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Te Whare Wānanga o Waikato

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Family structure and stability, cultural connectedness, and early child outcomes among tamariki Māori

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Supported by MSD to inform the Whānau Wellbeing research programme

I. Background: Whānau Wellbeing



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- Since 2015, ongoing NIDEA worksteam for Superu and MSD exploring whānau wellbeing
 - Wellbeing of Māori adults by household type
 - How Māori define their whānau
 - Subjective whānau wellbeing
 - Housing quality of Māori adults
- Te Kupenga
- Shift focus to early child wellbeing outcomes of tamariki Māori in the context of family structure and stability

I. Background: Literature



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- Early childhood as a sensitive period for development and critical intervention
- Tamariki Māori less likely to be in homes characterised as a ‘nuclear’ family. Fixation on sole-parent homes and risks
- Simple characterisation fails in understanding diversity and stability in experiences
- Important to examine structure, stability, and types and timing of family change
- Suggests important to understand impact on early outcomes

I. Background: Research questions



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- 1) What does family structure and stability look like over early childhood for tamariki Māori?
- 2) Is family structure and stability associated with child outcomes at the transition to primary school?
- 3) What role does cultural connectedness play in buffering the effects of household instability for tamariki Māori?

II. Methods: Data and sample



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- **Data: GUiNZ ($n \sim 7,000$)**
 - Longitudinal study of ethnically-diverse sample of NZ children
 - Births between April 2009 – March 2010
 - Family structure and covariates: Antenatal, 9-, 23-, and 45-months
 - Outcomes: 54-months
- **Sample: Tamariki Māori ($n = 1,349$)**
 - Children whose mothers' identify them as Māori
 - Mothers interviewed at antenatal, 9-months, and 54-months

II. Methods: Variables



- **Key Independent: Family Structure (4 categories)**
 - 1) Single parent; 2) Two parents only; 3) Parent(s) + kin adults; 4) Parent(s) + non-kin adults [and kin]
- **Key outcomes: Socioemotional, cognitive, cultural (54-months)**
 - *Negative affect*: CBQ VSF (12 items; Putnam & Rothbart 2006)
 - *Effortful control*: CBQ VSF (12 items; Putnam & Rothbart 2006)
 - *Cognitive score*: Latent construct (Reese & Meissel conversations)
 - DIBELS, PROL, Name and Numbers task
 - *Cultural connectedness*: Latent construct (12 items)
 - Mothers' reports of te reo use/understanding, discussions about ethnicity, ethnic and cultural activities
- **Covariates: Maternal, family, child, geo. (Antenatal, 9-months)**
 - *Maternal*: Māori ethnicity, education, age, work,
 - *Family*: Deprivation index, siblings
 - *Geographic*: Rural, DHB, meshblock deprivation
 - *Child*: Sex, low birthweight, early dev. problem, age at 54-month interview

II. Methods: Analytical approach



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- 1) What does family structure and stability look like over early childhood?
 - Social sequence analysis
 - Produces 'trajectories' of experience
 - Structure, change, type of change, and timing
 - Multinomial regressions
 - Sociodemographic predictors of trajectory membership
- 2) Is family structure and stability associated with child outcomes at the transition to primary school?
 - Structural Equation Models (SEM)
- 3) What role does cultural connectedness play in reducing disparities?
 - SEM, mediation analysis

