The Effects of Small Unconditional Cash Transfers on Child Abuse and Neglect in Early Childhood: Evidence from New Zealand

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Abstract

Child abuse and neglect are consistently found at higher rates in families facing low income and income insecurity, and in contexts with lower public spending on children and families. However, child abuse and neglect, particularly as measured through engagement with child protective services, has deep intergenerational and institutional causes, casting doubt on the effectiveness of income transfers alone to reduce it. In 2018, Aotearoa New Zealand introduced a "Families Package" of policies, including a small, unconditional cash transfer to mothers with children under three years of age, which increased family income by 5% on average. Using four years of national administrative child protective services and hospitalization data and difference-in-difference models, we find that the introduction of the Families Package was associated with a 19% (OR: 0.81, CI: 0.80-0.81, p.value=0.003) reduction in overall referrals to family services in nonurgent cases of suspected maltreatment, without significant changes in urgent cases. For Māori, the indigenous people of New Zealand, and those for whom the child protective services had recorded notifications of concern for older (half) siblings, the reduction was 26% (OR: 0.74, CI: 0.61-0.91, p.value=0.003). The Families Package likely also reduced neglect in single-mother families (OR 0.6, CI: 0.38 - 0.93, p.value=0.022). We find no statistically significant effects, however, on social worker findings of emotional or physical abuse, or for hospitalizations for traumatic brain injury.

Keywords: Child Benefits, Child Poverty, Cash Transfers, Child Protective Services, Child Abuse, Traumatic Brain Injury

Highlights

What is known

Child abuse is higher among low-income families, and in places with lower public spending on families. Increases in unearned income for families with children, through tax credits and universal income, are associated with reductions in child abuse recorded by child protective services in California and Alaska.

What this study adds

In a natural, nation-wide policy experiment in an ethnically-diverse country context, a marginal increase in unconditional income for children under three was associated with reductions in referrals for child abuse, particularly among indigenous-ethnic and at-risk families, and reductions in neglect among single mother families.

Introduction

Poor children, and children in poor places, are more likely than others to be abused or neglected. Low income is associated with a greater risk of child abuse and referrals to child protective services (Brooks-Gunn & Duncan, 2012; Currie, 2012), while low public spending on children and families is associated with higher referrals to child welfare services (Edwards et al., 2021; Edwards, Frank R, 2016). However, these associations reflect in part deep, intergenerational differences between families and historical institutional, racist, and colonial patterns of family impoverishment, surveillance, and punishment (Fong, 2020; Kong et al., 2021). Social scientists might therefore doubt that marginal increases in unconditional cash transfers to poorer families would lower the incidence of child abuse. In place of income, some policymakers hoping to reduce abuse have turned to provide parent education, training, and broader services instead.

In general, the evidence for benefits of unconditional cash transfers to children remains inconclusive, with a recent study of the 'baby bonus' introduced in Spain in 2007 finding no effect on any mechanisms that could lead to improved educational or health outcomes for children (Borra et al., 2021). Qualitative research in the New Zealand context suggests that the degree to which cash transfers translate into child and family well-being is limited by increases in servicing debt and still insufficient income, as well as limited access to services such as childcare (Momsen, K, 2021). Cash increases, particularly if small, may not therefore translate into reduced child abuse incidence, still less into the notifications of abuse recorded by child protective agencies, which may be driven more by the social work practices, legal regime of child protective services, or agencies, in turn influenced by political and popular context and tolerance of child abuse.

Recently, however, two working papers by economists in the United States suggest that rates of child abuse might be amendable to public unconditional cash transfers to families. Analyzing variation in the value of unconditional, universal payments made through the

Alaska Permanent Fund, Bullinger, Packing and Raissian (2023) find that an additional US$1000 paid to families in the first few months of a child's life reduced the likelihood they were referred to child protective services by age three by 10%. Using variation in tax credit rates in California, Rittenhouse (2023) finds that a one-time US$1,000 transfer to low-income households decreases the number of referrals to child protective services in the first 3 years of a child's life, and subsequent investigations, by approximately 3%. Furthermore, research on the effects of the expanded, fully-refundable (unconditional) child tax credits provided federally in the United States in 2021 during the peak of the COVID-19 pandemic finds that emergency-room visits for child abuse and neglect related incidents declined in the days after the payments were advanced, although these effects did not persist (Bullinger & Boy, 2023).

The mechanisms by which unconditional cash transfers to families could lead to reductions in child abuse are clear from existing research. Increased income to families, and mothers in particular, is typically is spent on child-focused goods and activities - and not on increased substance abuse. This could directly reduce neglect, defined as the failure to provide for basic needs or adequate care and supervision (Gennetian et al., 2022; Gregg et al., 2006; Jackson & Schneider, 2022; Yoo et al., 2022). Beyond their direct effects in reducing parent's ability to care for their children, child-related cash income increases reduce stress in the family. Parents' mental health tends to improve with increases in exogenous cash income, particularly among single mothers and those on low incomes (Akee et al., 2015; Kovski et al., 2023). Material hardship - the sense of going without basic needs -predicts child maltreatment, better than falling withing specific income poverty thresholds alone, because it is more closely related to parental aggravation (Kim & Maguire-Jack, 2021). Child-focused cash benefits reduce the total hours, and weekend shifts, that mothers with young children spend in paid work, which benefits mothers' mental health and reduces stress (Baker et al., 2023; Bibler et al., 2023; González, 2013; Gregg et al., 2005; Han et al., 2001).

