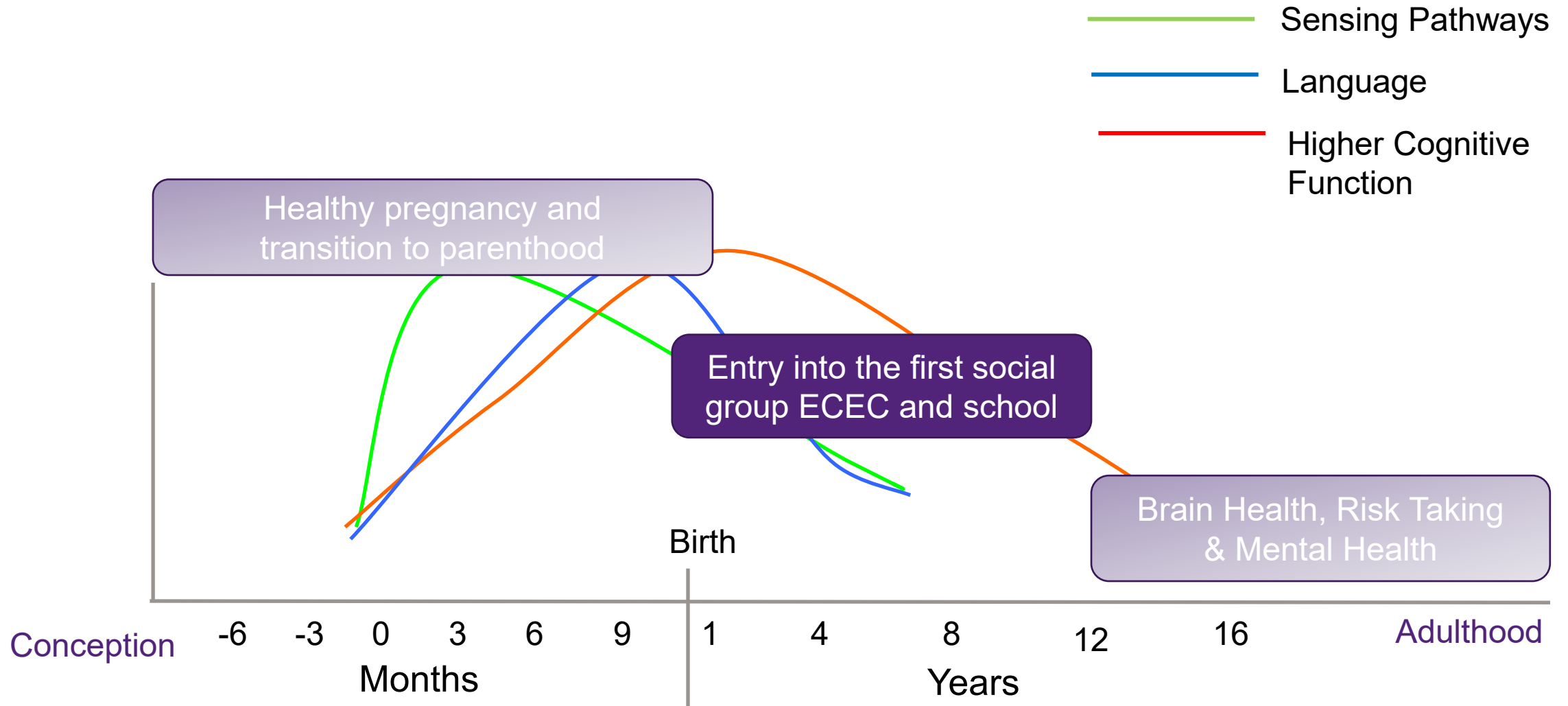




# Entry into the first social groups - of ECEC and school

Laureate Professor Karen Thorpe  
Queensland Brain Institute  
The University of Queensland

[k.thorpe@uq.edu.au](mailto:k.thorpe@uq.edu.au)



