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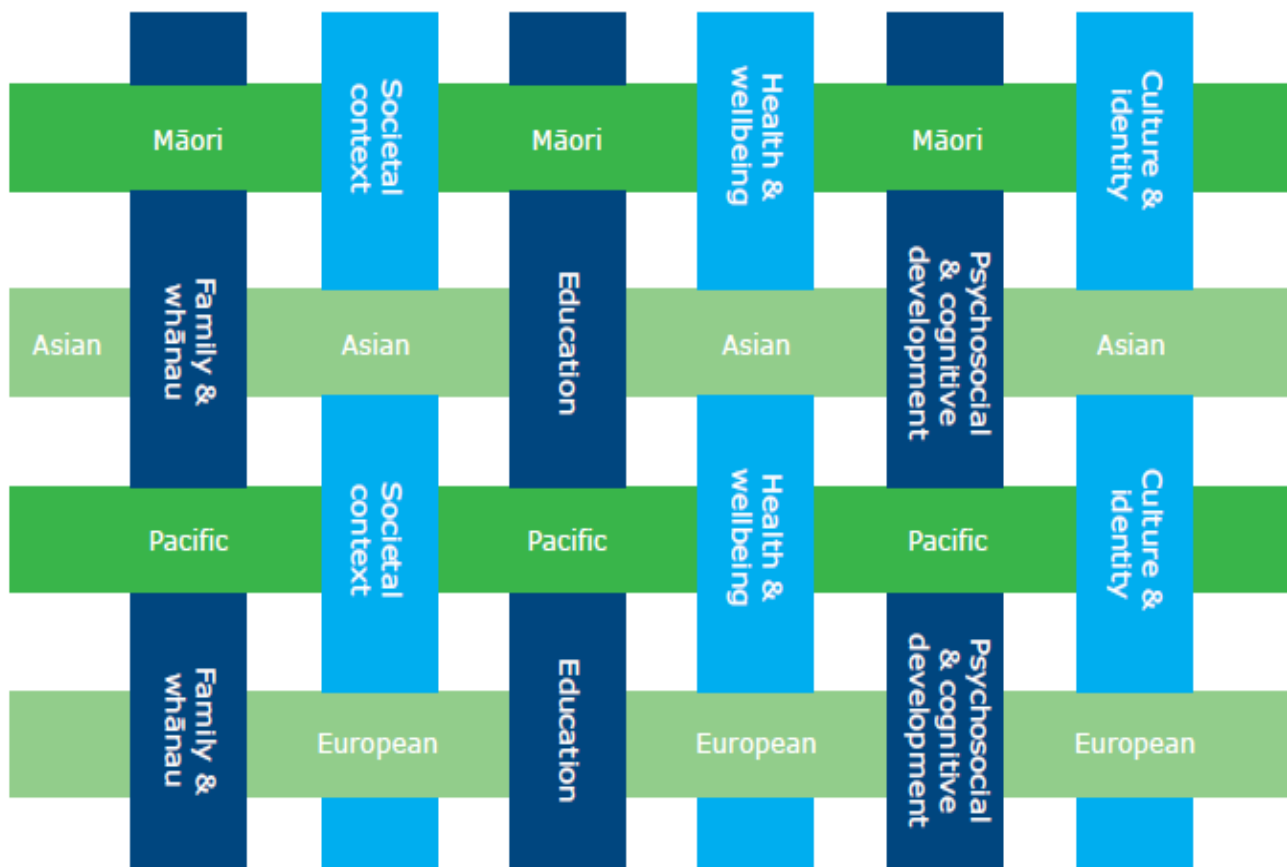
**Named Investigator, Growing Up in New Zealand**



# Today's talk

- Background to Growing Up in New Zealand
  - What makes the study special?
  - How do we collect our data?
  - What do we do with our data?
    - What have we found?
    - What next?