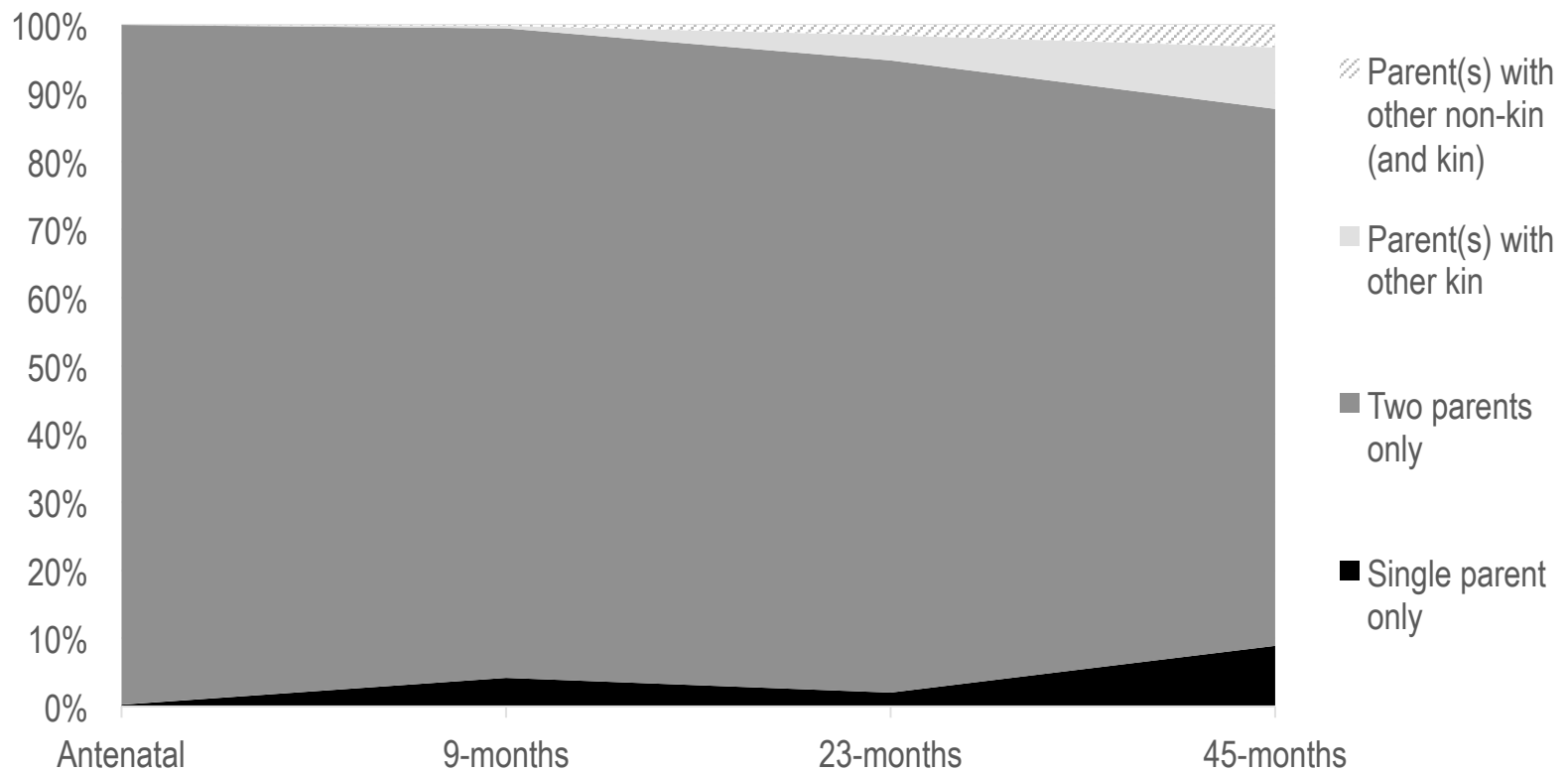
III. Results

- 1) What does family structure and stability look like over early childhood for tamariki Māori?
- Four sequences (best fit):
 - 1) Stable two parents ($n = 740$; 55%)
 - 2) Living with kin, late transition to two parents ($n = 448$; 33%)
 - 3) Living with others with instability ($n = 80$; 6%)
 - 4) Single parent with very late transition to living with others ($n = 81$; 6%)
 - **NOTE: Always single parent family is rare! (2.5% of Māori sample)**

III. Results

1) What does family structure and stability look like over early childhood?

Type 1: Stable two parents (55%)

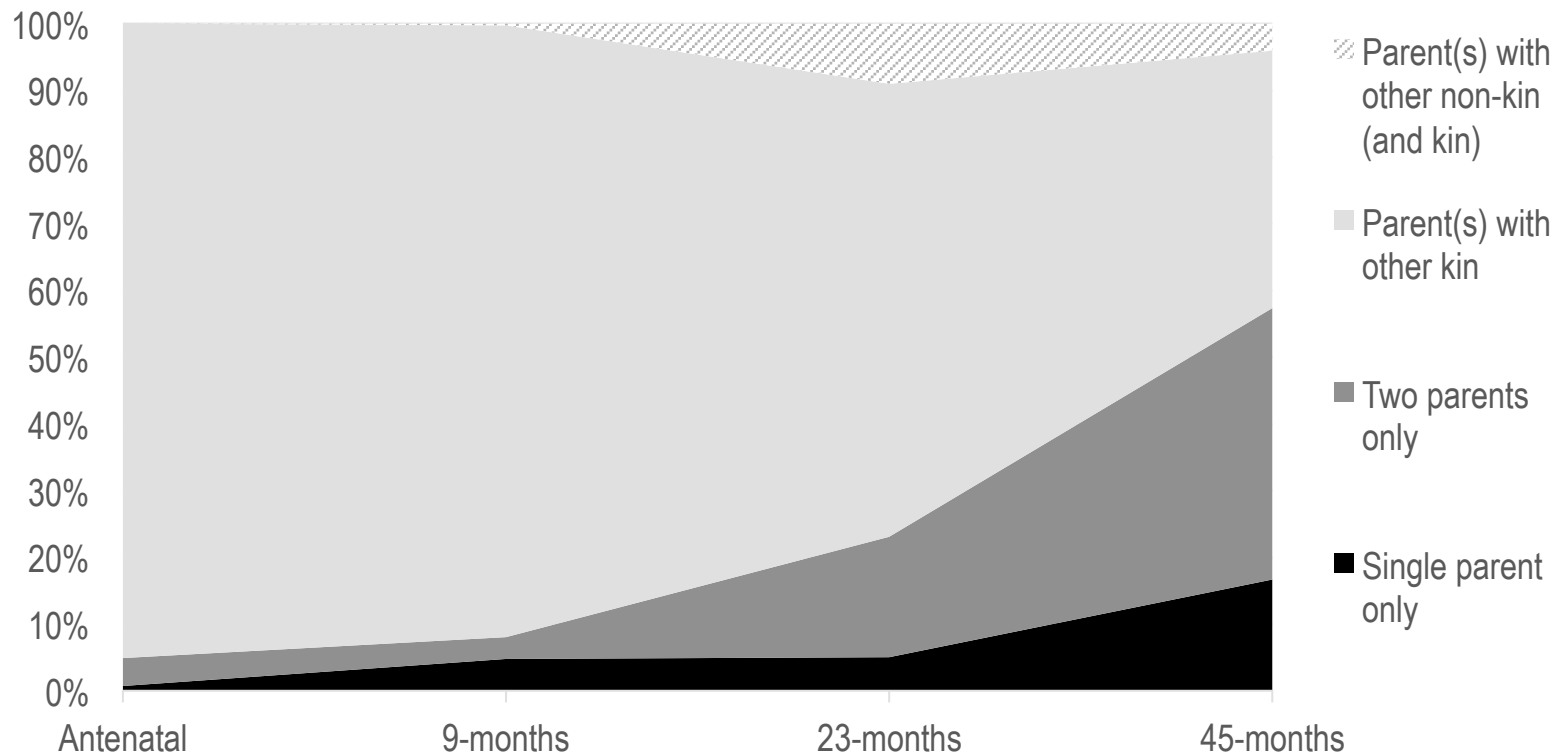


III. Results



1) What does family structure and stability look like over early childhood?