Finally, unconditional, universal child-related benefits tend to reach a wider group of families, including those most at risk of child abuse. Unconditional, universal child payments typically reach upward of 96% of eligible families, while (conditional), working tax credits do not reach a fifth of eligible families (Kovski et al., 2023). Universal schemes can also increase the uptake of other targeted, conditional supports among those eligible.

New Zealand's Families Package Policy and Best Start Payments

In 2018, New Zealand introduced a "Families Package" of policies aimed at reducing child poverty, increasing choice for parents over working and caring in the first years of their children's lives, and improving child wellbeing (New Zealand Government, 2018). The main policy change was the introduction of "Best Start": unconditional cash payments made to all primary parents in the first year of their child's life and then progressively for all but the highest-income families in the subsequent 2 years. The Families Package also increased the minimum paid parental leave in 2018 from 18 to 22 weeks, housing-related benefits (the accommodation supplement), and, marginally, working tax credits for families with young children.

Best Start payments were for about NZ$60 (US$37) a week, and parents choose whether to receive them weekly, monthly, or as an annual lump sum totaling more than NZ$3,100. Of eligible families, 97% signed up for payments, typically online as part of their child's birth registration. About two-thirds chose to receive the payment weekly, with the reminder choosing equally between monthly and annually.

Existing analysis by Wilson and McLeod (2023) shows that over the first three years of life, the Families' Package increased the average mother's income by 5%; more than NZ$6,600 (US$4,000). For indigenous Māori mothers, the average increase was eight percent, more than NZ$9,600 (US$5,800) (Wilson & McLeod, 2023). There were no adverse labor supply effects of the policies (Riggs, Lynn et al., 2022), and income from paid employment did not change significantly (Wilson & McLeod, 2023). Furthermore, at least in the short run, increases in the housing subsidy were not associated with rent changes (Hyslop & Maré, 2022). As a result, income inequality between families was reduced. The percentage of children in families in poverty (defined as a household with less than 50% of the median income after housing costs) fell by 6.5 percentage points, from 22.8% in June 2018 to 16.3% in June 2021. The decrease before housing costs was similar over the same period, from 16.5% to 13.6%, however material hardship (defined as lacking 6 or more of 17 measures of material wellbeing such the as ability to pay a $500 bill over a month without borrowing) fell less, by only 2 percentage points (13.3 to 11.0%) (Statistics New Zealand, 2022b).

Objective

Our objective therefore was to use the introduction of the Families Package in New Zealand as a natural-experimental population-wide case in which to ask: Do small increases in unconditional, age-targeted cash transfers reduce child abuse, and inequalities in its rates between families?

Our objective was to observe effects on child abuse and neglect on a range of different measures, that get us closest to effects on actual levels of child maltreatment, as opposed to engagement in child protective services. We consulted with the relevant Ministry for Children, who confirmed that, for example, records of notifications of concerns about potential child abuse members of the public or other professionals make to the CPS agency, and the number of children placed outside their immediate family, with other (foster, or extended) families or institutions, fluctuate greatly according to public sentiment, media attention, and changing policy guidance and legal requirements. We therefore use the five measures detailed below.

Measures of Child Abuse and Neglect

1. **Referrals to Family Services** are where initial assessment or investigation of reports of concern has revealed very likely cases of abuse, and the social worker has made the first initial step in accessing further services: a referral to a Family Group Conference.
2. **Urgent Child Protection Cases** are those urgent cases where the social worker has assessed the immediate safety of a child is of high concern. Referrals to family group conferences do not include these urgent cases.

3. **Emotional Abuse finding**: measures a social worker's assessment that the child has been emotionally abused. Emotional abuse can be any act or omission that results in adverse or impaired psychological, social, intellectual, and emotional functioning or development. This can include patterns of isolation, degradation, constant criticism or negative comparison with others, and exposure to family violence.
4. **Neglect finding**: measures a social worker's assessment that the child has been neglected. Neglect can be physical (not providing the necessities of life such as adequate shelter, food and clothing), emotional (not providing comfort, attention and love), medical, and includes neglectful supervision (leaving children without someone safe looking after them).
5. **Physical Abuse finding**: measures a social worker's assessment that the child has been physically abuse. Physical abuse is any act that may result in physical harm to a child, including hitting, burning, bruising and shaking.
   All the measures of abuse types require there being a notification to the child protective services regarding the child. Abuse findings are recorded for a given period and child, so a given abuse event or referral to family services can, and typically does, involve more than one kind of abuse.
6. **Traumatic Brain Injury** offers an alternative measure of physical abuse to children that does not rely on child protective services. Among infants and young children, physical abuse typically results in a traumatic brain injury (TBI) or Pediatric Abusive Head Trauma (PAHT), also known as "Shaken Baby Syndrome". Kelly (2020) finds that rates of TBI are similar in NZ to those in the United States, and that in NZ police or CPS records do not predict presentation for TBI well. We measure all cases of TBI that result in hospitalizations nation-wide.