**Human Brain Development : Synapse Formation C-16 years**

C. Nelson, *From Neurons to Neighbourhoods*, 2000.

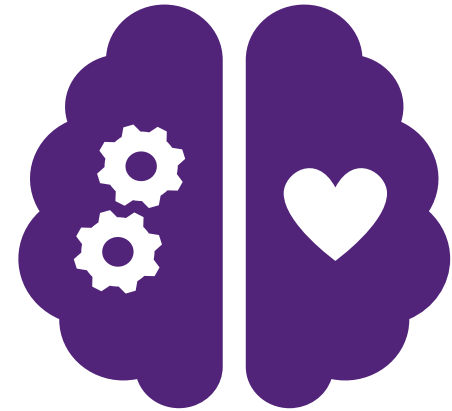
1

First 2000 days =  
foundation of brain architecture



2

# Early experiences matter

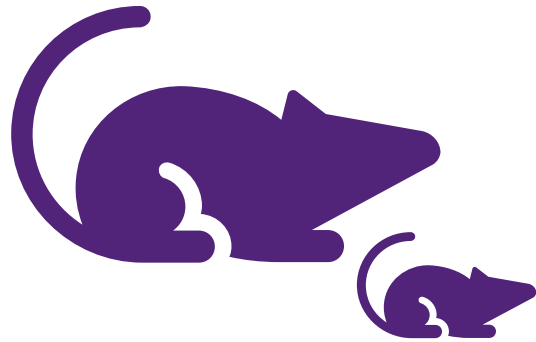


3

Interventions to improve  
experiences in first 2000 days  
have enduring effect



# Animal models

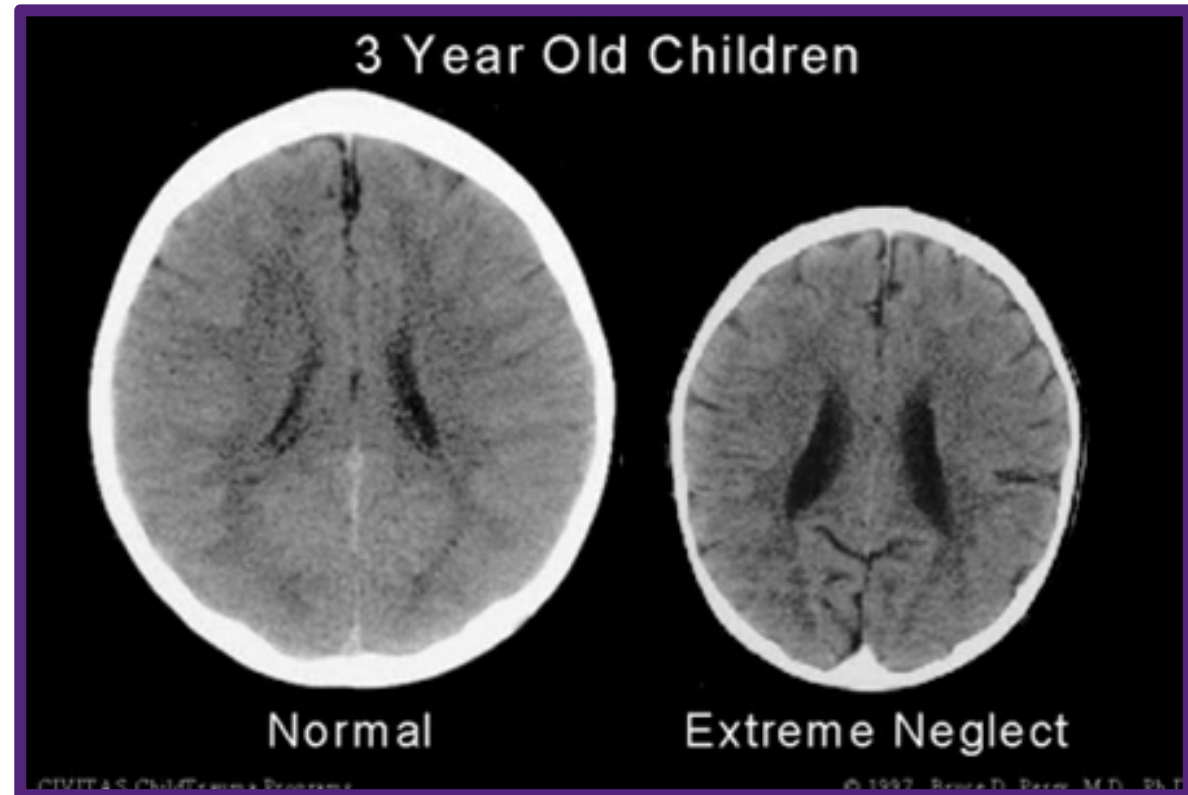


See work of Michael Meany's lab - McGill University

- ✓ Attentive rat mothers lick and groom their babies more
- ✓ By licking, the mother turns on her pups “genetic potential” by modifying their DNA
- ✓ Rat pups who are licked more grow bigger, have denser neural networks, have less stress hormone, are healthier and live longer

# Ecological studies of humans

Romanian adoptee studies



See work of Michael Rutter and Nathan Fox

# Early experiences matter

..... and are malleable targets for intervention to promote optimal developmental and life trajectories

