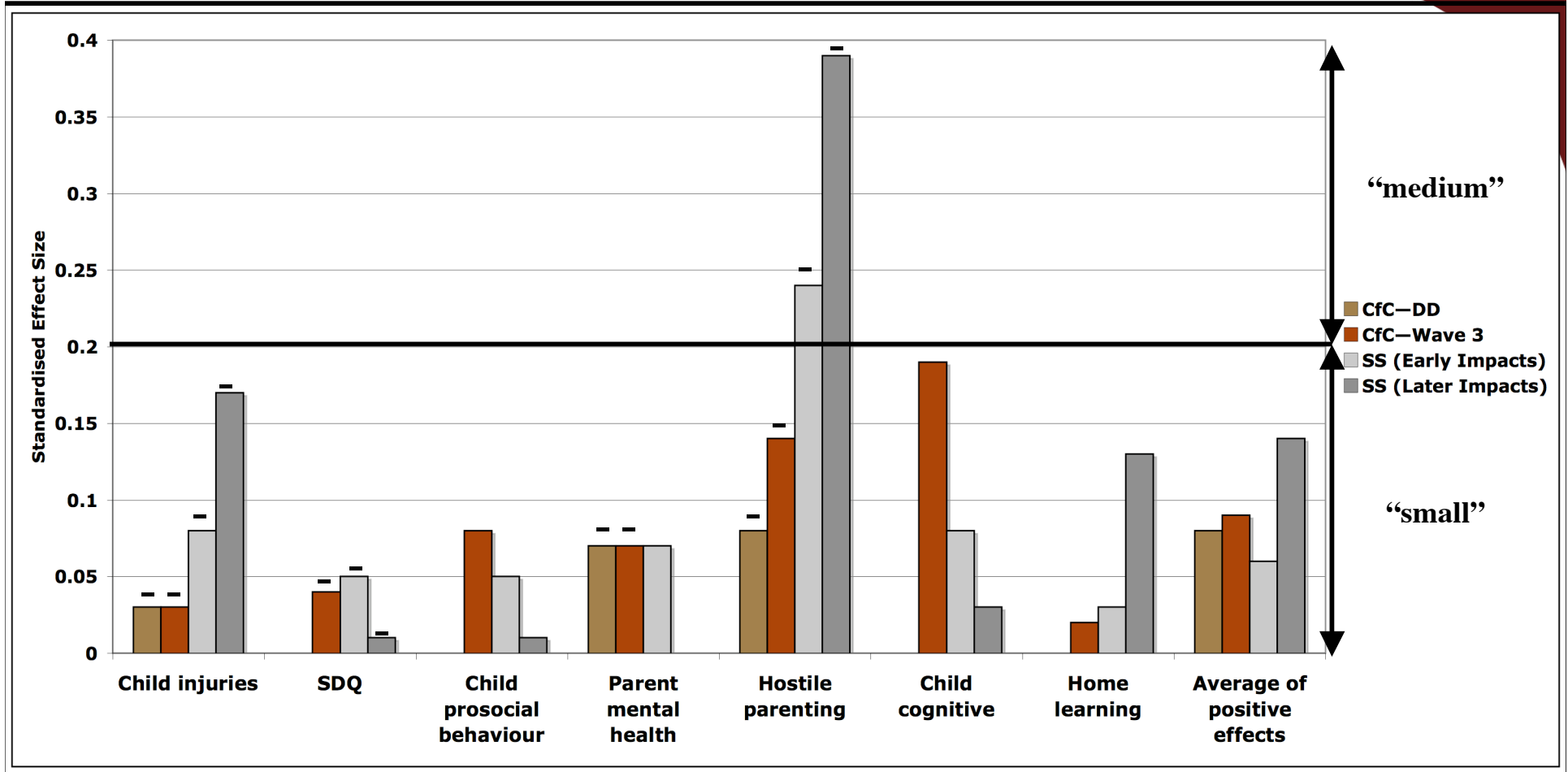- Unmet service need, difficulty accessing developmental, support and adult mental health services if needed.

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CfC impacts

Outcome variable	DID	Wave 3
Child number of injuries requiring medical attention		
Child physical health		✖
Child emotional and behavioural problems		
Child prosocial behaviour		
Child overweight		
Parent general health		
Parent mental health		
Hostile parenting		✔
Parenting self-efficacy		✔
Parental relationship conflict		
Living in a jobless household	✔	✔
Receptive vocabulary achievement and verbal ability		
Quality of home learning environment		
Support in raising children		
Involvement in community service activity		
Neighbourhood as a place to bring up kids		
Community social cohesion		
Community facilities		
Unmet services needs		

How large are these effects? Compared to Sure Start, UK

CfC impacts on disadvantaged groups

Disadvantaged children are:

- at risk of poorer outcomes, and
- less likely to benefit from area-based interventions

Three groups were studied:

- **Hard-to-reach households** (no father present, mother not employed and father not working/not present, low household income, maternal education Year 10 or less, a parent born overseas, and child is of Aboriginal or Torres Strait Islander origin)
- **Households with low income ($485 a week or less)**
- **Households with mothers with low education (Year 10 or less)**