Participants and Setting

We sourced administrative data on the entire population of interest: those children in New Zealand born between 2013 and 2019. We used the Integrated Data Infrastructure (IDI) of Statistics New Zealand (Stats NZ), a large database that contains linked individual-level microdata, all with national coverage, including data from the child protective service agency and Ministry for Children (Oranga Tamariki, and formerly the Ministry of Children, Youth and Families) and all hospitalizations occurring in the public health system (Milne et al., 2019; Statistics New Zealand, 2022a). All data are probabilistically linked and deidentified. Access to the data is only for approved and trained researchers and through a secure lab environment. Before releasing any data or findings, Stats NZ aggregates and checks all outputs to ensure confidentiality and anonymity. Stats NZ approved access to the data for this project (application number MAA2019-70), and ethical approval was obtained from the University of Auckland Human Participants Ethics Committee (ref. 027005).

Our study population includes all children born in New Zealand and eligible for Best Start (based on continuous residence in the country for at least 12 months, holding citizenship or

permanent residence), and who resided in New Zealand for at least 30 of their first 36 months of life). Dropping those observations born in the months April to June inclusive, to validate our difference-in-difference model (see below), and in the years 2013 and 2014 in order to have parallel trends before the introduction of the Families Package, gives us an analytic sample of 173,170 (approximately 60,000 births per year of data), of which 29,262 were "treated" with the Families Packages.

The New Zealand setting is a diverse population of children, with a quarter (24.7%) identifying (non-exclusively) as Māori, the indigenous people, 12.5% identifying as Pacific people, and 17.4% as Asians during our period of study. New Zealand's family incomes are below the OECD average, its income inequality higher than average, and as a result, in 2018, its child poverty rate (defined as the proportion of children in families with half the median household income of the total population) is above the OECD average, with rates similar to Italy and Spain (OECD, 2024).

We considered effects separately for five subgroups of children at increased risk for child abuse and neglect:

1. **Māori**: children who were identified by their parents in their birth registration as being of Māori ethnicity.
2. **Pacifica**: children who were identified by their parents in their birth registration as being Pacific peoples. Children could be identified as of multiple ethnicities, and the Māori, Pacifica and other ethnic groups are not mutually exclusive.
3. **Deprived Neighborhood**: children who lived in the top 10 percent of socio-economically deprived neighborhoods in New Zealand. This is based on NZ's neighborhood Deprivation Index 2018, which is based on the proportion of households in the meshblock (a small geographic area in which typically 100-200 people live) without access to the internet at home, and of working age and on a low income, not employed, having a single parent, in a rented accommodation, with poor living space and poor condition (for instance, damp and moldy). (Atkinson et al., 2019). The measure is based on the parents' address at birth registration, in case the Families Package induced children's parents move out of, or into, the most deprived neighborhoods after birth (Hyslop & Maré, 2022).
4. **Single Mother**: the children whose father was not listed on the birth certificate, and/or was not registered at the same address within six months of the child's life. Children whose parents who separated later in their life are not included in this subgroup, in case the Families Package induced parents to separate, or stay living together.
5. **CPS Notified Regarding Siblings**: the children for whom child protective services (CPS) had recorded a notification of concern for an older sibling, including half-sibling, of theirs.

Table 1 provides the means, and variances in parentheses where appropriate, for all our measures of child abuse, and subgroups, by the birth year and birth period used for our method.

Table 1: Descriptive Data by Birth Cohort

	2015-2017 Pre-April n=44,313	**2015-2017 Post-June** n=85,644	**2018 Pre-April** n=13,950	**2018 Post-June** n=29,262
Measure (Mean (Variance))				
Family Service Referrals	0.0219	0.0242	0.031	0.0284
	(0.0214)	(0.0237)	(0.03)	(0.0276)
Urgent Cases	0.0062	0.0067	0.0069	0.0074
	(0.0061)	(0.0066)	(0.0068)	(0.0074)
Neglect	0.0142	0.0136	0.0131	0.0123
	(0.014)	(0.0134)	(0.0129)	(0.0121)
Emotional Abuse	0.0247	0.0243	0.0243	0.0229
	(0.0241)	(0.0237)	(0.0238)	(0.0224)
Physical Abuse	0.0035	0.0033	0.0037	0.0034
	(0.0034)	(0.0033)	(0.0036)	(0.0034)
Traumatic Brain Injury	0.0025	0.0027	0.0024	0.0028
	(0.0025)	(0.0027)	(0.0024)	(0.0028)
Subgroup (Percentage)				
Māori	24.6%	24.9%	24.3%	24.4%
Pacifica	12.4%	12.5%	13.3%	12.4%
CPS Notified for Siblings	16.4%	16.3%	16.4%	15.8%
Neighborhood Deprived	15.7%	15.7%	16.0%	15.0%
Single Mother	6.4%	5.9%	5.6%	6.5%

Method

Most of the Families Package of policy changes were implemented on a single date: 1 July 2018. Babies born before that date were not eligible for Best Start (unless their due date was on or after July 1, 2018). Substantial increases in a housing cost subsidy for low-income families (the Accommodation Supplement), however, were introduced on April 1, 2018. We therefore compare those born January to March 2018 with those born July to December 2018. We then compare this difference to the equivalent differences in birth months over the previous three years, 2015-2017. This Difference-in-Differences model improves on before and after comparisons by adjusting for any seasonality that could affect family income, or patterns of child abuse and social work practices (Deutscher & Breuning, 2018).

