

Growing Up in New Zealand

“Disadvantage – a complex and changing environment”
– evidence for contemporary New Zealand children

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Growing Up in New Zealand

- **A longitudinal child health and development study**

- **Aims**

- To provide a robust, relevant evidence base to inform policy related to the wellbeing of children and their families in 21st century New Zealand
- To create a valuable resource for policy makers and stakeholders, researchers, and children and families in New Zealand























- **Inclusion criteria**

- Mother resident in Auckland/Counties-Manukau/Waikato DHB area
- Estimated delivery date between 25 April 2009 and 25 March 2010



Data Collection Waves

Growing Up in New Zealand data collection points of contact: The first two years

	Antenatal	Perinatal	6-weeks	35-weeks	9-months	12-months	16-months	23-months	Two-years
Mother									
Partner									
Child-proxy									
Child									
Household Grid									
Data Linkage									
KEY:		face to face interview		data linked from external source			telephone interview		

• The cohort

- Antenatal interview: Completed by 6822 mothers and 4401 partners
- Six weeks: 6846 children (from 6751 mothers)
- 9-month interview: Completed by 6384 mothers and 4094 partners
- 93-95% retention at 9 months; 31 month call currently underway

Antenatal Maternal Characteristics

	n	%		n	%
Age			Relationship Status		
• <20	328	4.8	• Married or Civil Union	3855	62.5
• 20-<30	2663	39.1	• Cohabiting	1723	27.9
• 30-<40	3541	51.9	• Dating, not cohabiting	256	4.2
• >=40	287	4.2	• No relationship	333	5.4
Multiple Ethnicity*			NZDep2006 Decile		
• European	4210	61.8	• 1&2	1100	16.1
• Māori	1260	18.5	• 3&4	1235	18.1
• Pacific	1160	17.0	• 5&6	1168	17.1
• Asian	1092	16.0	• 7&8	1426	20.9
• MELAA	169	2.5	• 9&10	1891	27.7
• Other	143	2.1			
Rural/Urban			Parity		
• Urban	6355	93.1	• First child	2852	42.2
• Rural	467	6.9	• Subsequent child	3963	57.8

All % are of those for whom information was available; *multiple response, will total to more than 100%

This Paper– Cumulative and Multiple Disadvantage

- Markers of disadvantage
 - Factors that have been associated with poorer outcomes
- This paper aims to examine:
 - The prevalence of experiencing markers of disadvantage
 - The prevalence of multiple markers of disadvantage (multiple disadvantage)
 - Changes in, and the accumulation of, markers of disadvantage over time (cumulative disadvantage)



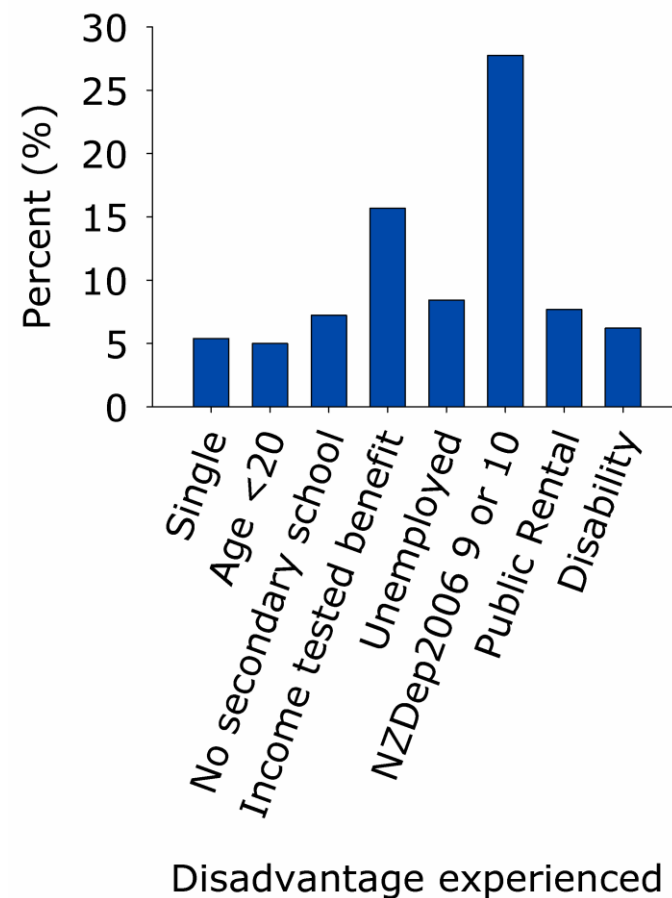
Method

Maternal Factors	Definition
Single	Mother reports that they do not have a current partner.
Age <20	Maternal age less than 20 years (from DOB).
No secondary school qualification	Mother has not obtained NCEA Level 1 or School Certificate.
Income tested benefit	Household sources of income include domestic purposes, unemployment, sickness, or invalid benefits.
Unemployment	Mother not currently in work and not on parental leave.
NZDep2006 9 & 10	Living in an area classified as decile 9 or 10 by the New Zealand Deprivation Index 2006.
Public Rental	Residence is owned by: Housing New Zealand; a local authority or city council; or another state-owned corporation, state-owned enterprise, or government department or ministry.
Disability	Mother reports having a long-term disability lasting 6 months or more.