# Research domains and themes



## How do you Recruit and Retain a Prebirth Cohort? Lessons Learnt from Growing Up in New Zealand

Susan M. B. Morton<sup>1</sup>, Cameron C. Grant<sup>2</sup>,  
Polly E. Atatoa Carr<sup>1</sup>, Elizabeth M. Robinson<sup>3</sup>,  
Jennifer M. Kinloch<sup>3</sup>, Courtney J. Fleming<sup>4</sup>,  
Te Kani R. Kingi<sup>5</sup>, Lana M. Perese<sup>6</sup>, and Renee Liang<sup>4</sup>

### Abstract

*Growing Up in New Zealand*, a longitudinal study following nearly 7,000 children, has faced some unique challenges in identifying, enrolling, and

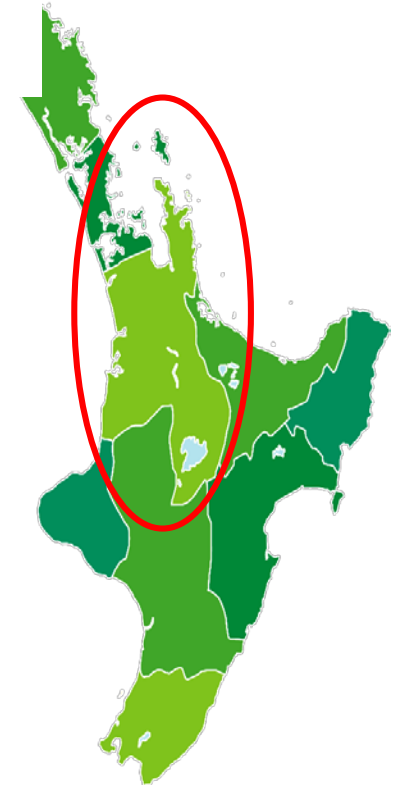
### COHORT PROFILE

## Cohort Profile: Growing Up in New Zealand

Susan M B Morton,<sup>1,2\*</sup> Polly E Atatoa Carr,<sup>1,2</sup> Cameron C Grant,<sup>1,2,3,4</sup> Elizabeth M Robinson,<sup>2,5</sup>  
Dinusha K Bandara,<sup>2</sup> Amy Bird,<sup>2</sup> Vivienne C Ivory,<sup>2,6</sup> Te Kani R Kingi,<sup>2,7</sup> Renee Liang,<sup>2</sup>  
Emma J Marks,<sup>2,8</sup> Lana M Perese,<sup>2,9</sup> Elizabeth R Peterson,<sup>2,10</sup> Jan E Pryor,<sup>2,11</sup> Elaine Reese,<sup>2,12</sup>  
Johanna M Schmidt,<sup>2</sup> Karen E Waldie<sup>2,10</sup> and Clare Wall<sup>1,2,13</sup>

### *Growing Up in New Zealand* cohort alignment with all New Zealand births

Susan M.B. Morton,<sup>1,2</sup> Jacqueline Ramke,<sup>2</sup> Jennifer Kinloch,<sup>2,3</sup> Cameron C. Grant,<sup>1,2,4,5</sup> Polly Atatoa Carr,<sup>1,2</sup> Heidi Leeson,<sup>2</sup>  
Arier Chi Lun Lee,<sup>2,3</sup> Elizabeth Robinson<sup>2</sup>



- Recruited during pregnancy
- 3 DHB regions (Auckland, Counties-Manukau, Waikato)
- Due date between 25 April 2009 and 25 March 2010
- 6822 Mothers and 4401 Partners
- 6853 Children, more than 90% retention to two years



























# Growing Up in New Zealand

## To date, the study has:

- Carried out more than 90,000 interviews
- Collected more than 50 million pieces of data
- Gathered more information about the crucial first 1000 days of life than any other contemporary study
- Completed 15 Data Collection Waves
- Deployed the services of more than 130 interviewers over the study's life
  - Published more than 90 manuscripts and reports