Child abuse and neglect before age three, on all our measures, is relatively rare, being

recorded for fewer than five percent of children. All our outcome measures are binary, so we use binomial Logistic Regression. Formally, we model y_i as the binary outcome for child i in the following equation:

$$y_i = \beta_0 + \beta_1 z_{2018,i} + \beta_2 z_{\geq \text{July},i} + \beta_3 (z_{2018,i} \cdot z_{\geq \text{July},i}) + \beta_4 \text{BirthYear}_i + \epsilon_i \quad (1)$$

where variable $z_{2018,i}$ is a binary indicator for whether child i was born in the year the policy (treatment) was introduced, 2018, compared to in the years 2015-2017. The variable $z_{\geq \text{July},i}$ is a binary indicator for the period of birth being after the introduction of the full policy change (treatment) on July 1, compared with being born before April 1. The interaction term $z_{2018,i} \cdot z_{\geq \text{July},i}$ is the Difference in Difference (DiD) estimator, representing the treatment effect. β_3 indicates the difference in the outcome attributable to the treatment after controlling for year and time period differences, and is calculated as:

$$\beta_3 = [(Y_{\geq \text{July},2018} - Y_{\leq \text{April},2018}) - (Y_{\geq \text{July, 2015-17}} - Y_{\leq \text{April},2015\text{-}17}),] \quad (2)$$

where $Y_{\geq \text{July},2018}$ is the average outcome for the treated group, $Y_{\leq \text{April},2018}$ is the average outcome for those born before the policy in 2018, $Y_{\geq \text{July, 2015-17}}$ is the average outcome for children born before after July in 2015-2017 and $Y_{\leq \text{April},2015\text{-}17}$ is the average outcome for those born before April in 2015-2017.

The validity of a Difference-in-Differences estimate rests on there being parallel trends before treatment. In our case, this means that in the that any differences in outcomes seen between those born after July and between Jan-April inclusive are consistent across the years before 2018. On our measures, likely reflecting changes in practices and record-keeping in the CPS agency, urgent cases referrals in 2013 and cases where the family has been referred to group conferences in 2014 were not parallel (Table S1). There is a significant interaction between the year of birth and being born after July, compared to in first three months of the year. Due to this, we use the years 2015-2017, where trends in all outcomes are parallel, as comparison years pre-treatment.

Results

The difference-in-difference estimates (reported in Table 2) indicate that the Families Package did significantly reduce overall referrals to family group conferences made by child protective services, typically in the case of non-urgent concern for the wellbeing of the child by 19% (p=0.003) The models by subgroup show these reductions were driven primarily by substantial reductions of 18-33% (p=0.003) for Māori children, and children for whom the CPS had received and recorded a notification of concern for an older sibling. There were also likely reductions among children in deprived neighborhoods. There was no significant increase (or decrease) in urgent cases.

Neglect also appears to have been reduced for children in single-mother families, and potentially substantially with the point-estimate of a 40% reduction (OR 0.60, CI:0.38-0.93,

p=0.022). Figure 1 visualizes the relative effects in percentage change terms, and confidence intervals, for Referrals to Family Services and Neglect. It suggests that, while the confidence interval crosses zero, it is possible that neglect could have also reduced among children born in deprived neigborhoods.

Figure 1: Effects of the Families Package on Referrals to Family Child Protection Services and Neglect by Age 3 among at-risk Subgroups