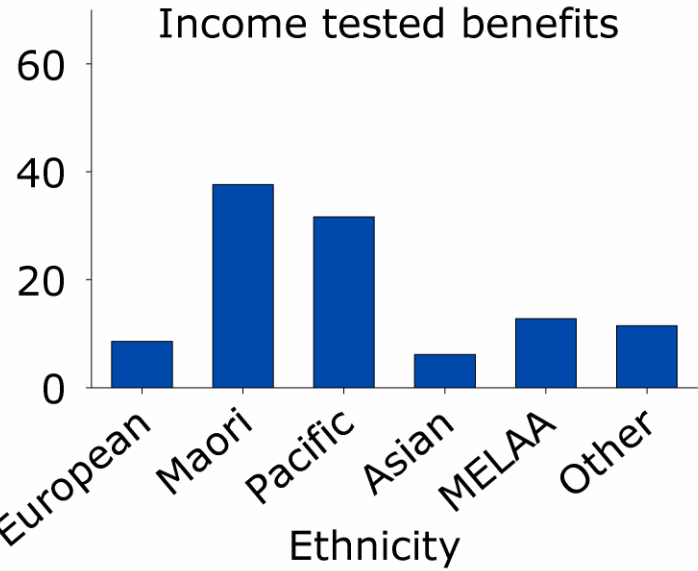
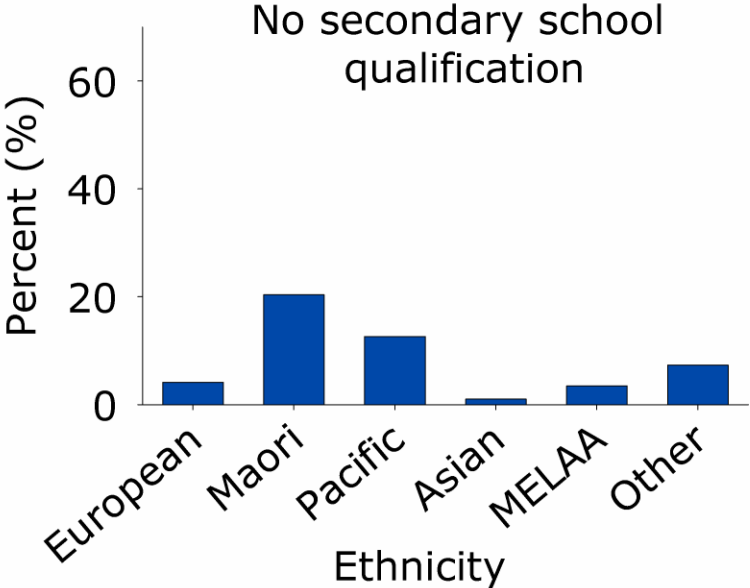
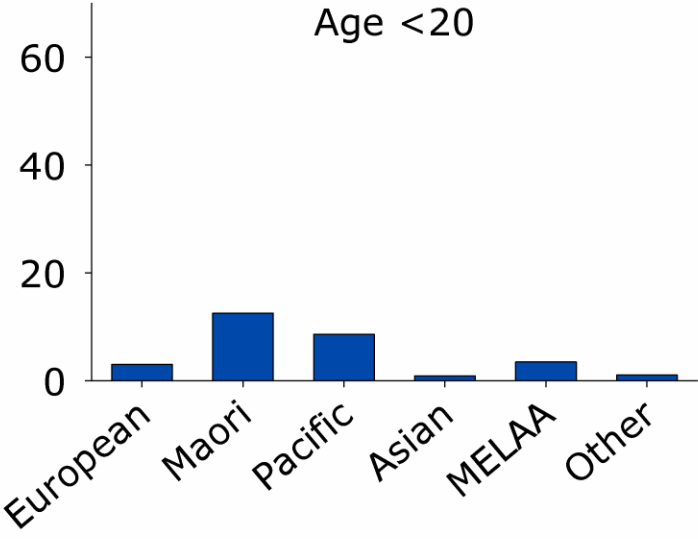
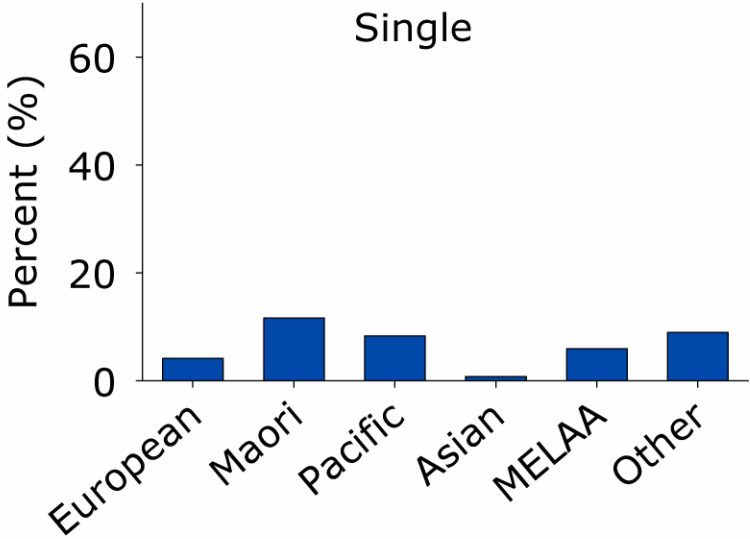
Markers of Disadvantage Experienced by Mothers of Children in *Growing Up in New Zealand*