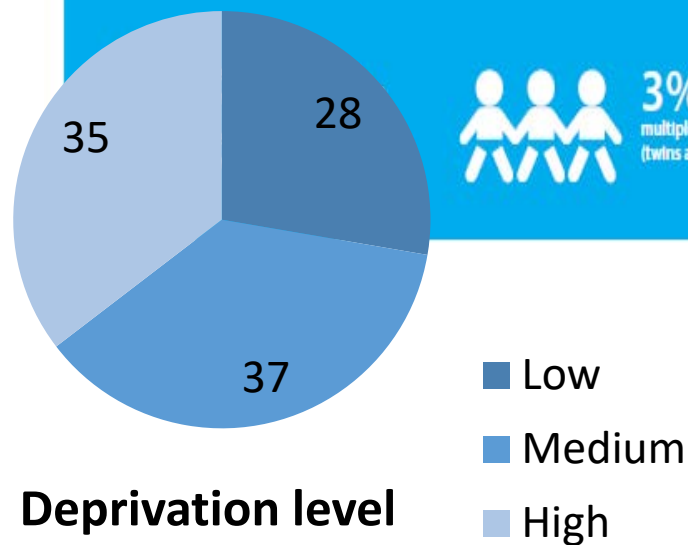
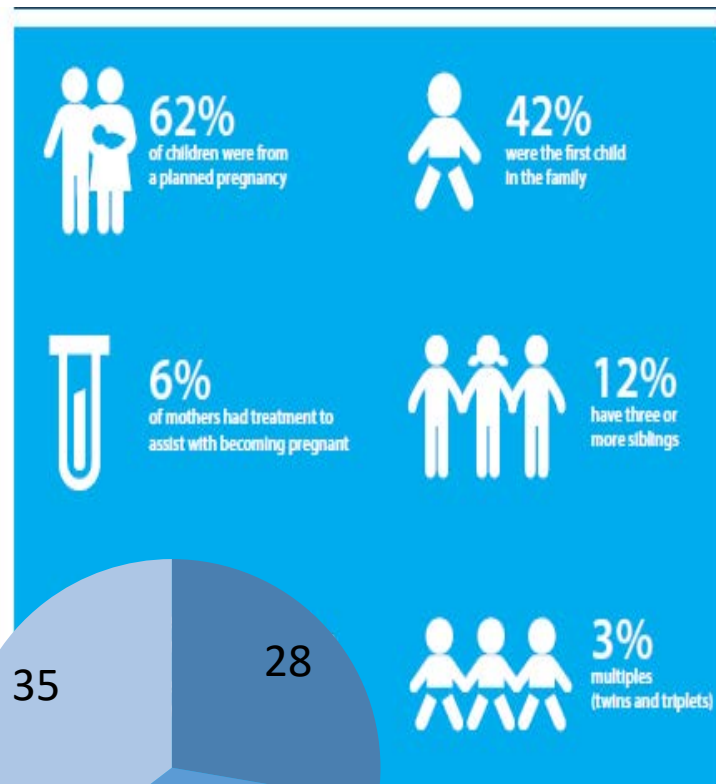
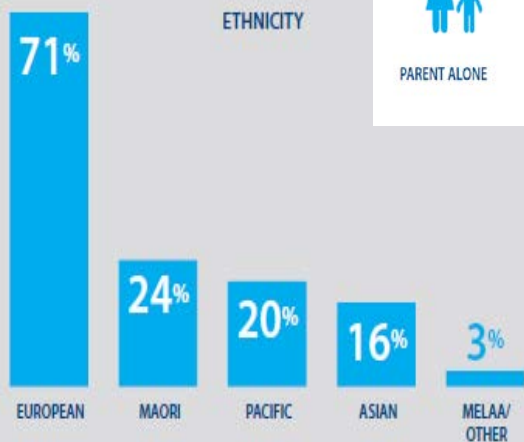
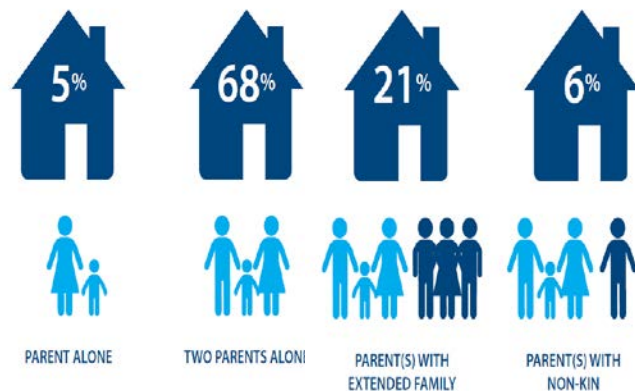
# Longitudinal Information collected to date

Child age	Ante-natal	Peri-natal	6 wk	35 wk	9 mth	12 mth	16 mth	23 mth	2 yr	31 mth	45 mth	54 mth	6 yr	8 yr
Mother CAPI*														
Father CAPI*														
Mother CATI†														
Mother online														
Father online														
Child‡														
Biological samples														
Data linkage**														

\* CAPI computer assisted personal interview; † CATI computer assisted telephone interview

‡ Child measurement/assessment/observation; \*\* Linkage to health and education records

# The cohort



**What makes us who we are?**





# What makes us special?

SAVE THE DATE

*Your Growing Up in New Zealand*

## 'Who are today's dads?'

**online questionnaire starts  
on Monday, 30 November 2015.**

If we have your email address we will send you a link to the online questionnaire on this day (please check your spam and other folders).