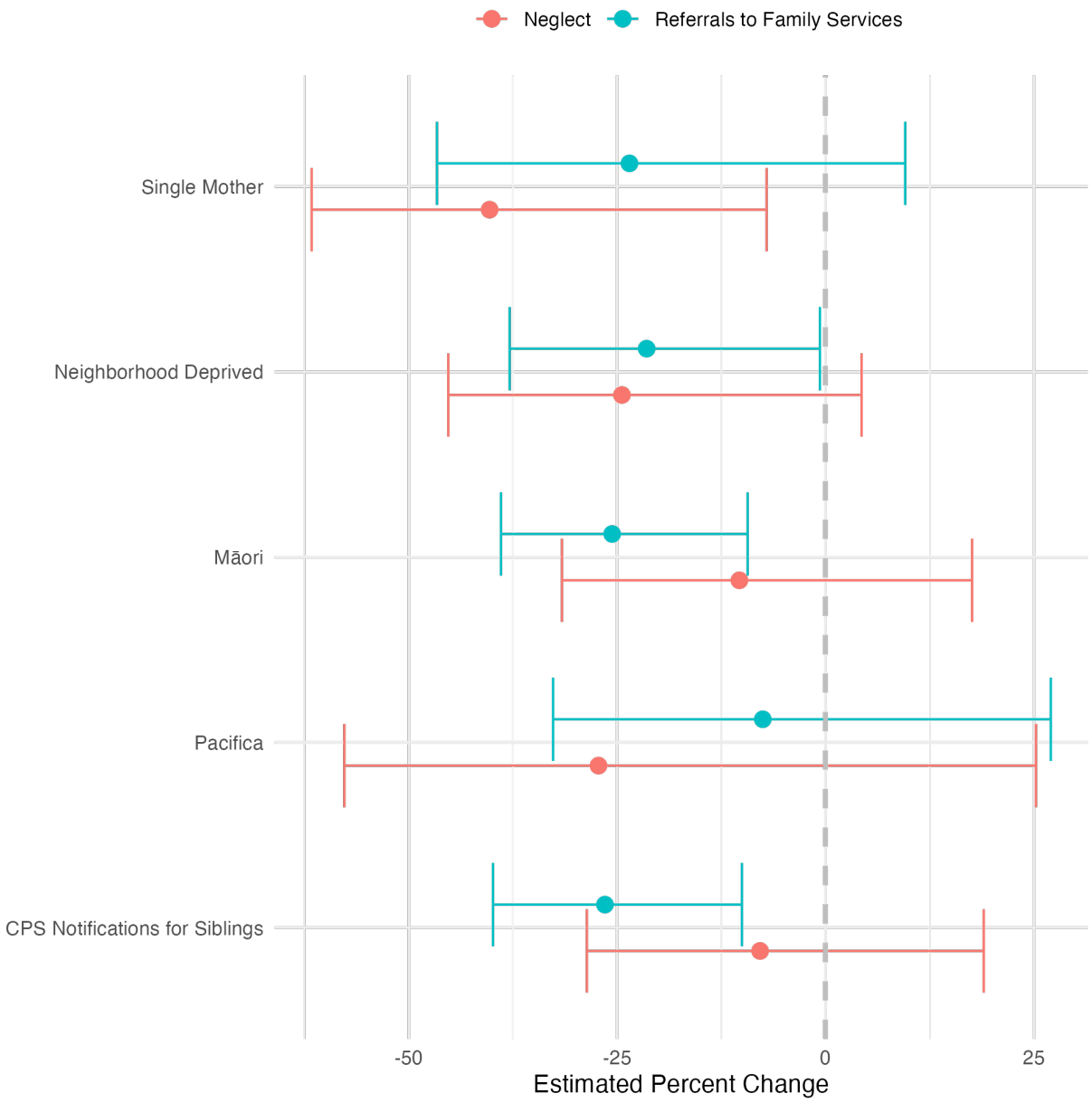

Table 2: Difference-in-Difference Estimates for the Effects of the Families Package on Child Abuse and Neglect

Model	Odds Ratio	CI	p-value	Mean	Observations
Referrals to Family Services					
Overall	0.81	0.80 - 0.81	0.072**	0.025	135684
Māori	0.74	0.61 - 0.91	0.003**	0.052	42774
Pacifica	0.93	0.67 - 1.27	0.629	0.042	21684
Neighborhood Deprived	0.79	0.62 - 0.99	0.044*	0.060	27030
Single Mother	0.77	0.53 - 1.10	0.144	0.068	10581
CPS Notified for Siblings	0.74	0.60 - 0.90	0.003**	0.079	28092
Urgent Cases					
Overall	0.93	2.48 - 0.35	0.145	0.007	135684
Māori	0.96	0.66 - 1.40	0.849	0.016	42774
Pacifica	0.95	0.49 - 1.85	0.874	0.009	21684
Neighborhood Deprived	0.88	0.56 - 1.38	0.586	0.017	27030
Single Mother	0.85	0.40 - 1.83	0.676	0.017	10581
CPS Notified for Siblings	0.89	0.63 - 1.26	0.511	0.028	28092
Neglect					
Overall	0.91	4.92 - 0.17	0.105	0.014	135684
Māori	0.90	0.68 - 1.18	0.430	0.033	42774
Pacifica	0.73	0.42 - 1.25	0.251	0.015	21684
Neighborhood Deprived	0.76	0.55 - 1.04	0.089	0.034	27030
Single Mother	0.60	0.38 - 0.93	0.022*	0.051	10581
CPS Notified for Siblings	0.92	0.71 - 1.19	0.530	0.058	28092
Emotional Abuse					
Overall	0.92	7.81 - 0.11	0.108	0.024	135684
Māori	0.95	0.78 - 1.15	0.582	0.061	42774
Pacifica	0.84	0.58 - 1.21	0.345	0.034	21684
Neighborhood Deprived	0.82	0.65 - 1.05	0.110	0.062	27030
Single Mother	0.78	0.54 - 1.13	0.187	0.063	10581
CPS Notified for Siblings	0.96	0.79 - 1.17	0.684	0.098	28092
Physical Abuse					
Overall	0.99	1.10 - 0.89	0.201	0.003	135684
Māori	0.92	0.53 - 1.60	0.766	0.007	42774
Pacifica	0.64	0.27 - 1.55	0.326	0.005	21684
Neighborhood Deprived	0.77	0.40 - 1.50	0.447	0.009	27030
Single Mother	1.41	0.57 - 3.50	0.454	0.010	10581
CPS Notified for Siblings	0.92	0.54 - 1.56	0.755	0.011	28092

Continued: Difference-in-Difference Estimates for the Effects of the Families Package on Child Abuse and Neglect

Model	Odds Ratio	CI	p-value	Mean	Observations
Traumatic Brain Injury					
Overall	1.07	0.63 - 1.82	0.238	0.003	135684
Māori	0.74	0.34 - 1.64	0.460	0.003	42774
Pacifica	0.51	0.15 - 1.76	0.284	0.003	21684
Neighborhood Deprived	0.89	0.29 - 2.76	0.838	0.003	27030
Single Mother	0.34	0.06 - 1.86	0.214	0.003	10581
CPS Notified for Siblings	0.63	0.24 - 1.62	0.337	0.004	28092

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Sensitivity

As a sensitivity analysis, we restrict our treatment group to those born July to September inclusive. This reduces the maximum difference in birth dates between children born before and after the policy implementation from 12 to 9 months, but also of course reduces the statistical power we have to estimate these relatively rare experiences of abuse, particularly for small subgroups. On these models (reported in Table S2), effects sizes were similar, but none were statistically significant.