Maternal Factors	Number of mothers	Total*
Single	333	6182
Age <20 years	341	6819
No secondary school qualification	491	6803
Income tested benefit	963	6143
Unemployment	547	6505
NZDep2006 9 and 10	1891	6820
Public rental	471	6131
Disability	384	6182

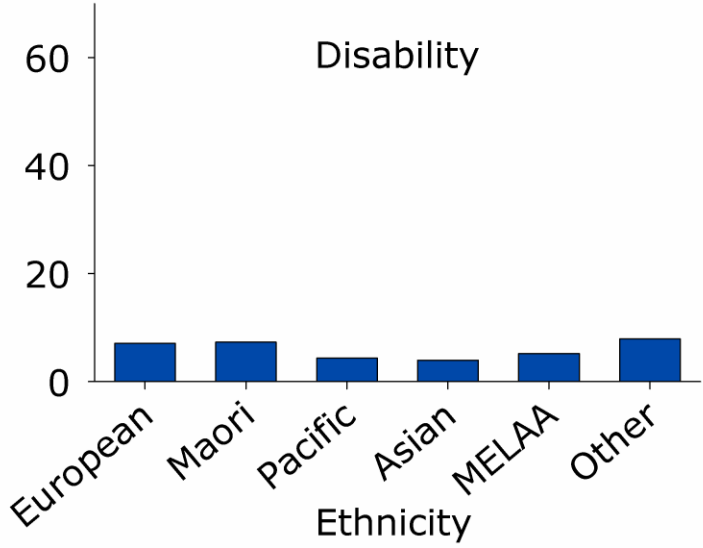
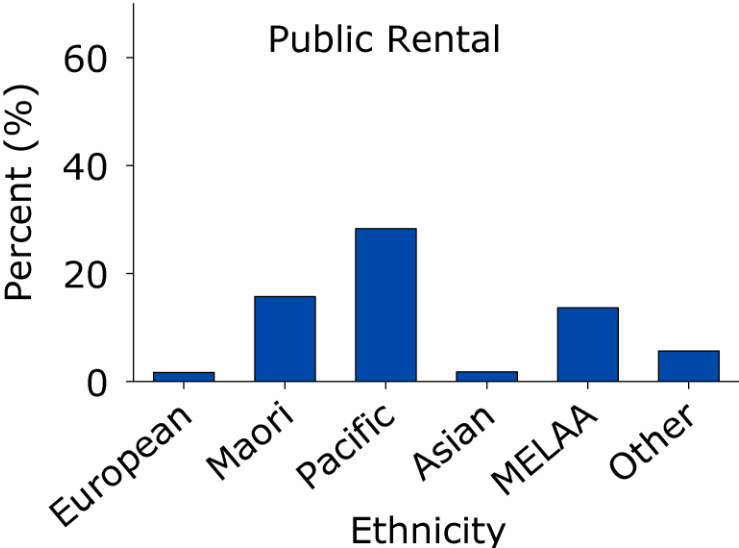
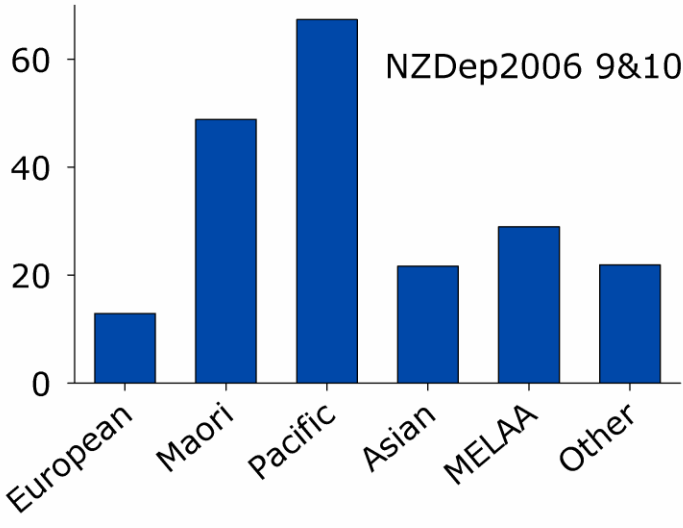
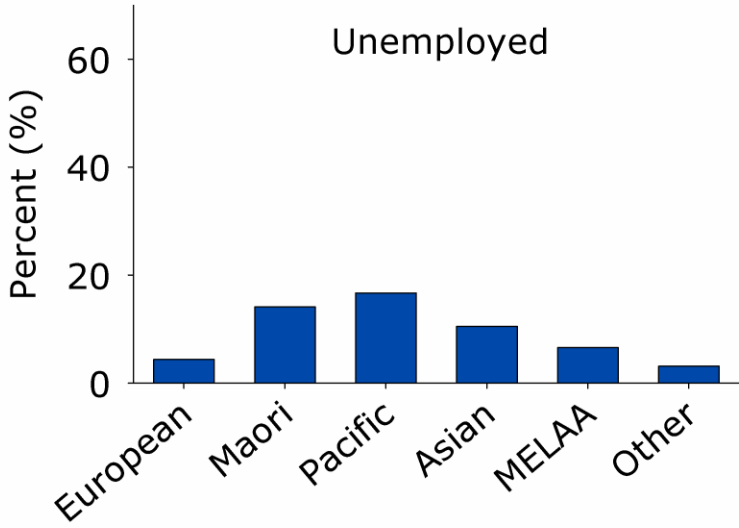
*for whom information is available