If you don't have email, don't worry – one of our interviewers will give you a call instead.



# “Who are Today’s Dads?”

## Fathers of the *Growing Up in New Zealand* cohort children

Lisa Underwood and Marjolein Verbiest

With Polly Atatoa Carr, Sarah Berry  
Cameron Grant, Jatender Mohal, Te Kani Kingi,  
Jan Nicholson, Jan Pryor, Nikolas Rusten and  
Susan Morton

[www.growingup.co.nz/todays-dads](http://www.growingup.co.nz/todays-dads)

# Dads' Engagement & Parenting Practices

- 82% feel they are a very good or better than average parent
- 58% of dads would like to be more involved in their child's life
- 89% of dads who would like to be more involved said that work commitments prevented this from happening
- Lower levels of actual involvement were associated with desire to be more involved
- Higher levels of actual involvement were associated with:
  - Living with the child all the time
  - Higher levels of confidence as a parent
  - Higher levels of support



# Paternal Depression Symptoms During Pregnancy and After Childbirth Among Participants in the Growing Up in New Zealand Study

Lisa Underwood, PhD; Karen E. Waldie, PhD; Elizabeth Peterson, PhD; Stephanie D'Souza, MSc; Marjolein Verbiest, PhD; Frances McDaid, BHSc; Susan Morton, FNZCPHM

**IMPORTANCE** Antenatal and postnatal depression are known to be common and associated with poor outcomes for women and their children. There is little evidence on depression symptoms among men during the perinatal period.

**OBJECTIVE** To identify characteristics associated with depression symptoms among men whose partners were pregnant and subsequently gave birth.

**DESIGN, SETTING, AND PARTICIPANTS** A longitudinal cohort study provided data from a demographically diverse sample of 3523 New Zealand men who completed interviews during their partner's pregnancy and 9 months after the birth of their child. Participants were drawn from a cohort whose partners were pregnant women with a due date between April 25, 2009, and March 25, 2010, who were enrolled in the Growing Up in New Zealand study. Data analysis was conducted from September 1, 2015, to January 8, 2016.

**MAIN OUTCOMES AND MEASURES** Depression symptoms were measured using the Edinburgh Postnatal Depression Scale and the 9-item Patient Health Questionnaire; elevated depression symptoms were defined as scores higher than 12 and 9, respectively.



# NZ study: Dads get the baby blues, too

16 Feb, 2017 5:00am

© 4 minutes to read



New research has shown how Kiwi dads are also prone to pre- and post-natal depression. Photo / 123RF



By: **Jamie Morton**  
 Science Reporter, NZ Herald  
[jamie.morton@nzherald.co.nz](mailto:jamie.morton@nzherald.co.nz)  
[@Jamienzherald](https://twitter.com/Jamienzherald)



Pre- and post-natal depression has been studied exhaustively in mothers but a new study of 3500 Kiwi men has revealed how dads are also affected by the baby blues.

Using participants from the longitudinal [Growing Up In New Zealand study](#), University of Auckland researchers discovered that 2.3 per cent of fathers experienced depression during their partners' pregnancy and the figure climbed to 4.3 per cent nine months after their child was born.

## Mentioned by



**Dads Can Suffer From Pre- and Postpartum Depression Too**



**Can Dads Get Postpartum Depression Too?**



**Depression Hits New Dads Too**



**Turns Out New Dads Can Get Postnatal Depression Too - VICE**



**Depression: New dads risk pre- and postpartum problems, study says**



ELSEVIER

Journal of Affective Disorders

Volume 186, 1 November 2015, Pages 66-73



Research report

## Depression symptoms during pregnancy: Evidence from *Growing Up in New Zealand*

Karen E. Waldie <sup>a</sup>  , Elizabeth R. Peterson <sup>a</sup>, Stephanie D'Souza <sup>a, b</sup>, Lisa Underwood <sup>b</sup>, Jan E. Pryor <sup>c</sup>, Polly Atatoa Carr <sup>b</sup>, Cameron Grant <sup>b, d</sup>, Susan M.B. Morton <sup>b, d</sup>




[Maternal and Child Health Journal](#)

April 2017, Volume 21, [Issue 4](#), pp 915–931 | [Cite as](#)

## A Longitudinal Study of Pre-pregnancy and Pregnancy Risk Factors Associated with Antenatal and Postnatal Symptoms of Depression: Evidence from Growing Up in New Zealand