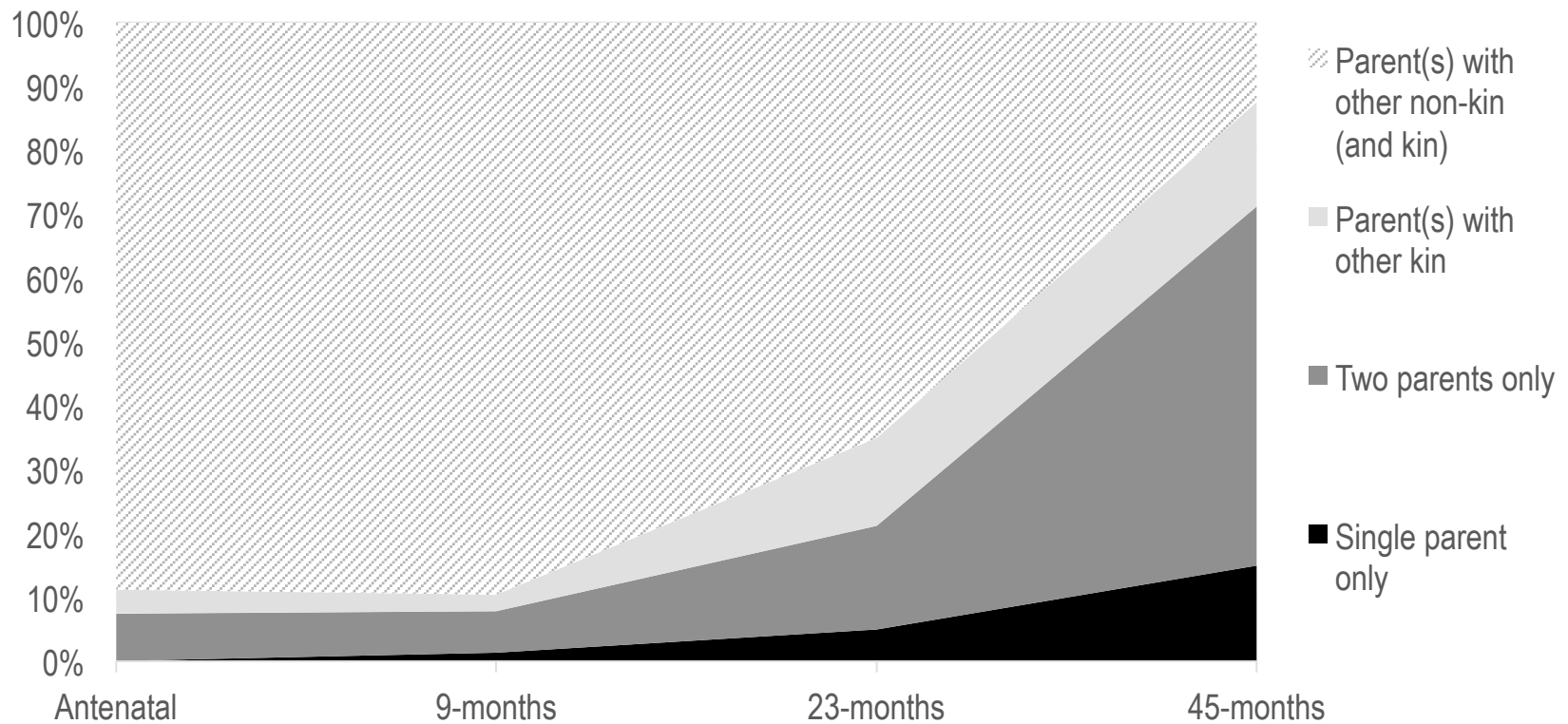
Type 2: Living with kin, late transition (33%)



III. Results

1) What does family structure and stability look like over early childhood?

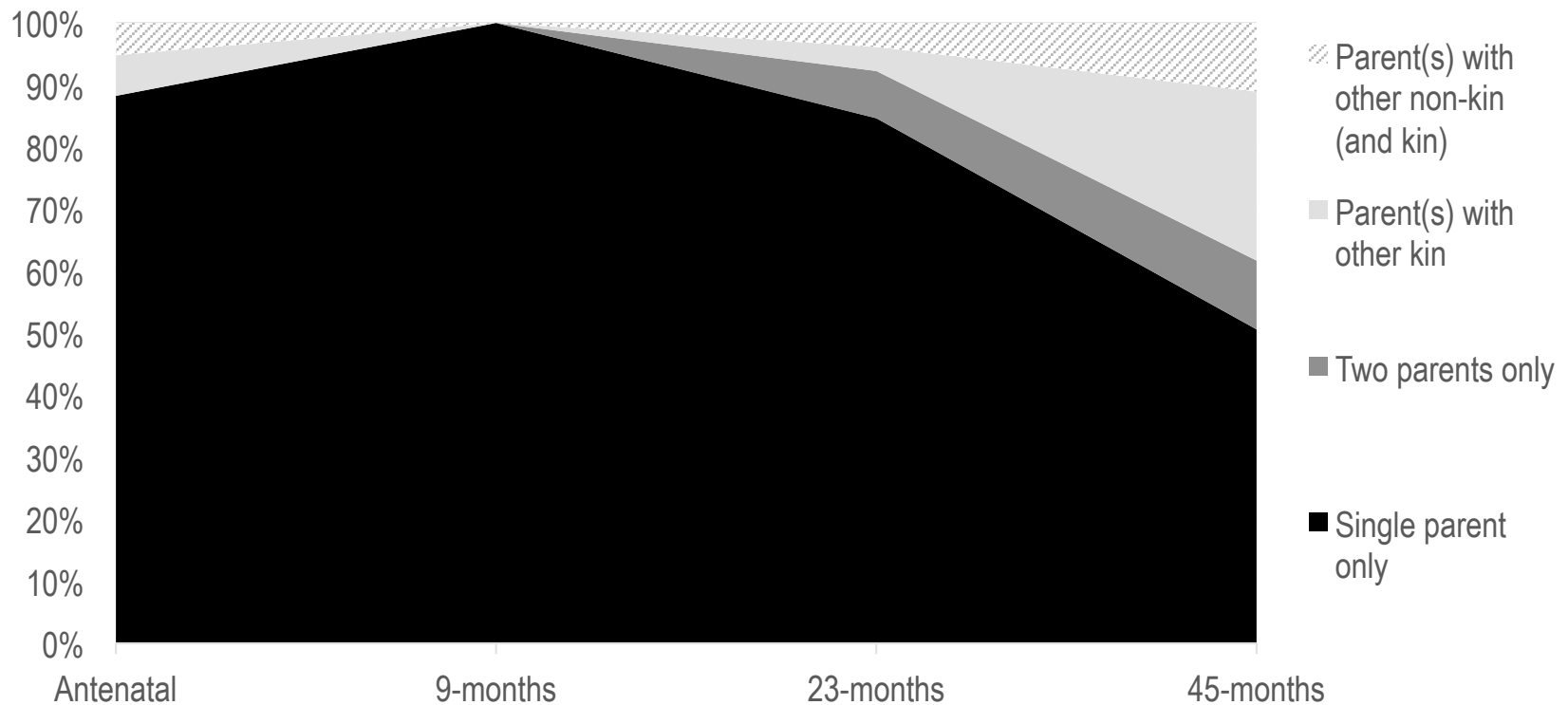
Type 3: Living with others with instability (6%)