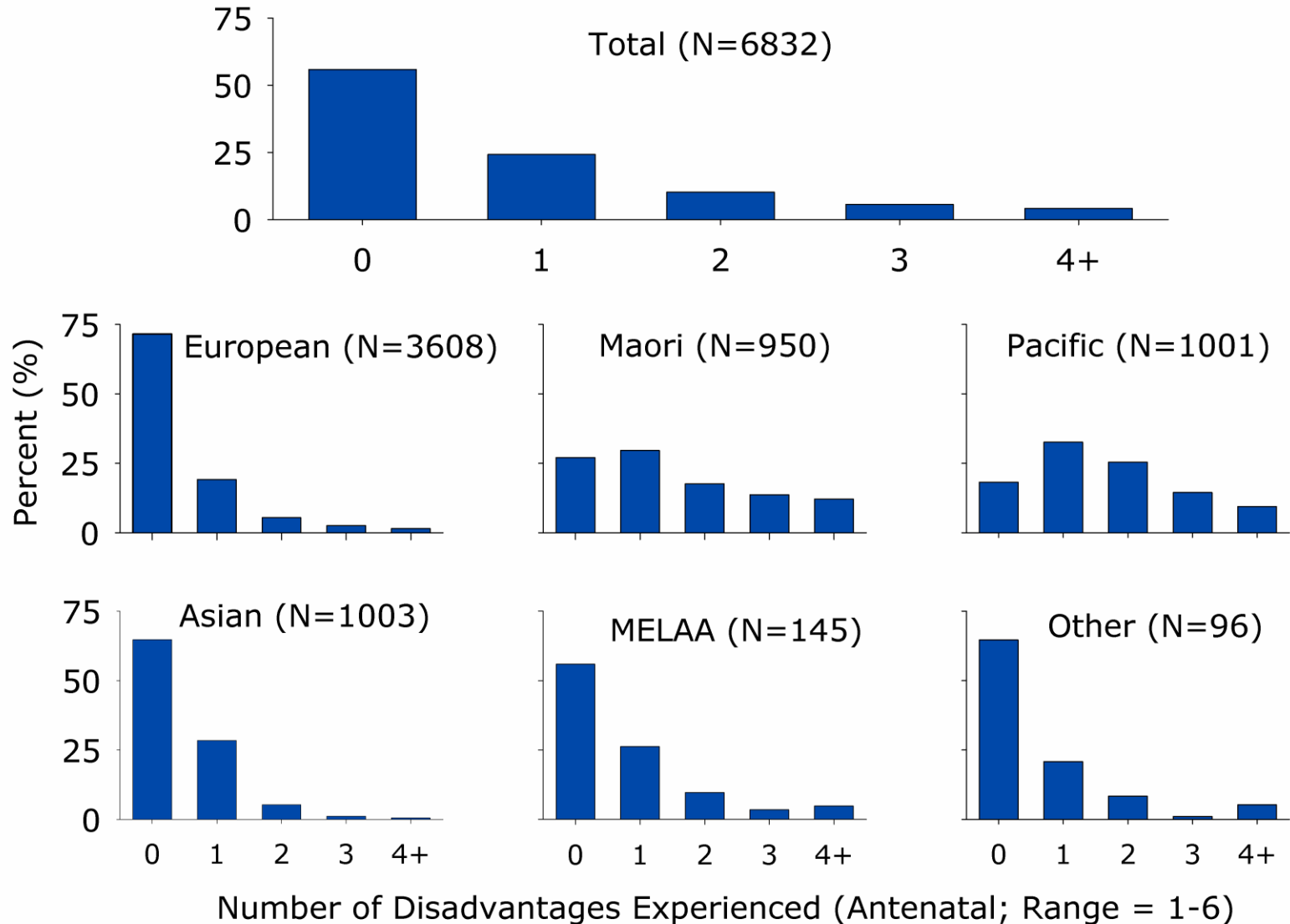
Markers of Disadvantage across Ethnicities