Authors

[Authors and affiliations](#)

Lisa Underwood , Karen E. Waldie, Stephanie D'Souza, Elizabeth R. Peterson, Susan M. B. Morton

Article

**First Online:** 11 November 2016

5

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Citations

# Antenatal Depression Symptoms in Pacific Women

- High rates of antenatal depression symptoms among Pacific women in the Growing Up in New Zealand cohort
  - 2 x rate among European women
- No existing literature on antenatal depression in Pacific women and associated factors
  - Huge gap in the literature
- 727 women who self-prioritised their ethnic identity as Pacific Islander



# Findings

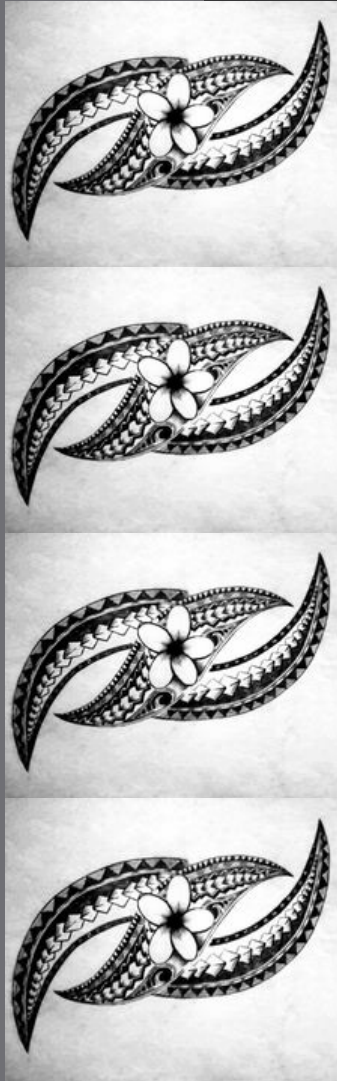
Variable	Other (N = 1762)	Pacific (N = 727)	European (N = 3168)	Pearson X <sup>2</sup>	P value
<b>Pre-pregnancy depression (N = 5653)</b>				136.287	.000
Yes	225 (12.8)	50 (6.9)	709 (22.4)		
No	1536 (87.2)	674 (93.1)	2459 (77.6)		
<b>Depression in pregnancy (N = 5653)</b>				9.171	.010
Yes	74 (4.2)	25 (3.5)	180 (5.7)		
No	1687 (95.8)	699 (96.5)	2988 (94.3)		
<b>EPDS depression (N = 5657)</b>				151.428	.000
Yes	250 (14.2)	171 (23.5)	250 (7.9)		
No	1512 (85.8)	556 (76.5)	2918 (92.1)		

Variable	B (SE)	OR	95% CI	Wald
<b>Family Doctor/GP before pregnancy</b>				
Yes	-	-	-	-
No	1.099 (.420)	3.000	1.317 – 6.834	6.841**

1 in 3 pregnant  
 Pacific women < 25 have  
 antenatal depression

Variable	Other	Pacific	European	Pearson X <sup>2</sup>
<b>Family Doctor before pregnancy (N = 5657)</b>				39.787**
Yes	1511 (85.8)	675 (92.8)	2874 (90.7)	
No	250 (14.2)	52 (7.2)	294 (9.3)	

\*\* p < .01





# **IPV during pregnancy: a socio-ecological, cross-cultural examination of risk and protective factors for New Zealand women**

Questions used to assess level of relationship conflict:

- Three verbal ('raise your voices when arguing', 'yell at each other when angry' and 'swear at each other when angry')
- Three physical ('push and shove each other when arguing', 'throw things at each other when arguing' and 'break things when arguing')



## Intimate partner conflict

14% (815) reported pushing or shoving, or breaking or throwing objects during relationship conflict within the previous month

- 6% of European women reported physical conflict
- 22% of Māori women
- 20% of Asian women
- 33% of Pacific women