III. Results

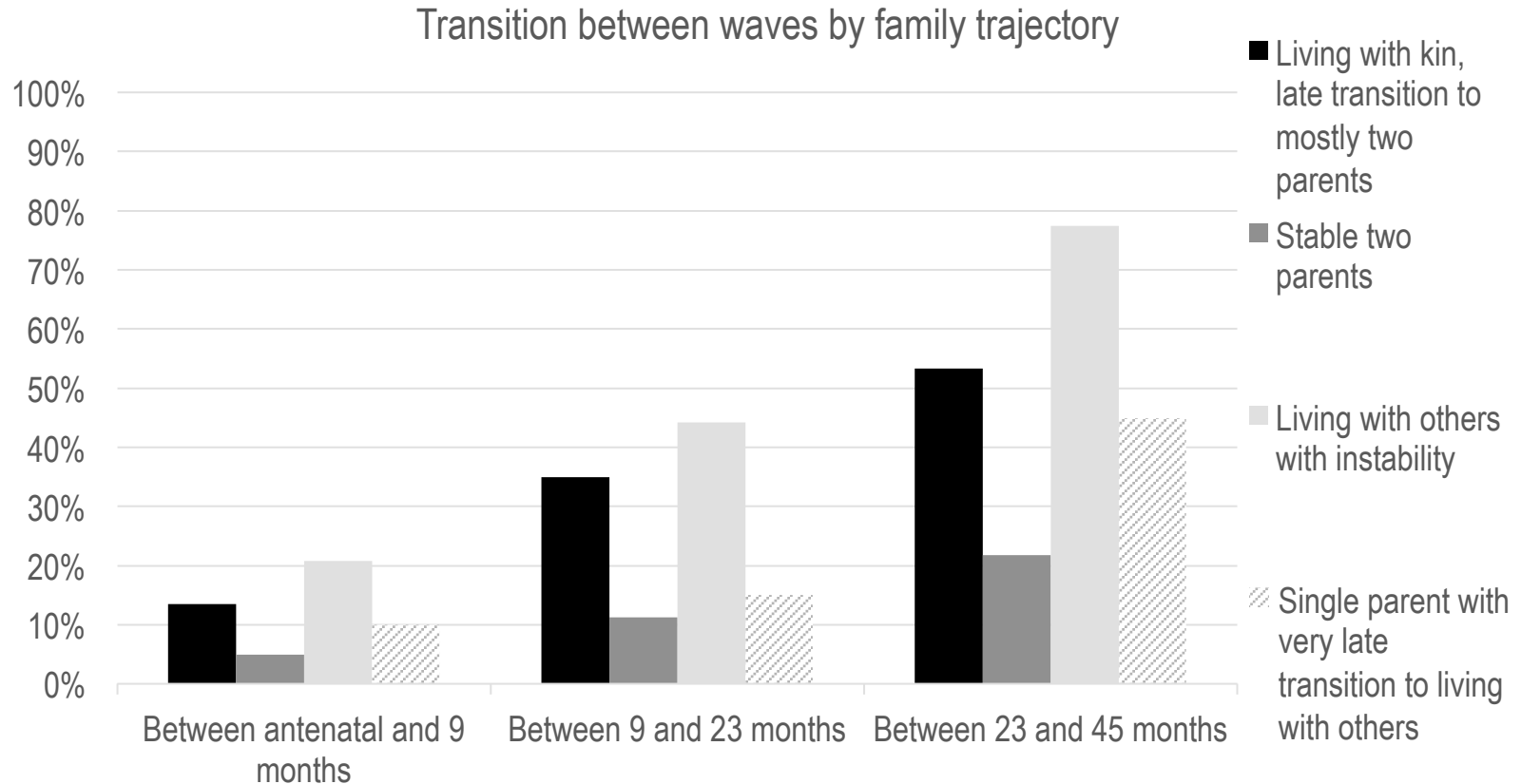
1) What does family structure and stability look like over early childhood?

Type 4: Single parent with very late transition to living with others (6%)