Discussion

We find that the introduction of a small "baby bonus" in New Zealand was associated with significant reductions in referrals to family services for nonurgent concerns for child abuse, particularly for Māori children, and a reduction in neglect in single-mother families, without any significant increases in urgent child protection cases. Our access to nationwide administrative data, gives us sufficient sample to analyze even relatively rare cases of child abuse, including hospitalizations for Traumatic Brain Injury where we were estimating from a minimum of 80 cases. Our access to historical child protection records for siblings, including half-siblings, also enables us to identify the families most at risk for child abuse and neglect, and effectively control for even unobserved family-level risk factors in that subgroup analysis. Administrative data, however, is a product of the legal and policy framework for child protection, as well as actual levels of harm to children. In particular, a finding of a case of physical or emotional abuse by age three - which we find did not reduce as a result of the Families Package - would require the social worker to have obtained substantial evidence. Rates of substantiated abuse thus could be unchanged, even as the number of children social workers suspected were being maltreated reduced, as the reduction in referrals we see indicates.

As well as administrative data, our study of course also relies on the assumption of our difference-in-difference or regression discontinuity model, namely that the differences we

observed in outcomes between children born after July and before April 2018 were due to the introduction of the Families Package. While this is a stronger assumption than that typically required in evidence from Randomized Control Trials (RCTs), the regression approach has the advantage of giving us a whole population-wide, and naturalistic, effects of a universal policy as implemented nationally (Heckman, James, 2020).

Even where confined to at-risk subgroups, the reductions in child abuse and neglect in early childhood we attribute to the Families Package, suggest it represents a worthy social investment. Child abuse and neglect is as prevalent - and costly - as other major public health concerns. Before the Families Package was introduced in New Zealand, for example, more children were referred to child protective services for suspected abuse against them before turning 18 than were medicated for asthma (Rouland & Vaithianathan, 2018). The public cost of child abuse is also equivalent to major public health problems such as heart disease or diabetes, in terms of additional spending required in terms of healthcare, special education and criminal justice (Fang et al., 2012). Children certainly experience abuse as a major trauma with lasting effects on many areas of functioning, health, and wellbeing (Dunn et al., 2018; Lippard & Nemeroff, 2020). Any reduction in abuse in early childhood could therefore have significant, lasting benefits.

The reduction in neglect among single mother families we find may have significance for other forms of child abuse at later ages, although find no effects of the Families Package on other kinds of abuse before age three. Neglect early in life is typically indicative of later and lasting child abuse. A study in California found that four out of five children investigated for neglect in infancy were subsequently referred to child protective services for all types of abuse (Palmer et al., 2023). Neglect is most directly affected by income, since it is defined by a failure to provide for the child's basic needs, including care and supervision. If such provision improves parent mental health, parent-child relationships, and reduced family stress in the early years, this could translate into improvements in other measures of child wellbeing at older ages.

Nonetheless, the lack of significant effects of the Families Package on social worker findings for child abuse other than neglect does contrast with the significant reductions in abuse associated with increases in the unconditional permanent income in Alaska, and child-related tax-credits in California (Bullinger & Boy, 2023; Rittenhouse, 2023). We know that the rates of engagement with child protective services, and findings of child abuse, are exceptionally high in the United States compared to most other rich democracies, and about twice that of New Zealand (Wildeman, 2018). This would mean a reduction of the same magnitude would have greater statistical significance. Secondly, the social policy context for families in the United States is also exceptional. The effect of an income transfer on parents' stress and ability to provide for their children could be expected to be lesser in a context with a broad social safety net already in place. We know that increases in minimum wages in the US reduced child abuse and neglect, and the introduction of short paid parental leaves have also reduced child abuse and neglect (Bullinger, Klika, et al., 2023; W. Schneider et al., 2022). In the New Zealand case however, the Families Package came into effect on top of one of

the highest minimum wages in the world, an 18-week universal paid parental leave policy, some unconditional income support for families, and universal healthcare provision free at the point of use.

Although cash transfers are typically found to be the most beneficial among families with the lowest incomes, research also shows that economic insecurity is associated with stress, aggression, and violence in families, regardless of actual income or employment shocks (Kong et al., 2021; D. Schneider et al., 2016). If sufficient enough to provide greater economic security to a greater proportion of families with young children, unconditional cash transfers could have welfare benefits beyond those most at risk. Certainly, that is what evidence from the 2021 universal, refundable child tax credits in the United States, and from the casino payments in the Great Smokey Mountains suggest (Akee et al., 2015; Bullinger & Boy, 2023). The reduction in referrals to family services regarding child protection concerns and in neglect among some of the highest-risk families that we find in the New Zealand context points, at least, to the potential for social policy to support parents and prevent harm to children.

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Disclaimer: The results presented in this study are the work of the author, not Stats NZ or individual data suppliers. to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 1922. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/.

References

Akee, R. K. Q., Simeonova, E., Costello, J., Copeland, W. E., Keeler, G., Angold, A., & Costello, E. J. (2015). Parents' Incomes and Children's Outcomes: A Quasi-Experiment Using Transfer Payments from Casino Profits. *American Economic Journal: Applied Economics*, *2*(1), 86–115. https://doi.org/10.1007/s13398-014-0173-7.2

Atkinson, J., Salmond, C., & Crampton, P. (2019). NZDep2018 Index of Deprivation.