Markers of Disadvantage across Ethnicities



Multiple Markers of Disadvantage



Groupings of the Markers of Disadvantage

- **Factor Analysis** identified two groupings of the markers of disadvantage

Single

Age <20

No secondary school qualification

Income tested benefit

Unemployed

NZDep2006 9 and 10

Public Rental

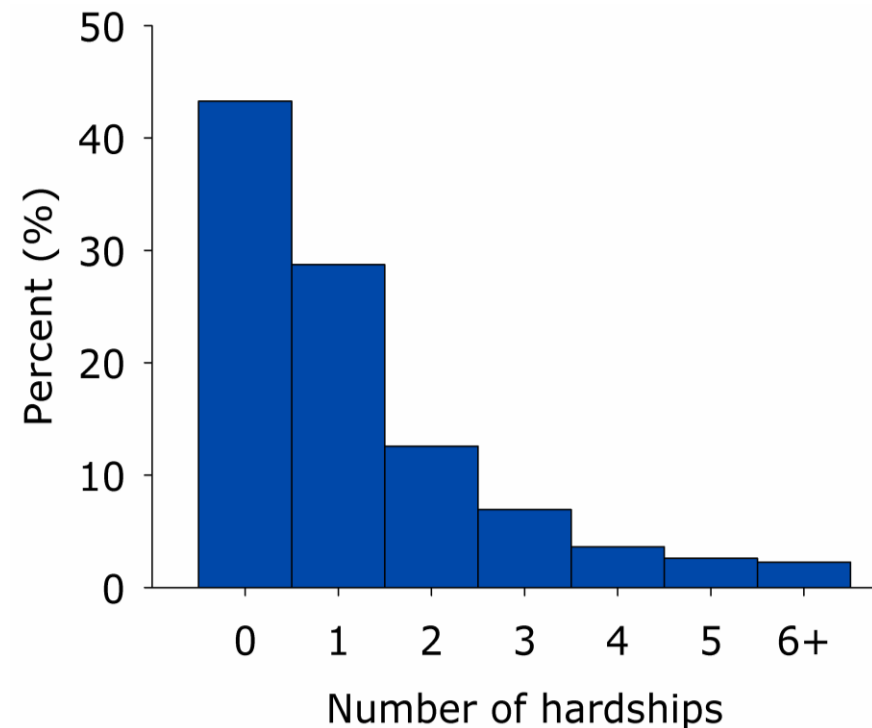
Disability

Antenatal Markers of Disadvantage and 9 Month Outcomes

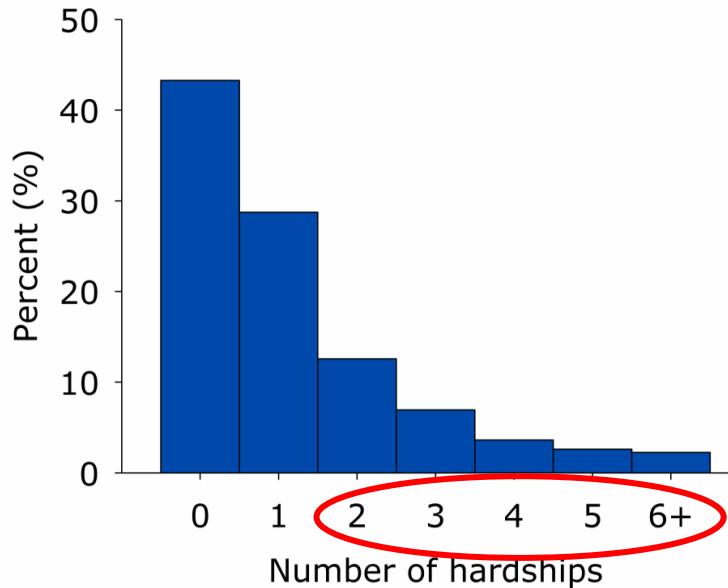
Hardship Scale

- In the last 12 months have you personally....
 - Been forced to **buy cheaper food** so that you could pay for other things you needed?
 - **Put up with feeling cold** to save heating costs?
 - Made use of **special food grants or food banks** because you didn't have enough money for food?
 - Continued **wearing shoes with holes** because you could not afford replacements?
 - **Gone without fresh fruit and vegetables** often, so that you could pay other things you needed?
 - Received **help in the form of food, clothes or money from a community organisation** (like the Salvation Army)?
 - Had **difficulty paying for medical care or medicines that your baby** [babies] needed?

- Have you ever **obtained a prescription for "BABY" [the babies] from the doctor, but didn't collect one or more of the items** from the chemist because you could not afford it?