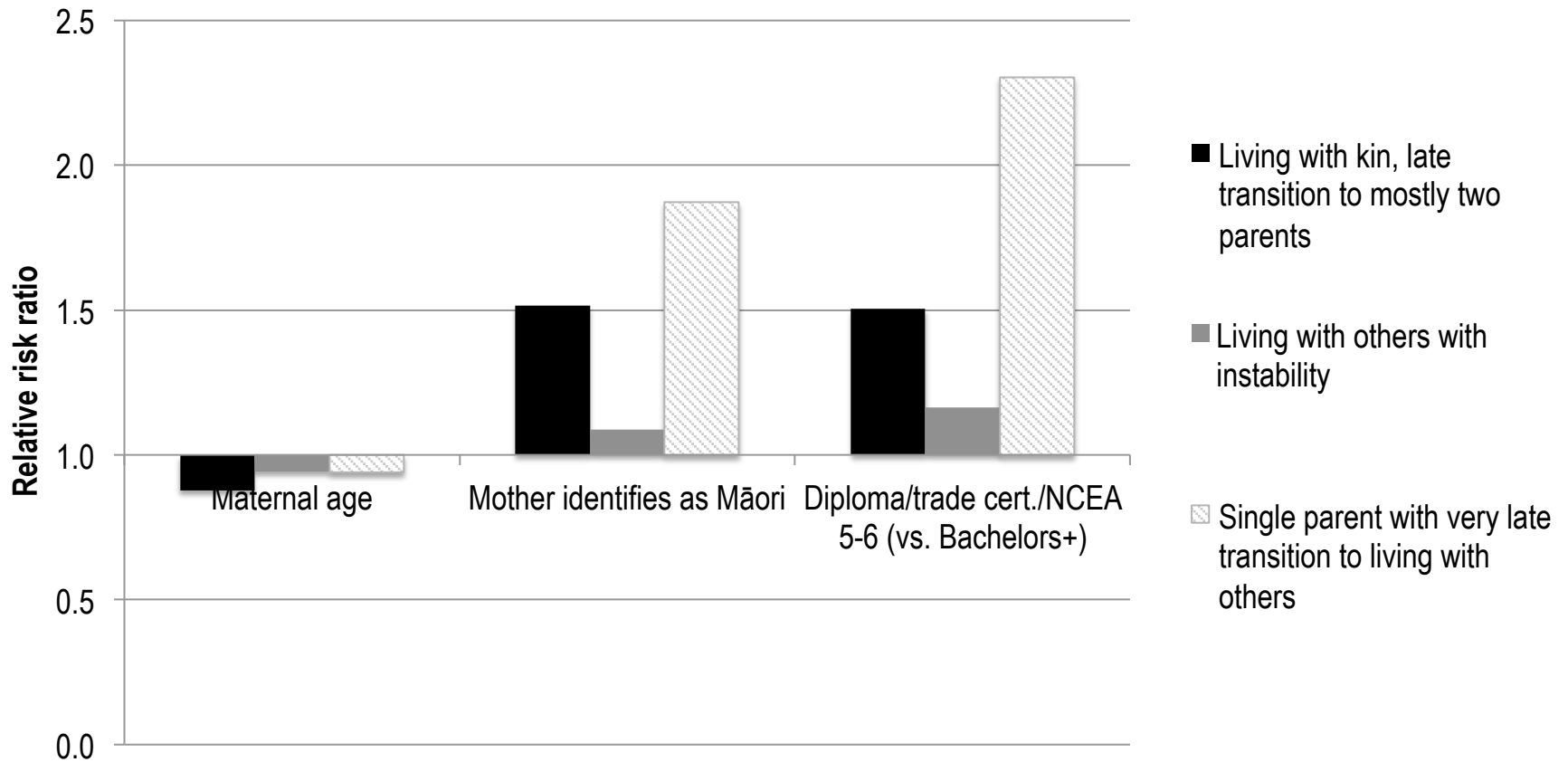
III. Results

1) What does family structure and stability look like over early childhood?



III. Results

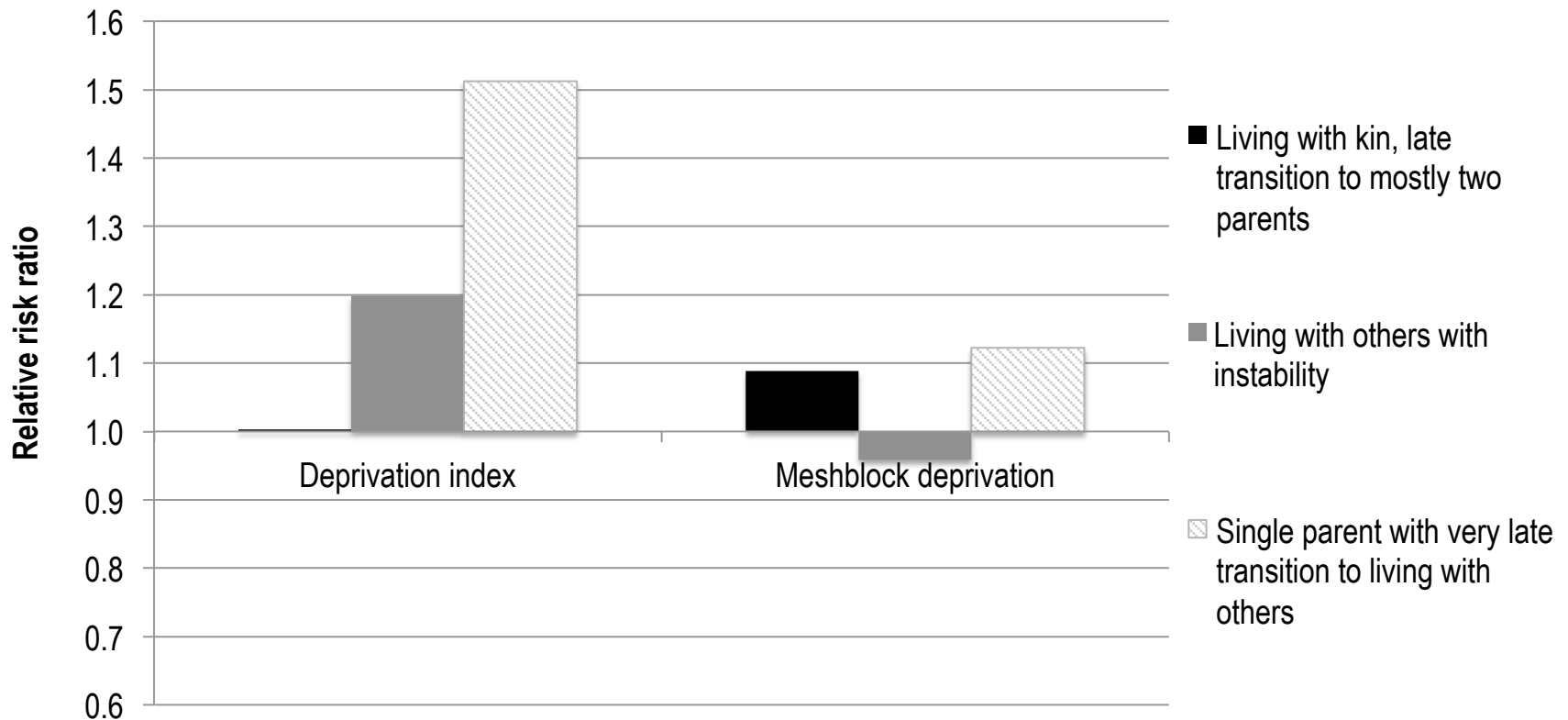
1) What does family structure and stability look like over early childhood? Maternal predictors of trajectories (ref: Stable two parents)



III. Results

1) What does family structure and stability look like over early childhood?