Baker, M., Messacar, D., & Stabile, M. (2023). Effects of Child Tax Benefits on Poverty and Labor Supply: Evidence from the Canada Child Benefit and Universal Child Care Benefit. *Journal of Labor Economics*, *41*(4), 1129–1182. https://doi.org/10.1086/721379

Bibler, A., Guettabi, M., & Reimer, M. N. (2023). Universal Cash Transfers and Labor Market Outcomes. *Journal of Policy Analysis and Management*, *42*(1), 198–224. https://doi.org/10.1002/pam.22455

Borra, C., Costa-Ramon, A., González, L., & Sevilla-Sanz, A. (2021). The Causal Effect of an Income Shock on Children's Human Capital [Number: 1272 Publisher: Barcelona School of Economics]. *Working Papers*. Retrieved February 19, 2024, from https://ideas.repec.org//p/bge/wpaper/1272.html

Brooks-Gunn, J., & Duncan, G. J. (2012). The Effects of Poverty on Children. *Future of Children*, *7*(2).

Bullinger, L. R., Packham, A., & Raissian, K. M. (2023, September). Effects of Universal and Unconditional Cash Transfers on Child Abuse and Neglect. https://doi.org/10.3386/w31733

Bullinger, L. R., & Boy, A. (2023). Association of Expanded Child Tax Credit Payments With Child Abuse and Neglect Emergency Department Visits. *JAMA Network Open*, *6*(2), e2255639. https://doi.org/10.1001/jamanetworkopen.2022.55639

Bullinger, L. R., Klika, B., Feely, M., Ford, D., Merrick, M., Raissian, K., Rostad, W., & Schneider, W. (2023). Paid Family Leave: An Upstream Intervention to Prevent Family Violence. *Journal of Family Violence*, 1–11. https://doi.org/10.1007/s10896-022-00486-3

Currie, J. M. (2012). Choosing among Alternative Programs for Poor Children. *Future of Children*, *7*(2).

Deutscher, N., & Breuning, R. (2018). Baby Bonuses: Natural Experiments in Cash Transfers, Birth Timing and Child Outcomes. *Economic Record*, *94*(304). https://doi.org/https://doi.org/10.1111/1475-4932.12382

Dunn, E. C., Nishimi, K., Gomez, S. H., Powers, A., & Bradley, B. (2018). Developmental timing of trauma exposure and emotion dysregulation in adulthood: Are there sensitive periods when trauma is most harmful? *Journal of Affective Disorders*, *227*, 869–877. https://doi.org/10.1016/j.jad.2017.10.045

Edwards, F., Wakefield, S., Healy, K., & Wildeman, C. (2021). Contact with Child Protective Services is pervasive but unequally distributed by race and ethnicity in large US counties [Publisher: Proceedings of the National Academy of Sciences]. *Proceedings of the National Academy of Sciences*, *118*(30), e2106272118. https://doi.org/10.1073/pnas.2106272118

Edwards, Frank R. (2016). Saving Children and Controlling Families: Punishment, Redistribution and Child Protection. *American Sociological Review*, *83*(1), 575–595. Retrieved February 13, 2024, from https://soc.washington.edu/research/publications/saving-children-controlling-families-punishment-redistribution-and-child

Fang, X., Brown, D. S., Florence, C., & Mercy, J. A. (2012). The Economic Burden of Child Maltreatment in the United States And Implications for Prevention. *Child abuse & neglect*, *36*(2), 156–165. https://doi.org/10.1016/j.chiabu.2011.10.006

Fong, K. (2020). Getting Eyes in the Home: Child Protective Services Investigations and State Surveillance of Family Life [Publisher: SAGE Publications Inc]. *American Sociological Review*, *85*(4), 610–638. https://doi.org/10.1177/0003122420938460

Gennetian, L. A., Duncan, G., Fox, N., Magnuson, K., Halpern-Meekin, S., Noble, K., & Yoshikawa, H. (2022, August). Unconditional Cash and Family Investments in Infants: Evidence from a Large-Scale Cash Transfer Experiment in the U.S. Retrieved June 25, 2024, from https://papers.ssrn.com/abstract=4203053

González, L. (2013). The Effect of a Universal Child Benefit on Conceptions, Abortions, and Early Maternal Labor Supply [Publisher: American Economic Association]. *American economic journal. Economic policy*, *5*(3), 160–188. https://doi.org/10.1257/pol.5.3.160

Gregg, P., Waldfogel, J., & Washbrook, E. (2006). Family expenditures post-welfare reform in the UK: Are low-income families starting to catch up? *Labour Economics*, *13*(6), 721–746. https://doi.org/10.1016/j.labeco.2005.10.002

Gregg, P., Washbrook, E., Propper, C., & Burgess, S. (2005). The Effects of a Mother's Return to Work Decision on Child Development in the UK*. *The Economic Journal*, *115*(501), F48–F80. https://doi.org/10.1111/j.0013-0133.2005.00972.x

Han, W.-J., Waldfogel, J., & Brooks-Gunn, J. (2001). The Effects of Early Maternal Employment on Later Cognitive and Behavioral Outcomes. *Journal of Marriage and Family*, *63*(2), 336–354. https://doi.org/10.1111/j.1741-3737.2001.00336.x

Heckman, James. (2020). Randomization and Social Policy Evaluation Revisited. *National Bureau of Economic Research*, (107). https://www.nber.org/system/files/working_papers/t0107/t0107.pdf

Hyslop, D., & Maré, D. (2022). The impact of the 2018 Families Package Accommodation Supplement area changes on housing outcomes. *Motu Working Paper*. http://dx.doi.org/10.2139/ssrn.4098191

Jackson, M. I., & Schneider, D. (2022). Public Investments and Class Gaps in Parents' Developmental Expenditures [Publisher: SAGE Publications Inc]. *American Sociological Review*, *87*(1), 105–142. https://doi.org/10.1177/00031224211069975

Kelly, Patrick. (2020). *Paediatric Abusive Head Trauma in New Zealand* [Doctoral dissertation].