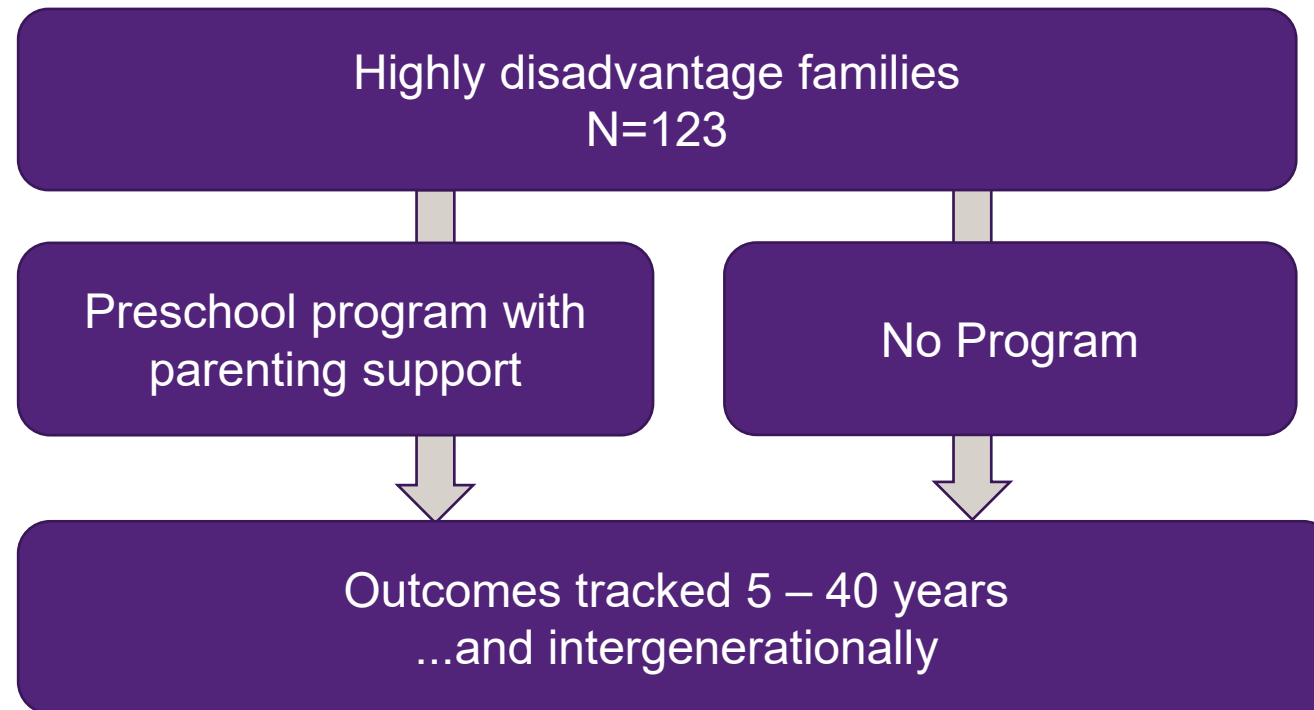


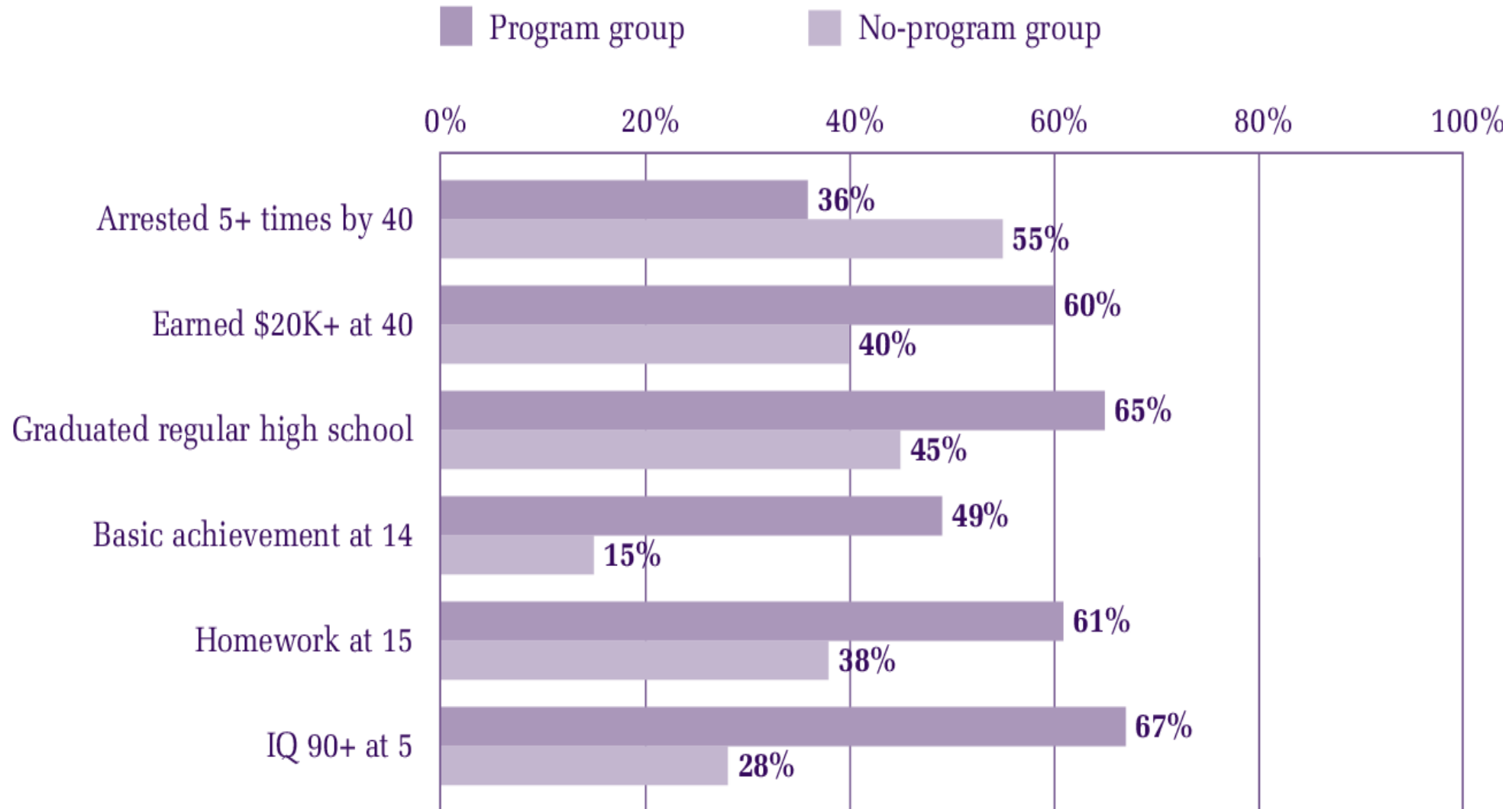
# The example of ECEC



# Experimental Evidence

## Perry Highscope 1960s





Children of Perry participants spend at least three times the amount of time with stably married parents before age 18.