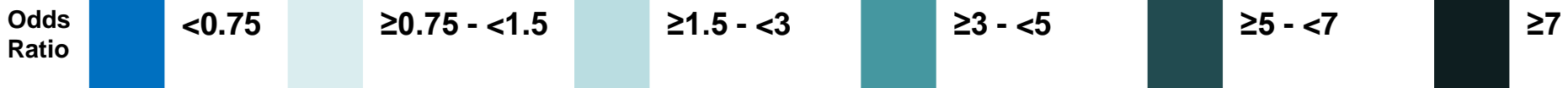


Multiple Logistic Regression

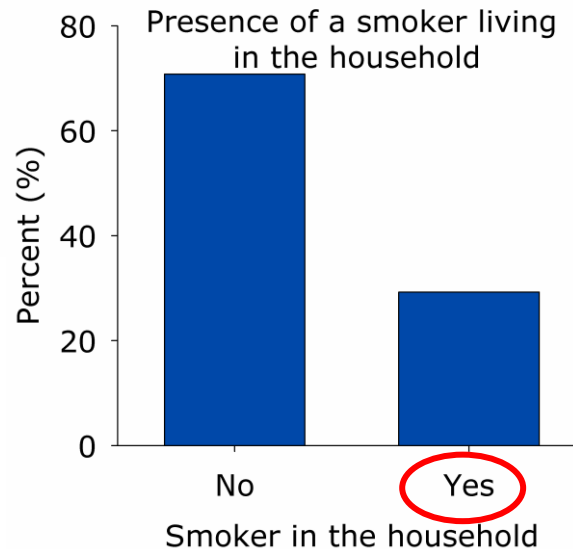
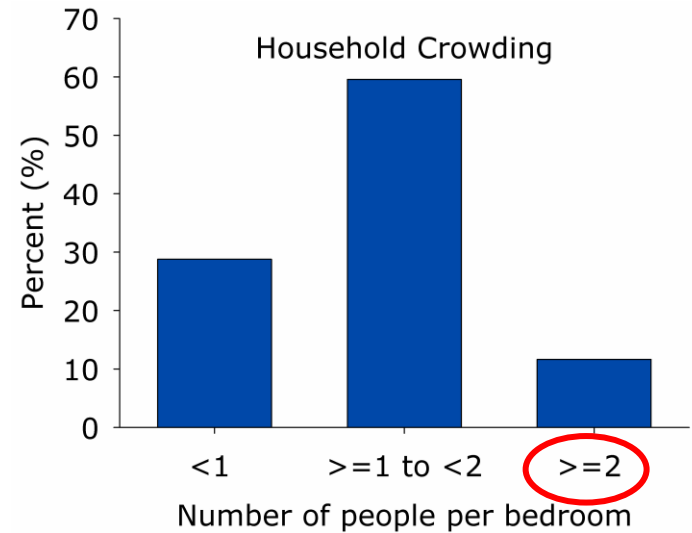
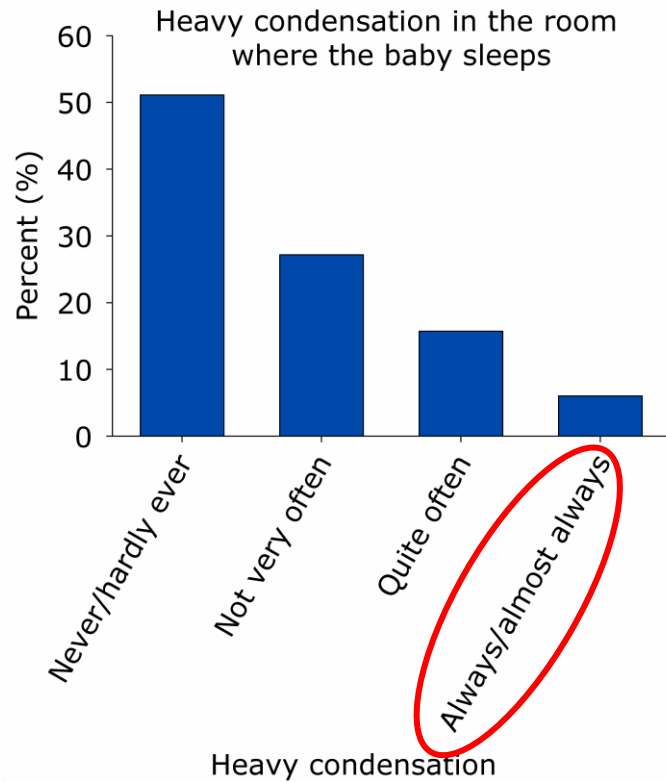


- Effect of antenatal markers of disadvantage on the likelihood of experiencing two or more of the hardship indicators

		≥2 hardships
	p<0.05	Odds ratio (95% CI)
Single	✓	2.08 (1.56-2.76)
Age <20	✓	0.658 (0.487-0.891)
No secondary school qualification	✓	1.61 (1.26-2.06)
Income tested benefit	✓	2.30 (1.93-2.74)
Unemployed	✓	1.40 (1.12-1.73)
NZDep2006 &10	✓	2.19 (1.90-2.52)
Public Rental	✓	2.19 (1.73-2.76)
Disability	✓	1.28 (1.00-1.64)


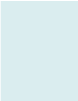






Condensation, Crowding, and Presence of a Smoker in the Household



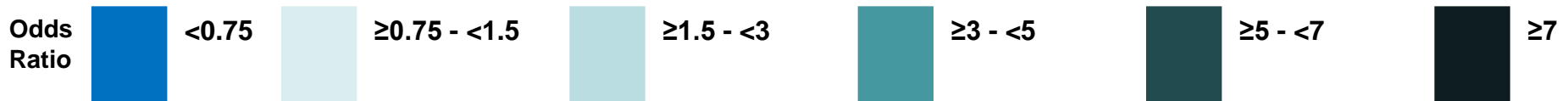
Condensation, Overcrowding, and Presence of a Smoker in the Household - Regression

	Condensation		Overcrowding		Smoker in the household	
	p<0.05	Odds ratio (95% CI)	p<0.05	Odds ratio (95% CI)	p<0.05	Odds ratio (95% CI)
Single	-	-	✓	0.49 (0.32-0.73)	X	1.30 (0.98-1.74)
Age <20	✓	0.72 (0.52-1.0)	✓	1.47 (1.04-2.08)	✓	2.39 (1.77-3.22)
No secondary school qualification	✓	1.31 (1.01-1.69)	✓	1.42 (1.057-1.90)	✓	3.238 (2.50-4.20)
Income tested benefit	✓	1.18 (0.98-1.43)	✓	1.44 (1.15-1.81)	✓	3.06 (2.56-3.64)
Unemployed	✓	1.37 (1.10-1.71)	✓	2.09 (1.62-2.69)	✓	1.48 (1.19-1.84)
NZDep2006 &10	✓	1.80 (1.54-2.09)	✓	2.47 (2.05-2.99)	✓	1.92 (1.66-2.21)
Public Rental	✓	1.77 (1.40-2.23)	✓	3.56 (2.77-4.57)	✓	1.94 (1.53-2.48)
Disability	-	-	-	-	-	-