Family and geo predictors of trajectories (ref: Stable two parents)



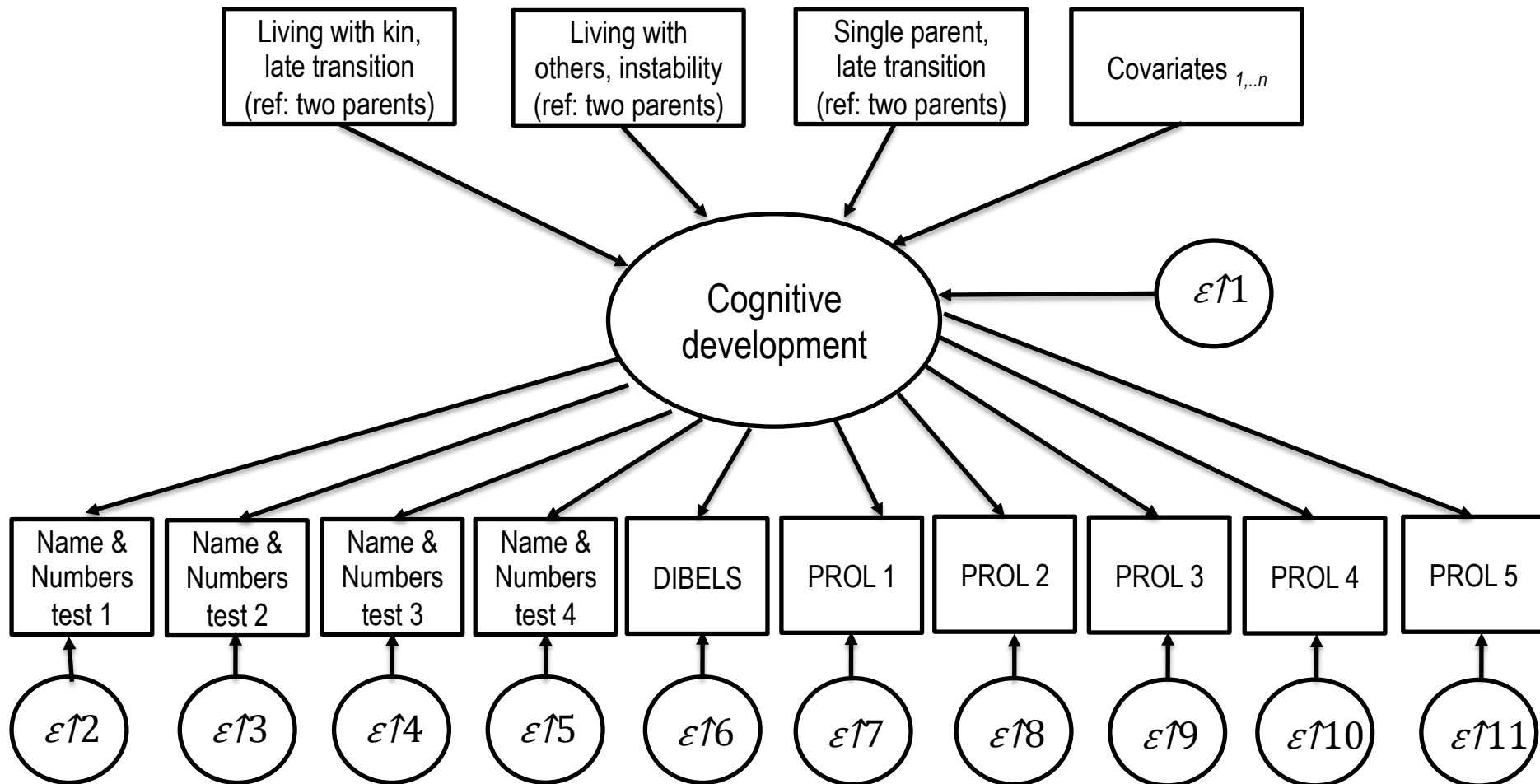
III. Results



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2) Is family structure and stability associated with child outcomes at the transition to primary school?

III. Results



III. Results



2) Is family structure and stability associated with child outcomes at the transition to primary school?

Structural equation models predicting child outcomes at 54-months

	Negative affect		Effortful control	
	Child covariates	All covariates	Child covariates	All covariates
Family trajectory (ref: Stable two parents)				
Living with kin, late transition to mostly two parents	0.22*** (0.05)	0.11* (0.05)	-0.07† (0.04)	-0.02 (0.04)
Living with others with instability	0.09 (0.09)	0.02 (0.09)	0.04 (0.08)	0.07 (0.08)
Single parent with very late transition to living with others	0.42*** (0.09)	0.26** (0.10)	-0.03 (0.07)	0.00 (0.08)