Significant effects of CfC, families in CfC sites compared to contrast sites

Outcome variable	Full sample	Hard-to-reach status		Mother's education		Income	
		Hard-to-reach	Not hard-to-reach	Year 10 or less	Higher than Year 10	Low income	Higher income
Less hostile parenting	✓(W3**)	✓(W3*)	✓(W3**)		✓(W3*)		✓(W3*)
Parenting self-efficacy	✓(W3*)		✓(W3**)				
Service needs are met			✕ (W3**)				
Living in a household with a job	✔(DD** & W3**)	✔(DD** & W3**)		✓(DD**)	✓(DD**)	✓(DD**)	✓(W3**)
Involvement in community service activities				✓(W3**)		✓(DD**)	
Community social cohesion						✓(DD*)	
Child receptive vocabulary and verbal ability[a]			✓(W3*)	✓(W3**)			
Child has no/few emotional and behavioural problems			✓(W3**)				
Reported child physical health	✕(W3**)	✕(W3** & DD*)		✕(W3**)	✕(W3**)	✕(W3**)	✕(W3**)
Parent-reported general health		✕(DD*)				✕(DD**)	
Parent-reported mental health				✕(DD**)			

✓ = CfC result is 'better' than the control site
✕ = CfC result is 'worse' than the control site

Overall pattern of impact of CfC

Outcome variable	DID	Wave 3
Child number of injuries requiring medical attention	✔	✔
Child physical health	✘	✘
Child emotional and behavioural problems	-	✔
Child prosocial behaviour	-	✔
Child overweight		✔
Parent general health	✘	✘
Parent mental health	✘	✘
Hostile parenting	✔	✔
Parenting self-efficacy	✔	✔
Parental relationship conflict	✔	✔
Living in a jobless household	✔	✔
Receptive vocabulary achievement and verbal ability		✔
Quality of home learning environment	-	✔
Support in raising children	-	✔
Involvement in community service activity	✔	✔
Neighbourhood as a place to bring up kids	✔	✔
Community social cohesion	✔	✔
Community facilities	✔	✔
Unmet services needs	✔	✔

Summary of CfC Impacts

Short run effects but similar in size to other early childhood interventions

Positive effects:
- **for disadvantaged families on <u>community engagement and involvement</u>**
- **rates of <u>jobless households</u>**
- **<u>Parenting</u>**
- **<u>verbal ability</u> among children with mothers with relatively low education and those that were not HTR**
- **fewer children were experiencing <u>emotional or behavioural problems</u> in the non-HTR group**

There was a *small* negative effect on <u>child physical health</u> overall and a small negative effect on <u>parent health</u> for disadvantaged groups

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Summary of CfC Impacts

CfC impacts likely to be the result of improved service infrastructure and delivery:

- **Greater number of services based on community needs**

- **Better coordination**

- **Focus on improving 'child-friendliness'**

CfC appears to be working for disadvantaged groups

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Outcome variable	Hard-to-reach		Not hard-to-reach	
	DID	Wave 3	DID	Wave 3
Child injuries requiring medical attention				
Child physical health	✖	✖		
Child emotional and behavioural problems				✔
Child prosocial behaviour				
Child overweight				
Parent general health	✖			
Parent mental health				
Hostile parenting		✔		✔
Parenting self-efficacy				✔
Parental relationship conflict				
Living in a jobless household	✔	✔		
Receptive vocabulary & verbal ability				✔
Home learning environment				
Support in raising children				
Involvement in community service activity				
Neighbourhood as a place to bring up kids				
Community social cohesion				
Community facilities				
Unmet services needs				✖

Outcome variable	Low-income household		Not low-income household	
	DID	Wave 3	DID	Wave 3
Child injuries requiring medical attention				
Child physical health		✖		✖
Child emotional and behavioural problems				✔
Child prosocial behaviour				
Child overweight				
Parent general health	✖			
Parent mental health				
Hostile parenting				✔
Parenting self-efficacy				
Parental relationship conflict				
Living in a jobless household	✔			✔
Receptive vocabulary & verbal ability				
Home learning environment				
Support in raising children				
Involvement in community service activity	✔			
Neighbourhood as a place to bring up kids				
Community social cohesion	✔			
Community facilities				
Unmet services needs				

Outcome variable	Year 10 or less		Greater than Year 10	
	DID	Wave 3	DID	Wave 3
Child injuries requiring medical attention				
Child physical health		✘		✘
Child emotional and behavioural problems				✔
Child prosocial behaviour				
Child overweight				
Parent general health				
Parent mental health	✘			
Hostile parenting				✔
Parenting self-efficacy				
Parental relationship conflict				
Living in a jobless household	✔		✔	
Receptive vocabulary & verbal ability		✔		
Home learning environment				
Support in raising children				
Involvement in community service activity		✔		
Neighbourhood as a place to bring up kids				
Community social cohesion				
Community facilities				
Unmet services needs				