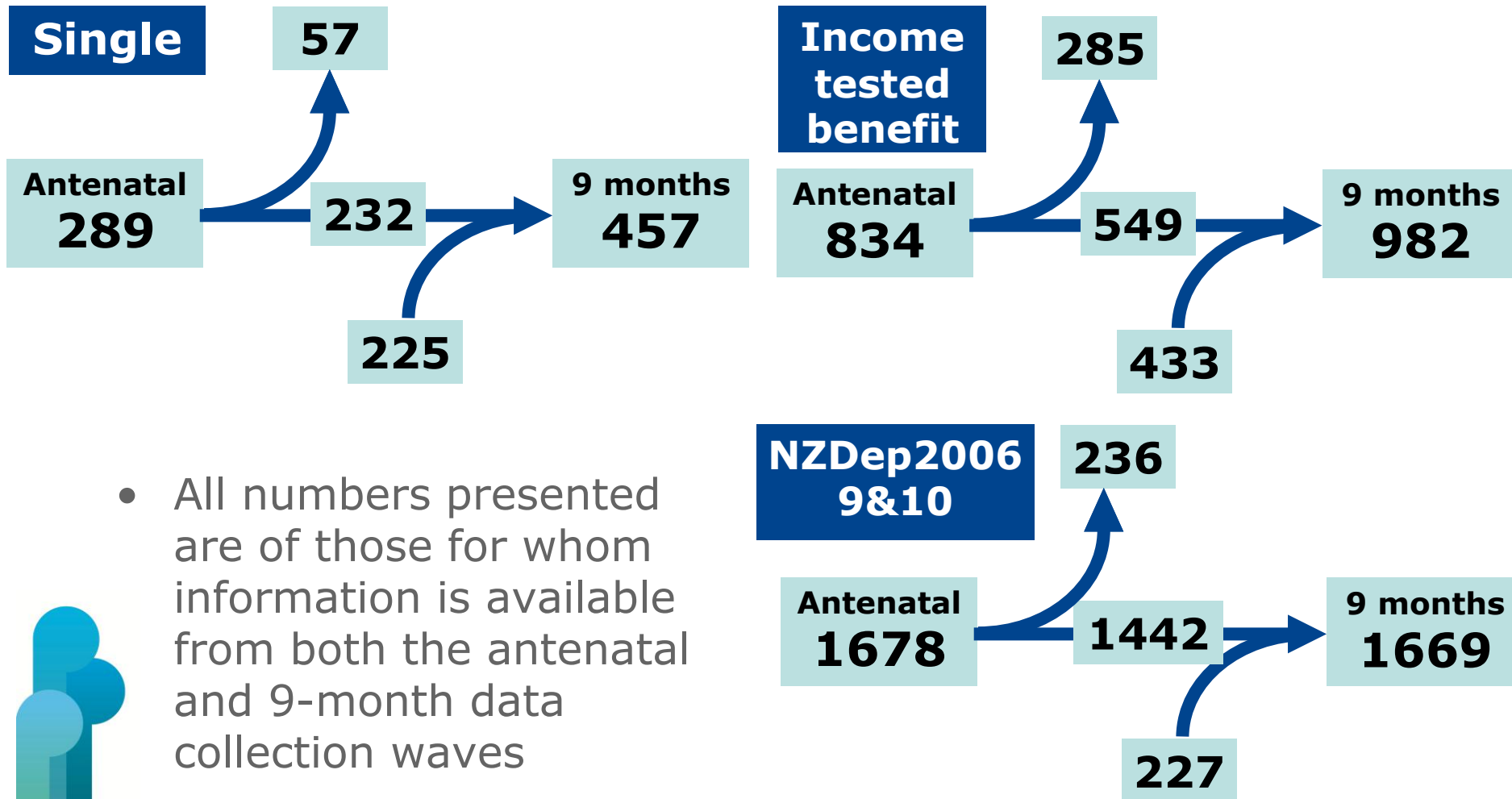
Odds Ratio		<0.75		≥0.75 - <1.5		≥1.5 - <3		≥3 - <5		≥5 - <7		≥7
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Multiple Antenatal Markers of Disadvantage and 9 Month Outcomes