III. Results



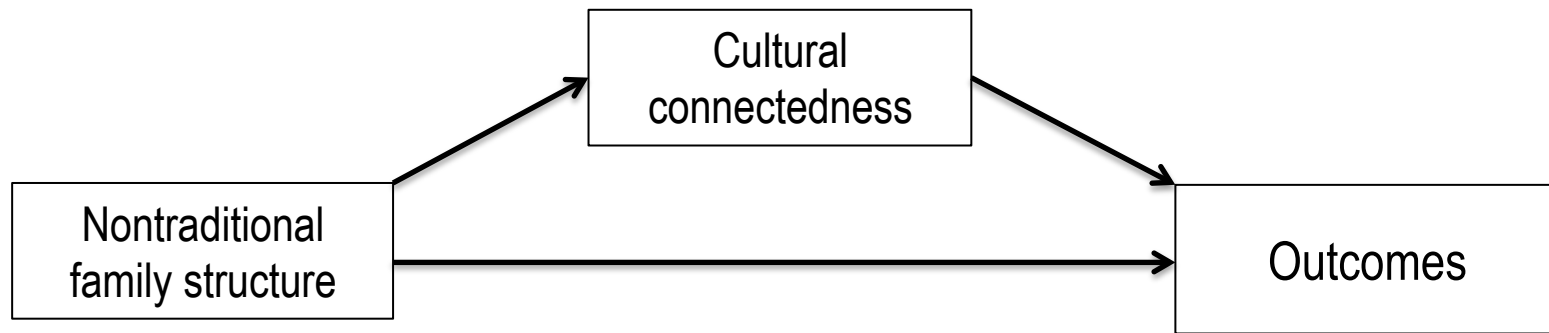
2) Is family structure and stability associated with child outcomes at the transition to primary school?

Structural equation models predicting child outcomes at 54-months

	Cognitive development		Cultural connectedness	
	Child covariates	All covariates	Child covariates	All covariates
Family trajectory (ref: Stable two parents)				
Living with kin, late transition to mostly two parents	-1.23**	-0.18	0.12*	0.09
	(0.36)	(0.37)	(0.05)	(0.06)
Living with others with instability	-0.09	0.19	0.21*	0.23*
	(0.69)	(0.67)	(0.10)	(0.10)
Single parent with very late transition to living with others	-2.92***	-1.17†	0.33**	0.21*
	(0.69)	(0.67)	(0.11)	(0.10)

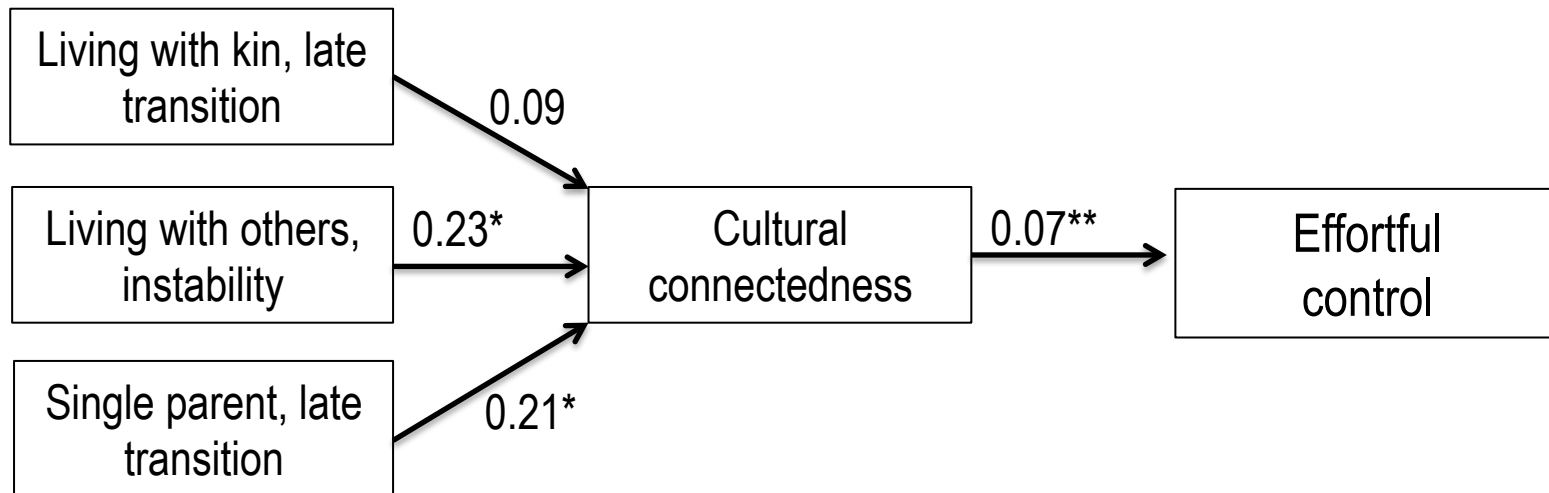
III. Results

3) What role does cultural connectedness play in reducing disparities?



III. Results

3) What role does cultural connectedness play in reducing disparities?



IV. Conclusion



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- A more complex understanding of family structure and fluidity during early childhood
 - Current policies aimed at families challenged by this fluidity
- Household-based family structure matters for child development, but much of it has to do with structural factors associated with family structure and wellbeing outcomes
 - Policies should meet families where they are, not what they look like
- Diverse family structures may be responding to structural factors
 - Reorganisation a form of resilience
- Diverse family structures promote/associated with cultural connectedness
 - In turn, cultural connectedness linked to socioemotional development
- Limitations
 - Family structure typology
 - Undercounting family instability
 - Causal ordering and selection