Kim, H., & Maguire-Jack, K. (2021). Longitudinal changes in child maltreatment reports [Place: US Publisher: Educational Publishing Foundation]. *American Journal of Orthopsychiatry*, *91*(5), 635–646. https://doi.org/10.1037/ort0000565

Kong, N., Phipps, S., & Watson, B. (2021). Parental economic insecurity and child health. *Economics & Human Biology*, *43*, 101068. https://doi.org/10.1016/j.ehb.2021.101068

Kovski, N., Pilkauskas, N. V., Michelmore, K., & Shaefer, H. L. (2023). Unconditional cash transfers and mental health symptoms among parents with low incomes: Evidence from the 2021 child tax credit. *SSM - population health*, *22*, 101420. https://doi.org/10.1016/j.ssmph.2023.101420

Lippard, E. T., & Nemeroff, C. B. (2020). The Devastating Clinical Consequences of Child Abuse and Neglect: Increased Disease Vulnerability and Poor Treatment Response in Mood Disorders [Publisher: American Psychiatric Publishing]. *American Journal of Psychiatry*, *177*(1), 20–36. https://doi.org/10.1176/appi.ajp.2019.19010020

Milne, B. J., Atkinson, J., Blakely, T., Day, H., Douwes, J., Gibb, S., Nicolson, M., Shackleton, N., Sporle, A., & Teng, A. (2019). Data Resource Profile: The New Zealand Integrated Data Infrastructure (IDI). *International Journal of Epidemiology*, *48*(3), 677–677e. https://doi.org/10.1093/ije/dyz014

Momsen, K. (2021). *Client experiences of the 2018-2020 social assistance changes - a baseline research synthesis.* (tech. rep.). Ministry of Social Development (MSD). https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/families-package-reports/families-package.html

New Zealand Government. (2018). *Families Package Factsheet* (tech. rep.). New Zealand Government.

OECD. (2024). *Inequality - Poverty gap* (tech. rep.). Retrieved June 16, 2024, from http://data.oecd.org/inequality/poverty-gap.htm

Palmer, L., Font, S., Rebbe, R., & Putnam-Hornstein, E. (2023). Lifetime rates and types of subsequent child protection system contact following a first report of neglect: An age-stratified analysis. *PloS One*, *18*(4), e0283534. https://doi.org/10.1371/journal.pone.0283534

Riggs, Lynn, Hyslop, Dean, & Maré, David. (2022). Estimating the Impact of the Families Package Changes in Financial Incentives. *Motu Working Paper 22-06*. Retrieved July 29, 2024, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4434485

Rittenhouse, K. (2023). Income and Child Maltreatment: Evidence from a Discontinuity in Tax Benefits. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4349231

Rouland, B., & Vaithianathan, R. (2018). Cumulative Prevalence of Maltreatment Among New Zealand Children, 1998–2015. *American Journal of Public Health*, *108*(4), 511–513. https://doi.org/10.2105/AJPH.2017.304258

Schneider, D., Harknett, K., & McLanahan, S. (2016). Intimate Partner Violence in the Great Recession. *Demography*, *53*(2), 471–505. https://doi.org/10.1007/s13524-016-0462-1

Schneider, W., Bullinger, L. R., & Raissian, K. M. (2022). How does the minimum wage affect child maltreatment and parenting behaviors? An analysis of the mechanisms. *Review of Economics of the Household*, *20*(4), 1119–1154. https://doi.org/10.1007/s11150-021-09590-7

Statistics New Zealand. (2022a). *Integrated Data Infrastructure* (tech. rep.). Retrieved July 28, 2024, from https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/

Statistics New Zealand. (2022b, February). *Child Poverty Statistics: Year ended June 2021* (tech. rep.). Retrieved February 12, 2024, from https://www.stats.govt.nz/information-releases/child-poverty-statistics-year-ended-june-2021/

Wildeman, C. (2018). The Incredibly Credible Prevalence of Child Protective Services Contact in New Zealand and the United States. *American Journal of Public Health*, *108*(4), 438–439. https://doi.org/10.2105/AJPH.2018.304313

Wilson, M., & McLeod, K. (2023). How the Families Package Increased Income and Created New Opportunities for Life-course Research [Number: 4]. *Policy Quarterly*, *19*(4), 22–33. https://doi.org/10.26686/pq.v19i4.8652

Yoo, P. Y., Duncan, G. J., Magnuson, K., Fox, N. A., Yoshikawa, H., Halpern-Meekin, S., & Noble, K. G. (2022). Unconditional cash transfers and maternal substance use: Findings from a randomized control trial of low-income mothers with infants in the U.S. *BMC Public Health*, *22*(1), 897. https://doi.org/10.1186/s12889-022-12989-1