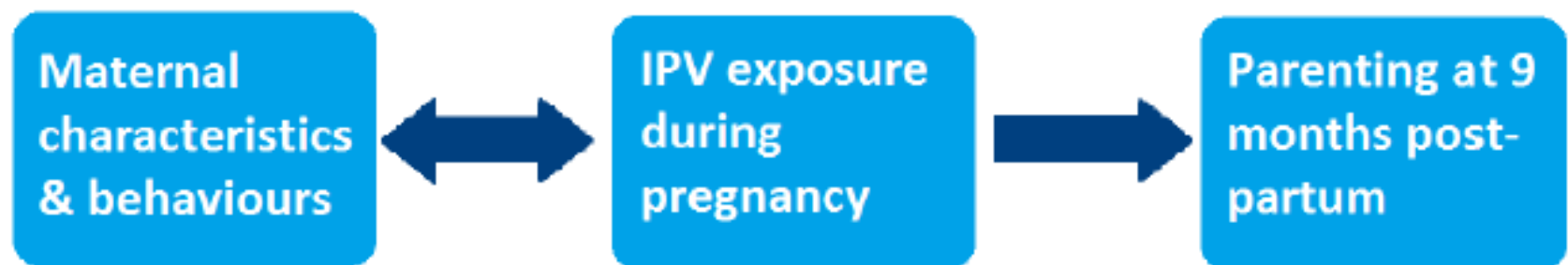
## Intimate partner conflict

European factors	Maori factors	Pacific factors	Asian factors
Identification with traditional culture Racial discrimination		Migrant to NZ	
Lower family cohesion	Household structure	Lower family cohesion	
Lower personal commitment	Lower personal commitment Higher structural commitment	Lower personal commitment Higher structural commitment	Lower relationship commitment Higher structural commitment
Poor-fair maternal health		Continuing to smoke	
Higher perceived stress Family stress	Higher perceived stress	Higher perceived stress	Higher perceived stress

**Factors uniquely associated with IPV during pregnancy for European, Maori, Pacific and Asian women**



1. What factors during pregnancy are associated with IPV exposure in pregnant Pacific women?
2. Does IPV exposure in Pacific women during pregnancy have an effect on parenting at 9 months post-partum? If so, what parenting behaviours are affected and how?



# Exposure to IPV during pregnancy & effects on parenting at 9 months |

Findings from *Growing Up in New Zealand*

- Previous *Growing Up in New Zealand* findings identified highest rate of IPV in Pacific women during pregnancy
- No existing literature looking at IPV in Pacific women and effect on parenting
- Used data from a cohort of 580 Pacific women who completed antenatal and 9 month interviews
- IPV = reported any physical conflict in the previous 4 weeks

# Findings



**31.2%**

reported exposure to IPV in the previous 4 weeks



**1.6 x**

the increased risk of IPV as a result of migrating to NZ after the age of 10 years old



**2.3 x**

the increased risk of IPV exposure associated with smoking during pregnancy



Women exposed to IPV had **higher perceived stress**

Of those exposed to IPV:

**75%**

play with toys with baby several times a day



Women exposed to IPV **2.2 x** more likely to play with toys with their baby several times a day compared to once a day



Higher **Family Cohesion** was protective of IPV exposure



Personal and Relationship **commitment** was protective of IPV exposure

### Focus of the 8/9 year DCW

- Child-centred
- Areas of interest:
  - Aspects of the children's lives that may have been affected by their past environment, experiences and circumstances
  - How the children are doing at 8 years
  - Aspects of the children's lives that may affect their future development and later childhood or even adult outcomes
  - A chance to hear the children's voices



## How are data collected?

- Precise measurement >>> open questions
- All children (where possible) are asked to complete the same questionnaires and tasks
- Experts, researchers and the Growing Up team spent two years selecting the best tools
  - Designed and developed scientifically
  - Good psychometric properties
  - Widely / internationally recognised
  - Easy / quick to use





## What are we measuring?

- Children's perceptions, views and experiences (Questionnaires)
- Development (Direct measurement)
  - Growth (anthropometry – height, weight, etc.)
  - Psychosocial (cognition – NIH Toolbox; social – sticker game)
  - Language (te reo tool)
- Relationships (Direct measurement)
  - Parent-child interaction
  - Day-to-day life and activities (Direct measurement)
  - Accelerometers and Time Use Diary



# Acknowledgements

## Participants and their families

Assoc. Prof. Susan Morton

*Growing Up in New Zealand* team

University of Auckland and UniServices

Ministry of Social Development & Families Commission

Executive Board

Policy Forum members: *Ministry of Health, Ministry of Education, Ministry of Justice, Dept of Labour, Ministry of Pacific Island Affairs, Te Puni Kokiri, Office of Ethnic Affairs, Statistics NZ, Children's Commission and others*

Advisory and Stakeholder groups: *Executive Scientific Advisory Group, Data Access Committee, Named Investigators and Collaborators, Kaitiaki Group*