Extra slides

Table 1. Sequence analysis sample description

	Total		Living with kin, late transition to mostly two parents	Stable two parents	Living with others with instability	Single parent with very late transition to others
	n	% (std. dev.)	% (std. dev.)	% (std. dev.)	% (std. dev.)	% (std. dev.)
Maternal characteristics						
Education¹						
No secondary school qual	188	13.99	18.79	10.95	11.25	18.18
Secondary school/NCEA 1-4	358	26.64	30.87	24.32	30	20.78
Diploma/trade cert./NCEA 5-6	462	34.38	35.57	32.3	32.5	49.35
Bachelors degree or higher	336	25	14.77	32.43	26.25	11.69
Age ¹ (years)	1,349	28.4 (6.28)	25.23 (5.93)	30.4 (5.53)	27.24 (6.21)	28.85 (7.26)
Employed ¹	877	67.93	59.62	73.71	67.95	58.82
Mother identifies as Māori ¹	908	67.51	75	61.89	62.5	83.12
Family characteristics						
Deprivation index ² (0-6 scale)	1,343	1.36 (1.43)	1.39 (1.45)	1.2 (1.34)	1.51 (1.56)	2.51 (1.54)
Number of siblings ¹ (0-6+ scale)	1,222	1.43 (1.56)	1.17 (1.54)	1.59 (1.54)	0.8 (1.21)	2.19 (1.76)
Child characteristics						
Female ²	654	48.48	54.02	49.46	50	51.85
Born at low birthweight ² (<2500 gms)	65	4.82	6.92	3.78	3.75	3.7
Developmental problem ²	135	10.01	9.15	10.41	11.25	10
Child's age at 54-months	1,349	54.07 (1.60)	54.27 (1.76)	53.95 (1.44)	54.01 (1.65)	54.2 (1.79)
Geographic characteristics						
Meshblock deprivation ¹ (1-10 scale)	1,348	6.74 (2.78)	7.41 (2.55)	6.27 (2.81)	6.29 (3.02)	7.86 (2.46)
Rural area ¹	98	7.26	4.91	9.59	1.25	4.94
District Health Board²						
Auckland	272	20.16	17.19	22.03	20	19.75
Counties Manukau	490	36.32	43.97	31.76	41.25	30.86
Waikato	530	39.29	33.04	43.92	27.5	43.21

Table 1. Sequence analysis sample description

	Total		Living with kin, late transition to mostly two parents	Stable two parents	Living with others with instability	Single parent with very late transition to with others
	n	% (std. dev.)	% (std. dev.)	% (std. dev.)	% (std. dev.)	% (std. dev.)
Family structure at antenatal						
Single parent only	73	5.43	0.67	0.27	0.00	88.31
Two parents only	763	56.73	4.24	99.73	7.50	0.00
Parent(s) with other kin	434	32.27	95.09	0.00	3.75	6.49
Parent(s) with other non-kin (and kin)	75	5.58	0.00	0.00	88.75	5.19
Family structure at 9 months						
Single parent only	110	8.74	4.74	4.14	1.30	100.00
Two parents only	687	54.57	3.32	95.43	6.49	0.00
Parent(s) with other kin	391	31.06	91.71	0.29	2.60	0.00
Parent(s) with other non-kin (and kin)	71	5.64	0.24	0.14	89.61	0.00
Family structure at 23 months						
Single parent only	107	8.01	4.99	2.04	5.00	84.62
Two parents only	783	58.61	18.14	92.81	16.25	7.69
Parent(s) with other kin	340	25.45	67.80	3.66	13.75	3.85
Parent(s) with other non-kin (and kin)	106	7.93	9.07	1.49	65.00	3.85
Family structure at 45 months						
Single parent only	194	14.38	16.74	8.92	15.00	50.62
Two parents only	819	60.71	40.63	78.78	56.25	11.11
Parent(s) with other kin	275	20.39	38.62	9.05	16.25	27.16
Parent(s) with other non-kin (and kin)	61	4.52	4.02	3.24	12.50	11.11
Transitions						
Between antenatal and 9 months	113	8.98	13.51	4.86	20.78	10.00
Between 9 and 23 months	266	21.30	34.94	11.19	44.16	15.00
Between 23 and 45 months	492	36.83	53.29	21.71	77.50	44.87
Total transitions	1,349	0.67	1.02	0.38	1.43	0.63

Table 2. Multinomial regressions predicting family trajectory membership (Reference group: Stable two parents)

	Stable two parents	Living with kin, late transition to mostly two parents	Living with others with instability	Single parent with very late transition to living with others
	RRR	RRR	RRR	RRR
Maternal education ¹ (ref: Bachelors+)				
No secondary school qual	--	1.438 (0.355)	0.909 (0.424)	1.335 (0.662)
Secondary school/NCEA 1-4	--	1.224 (0.253)	1.161 (0.408)	1.292 (0.593)
Diploma/trade cert./NCEA 5-6	--	1.503* (0.290)	1.163 (0.386)	2.304* (0.939)
Age ¹ (years)	--	0.877*** (0.013)	0.943* (0.024)	0.940* (0.025)
Employed ¹	--	0.819 (0.124)	0.920 (0.259)	0.819 (0.231)
Mother identifies as Māori ¹	--	1.514** (0.227)	1.087 (0.283)	1.872† (0.626)
Deprivation index ² (0-6 scale)	--	1.003 (0.050)	1.198 (0.104)	1.512*** (0.119)
Number of siblings ¹ (0-6+ scale)	--	0.954 (0.053)	0.715† (0.086)	1.084 (0.105)
Rural area ¹	--	0.739 (0.211)	0.130 (0.133)	0.616 (0.398)
District Health Board ² (ref: Auckland)	--			
Counties Manukau	--	1.015 (0.198)	1.408 (0.482)	0.616 (0.231)
Waikato	--	0.638* (0.127)	0.792 (0.287)	0.730 (0.266)
Elsewhere	--	2.217* (0.831)	4.817 (2.436)	2.027 (1.247)
Meshblock deprivation ¹ (1-10 scale)	--	1.089** (0.030)	0.959* (0.044)	1.122* (0.065)
Constant	--	10.765*** (5.579)	0.797 (0.717)	0.070* (0.072)

III. Results

3) What role does cultural connectedness play in reducing disparities?

Path coefficients for models predicting child outcomes at 54-month interview via cultural connectedness ($n = 1,349$)

Outcome	Cultural connectedness	Indirect effect
	B [Confidence intervals]	B [Bootstrapped bias-corrected confidence intervals]
Effortful control		
Cultural connectendess	0.065** [0.020, 0.109]	--
Family trajectory (ref: Stable two parents)		
Living with kin, late transition to mostly two parents	-0.024 [-0.106, 0.057]	0.086 [-0.026, 0.198]
Living with others with instability	0.053 [-0.095, 0.201]	0.225* [0.022, 0.429]
Single parent with very late transition to living with others	-0.012 [-0.162, 0.137]	0.207* [0.002, 0.412]
		0.006* [0.001, 0.018]
		0.015* [0.004, 0.044]
		0.013* [0.002, 0.047]