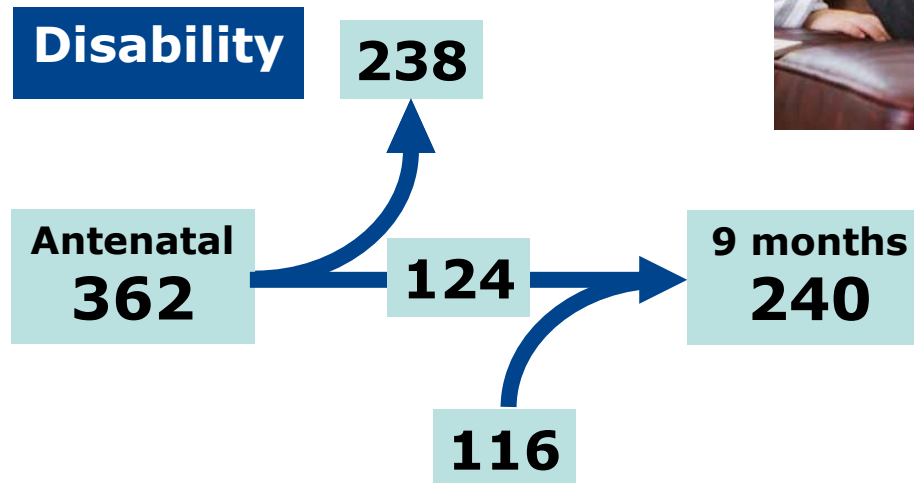
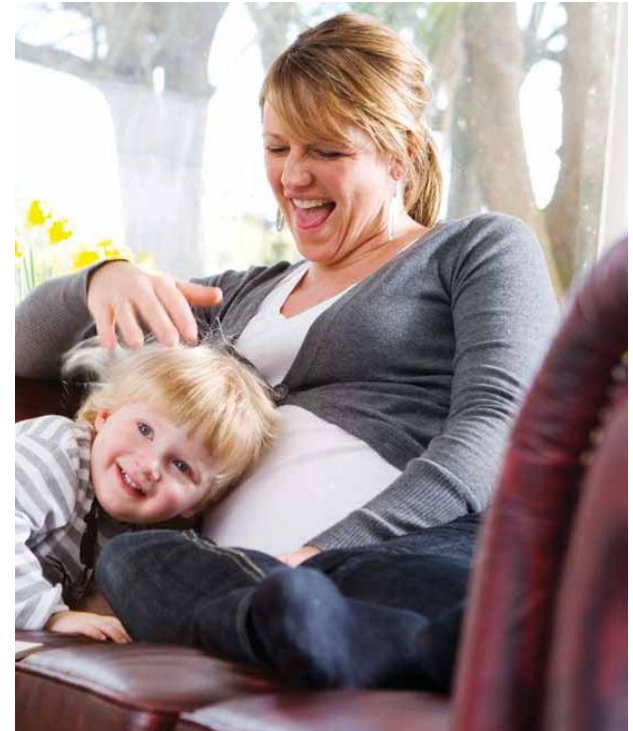
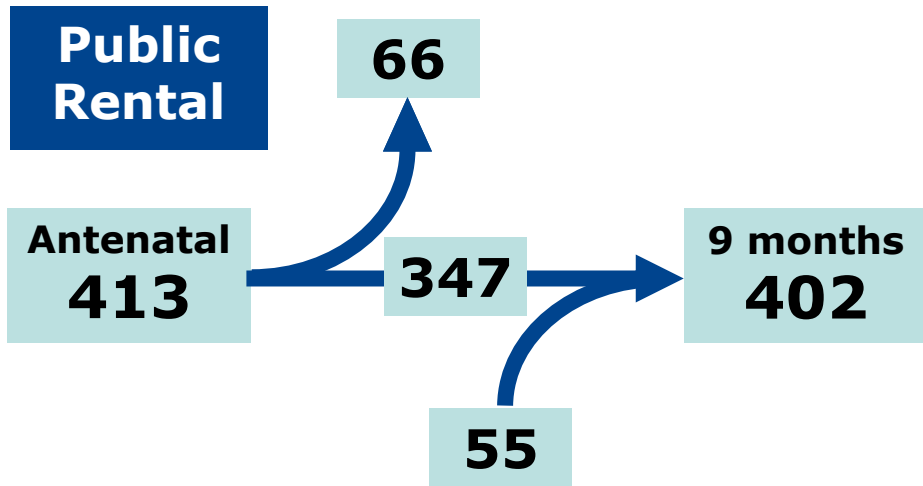
No. of markers of disadvantage	Hardship (p<0.0001)	Condensation (p<0.0001)	Overcrowding (p<0.0001)	Presence of Smoker (p<0.0001)
1 vs. none	2.22 (1.94-2.55)	1.66 (1.43-1.92)	3.10 (2.52-3.80)	2.60 (2.26-2.98)
2 vs. none	4.79 (4.01-5.73)	2.41 (1.99-2.91)	7.00 (5.56-8.80)	5.55 (4.64-6.65)
3 vs. none	6.51 (5.15-8.22)	2.42 (1.89-3.09)	7.88 (5.98-10.41)	11.03 (8.60-14.13)
4+ vs. none	7.11 (5.37-9.41)	2.67 (2.00-3.57)	7.42 (5.36-10.27)	12.67 (9.35-17.17)



Changes in Numbers Experiencing the Markers of Disadvantage



Changes in Numbers Experiencing the Markers of Disadvantage



Changes in the Number of Markers of Disadvantage Experienced

- Change in the number of markers of disadvantage experienced at the time of the antenatal and 9-month interviews
- Maternal factors available at both antenatal and 9 months:
 - Single
 - Income tested benefit
 - NZDep2006 9&10
 - Public Rental
 - Disability

		9 months				
		0	1	2	3	4+
Antenatal	0	3513	323	98	15	<10
	1	350	924	239	87	<10
	2	30	127	252	112	20
	3	<10	20	86	85	20
	4+	<10	<10	<10	16	30

Summary & Conclusion

- Overall prevalence of each marker of disadvantage hides the large proportions of mothers who experienced at least one, or multiple, markers of disadvantage antenatally.
- The markers of disadvantage may cluster, however most contributed individually to the outcomes at 9 months (when the others were accounted for).
- Experience of the type and number of markers of disadvantage is not static, there was much movement both in and out of experiencing each marker between the antenatal and 9-month interviews.
- These findings suggest that:
 - There is great complexity in defining and measuring disadvantage.
 - Strategies to address childhood disadvantage need to provide for all children but with a gradient based on need (proportionate universalism), and regular assessment is needed to capture their changing needs.