All children of Perry participants



Male children of male participants

# Effectiveness Evidence

What are the effective ingredients of ECEC?

What elements have enduring effects?

Do these work across social context?

Are interventions scalable?

# ECEC: What matters? What's effective?

- ✓ 2600 children tracked from ECEC classrooms (age 3-4) to (age 8)
- ✓ Standard observations of ECEC (LDC, FDC, K) – measuring emotional organisational and instructional quality
- ✓ Tracking of outcomes – direct cognitive assessments and NAPLAN



- ✓ Tracking of outcomes of E4Kids participants in Queensland state schools (n=700) from age 5-14 years



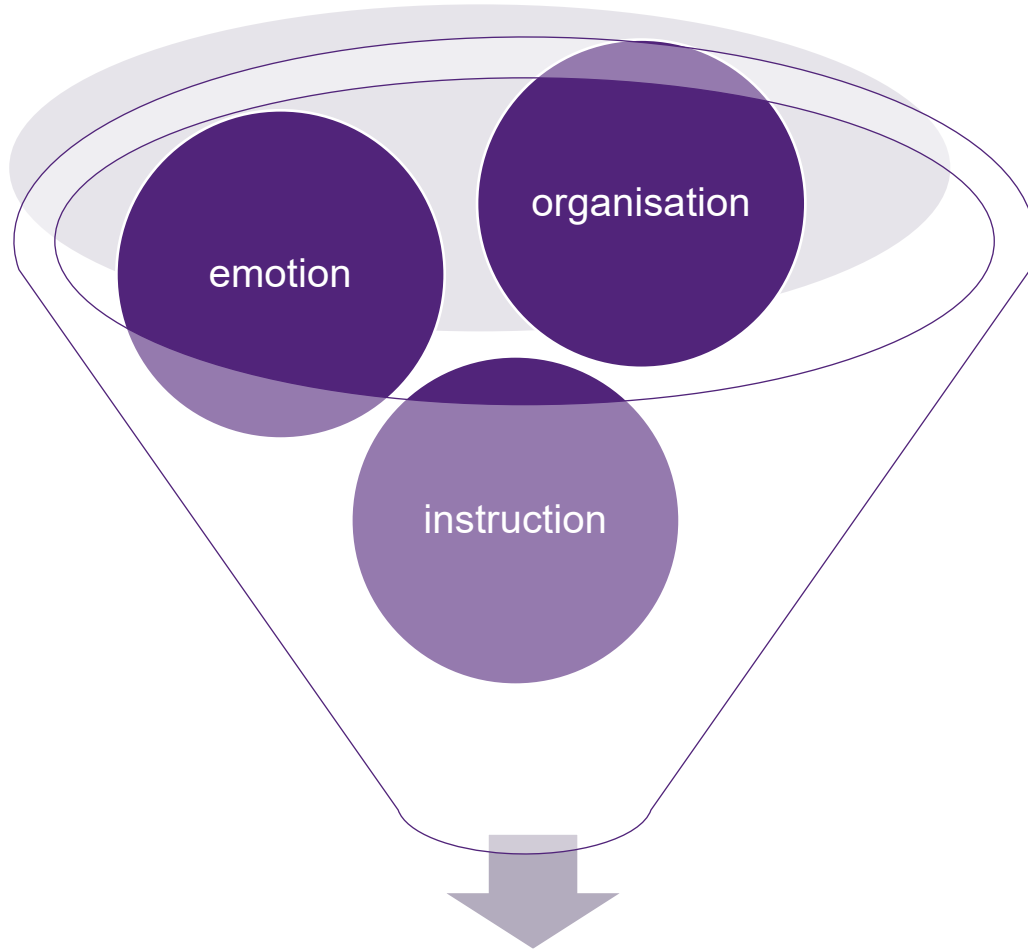
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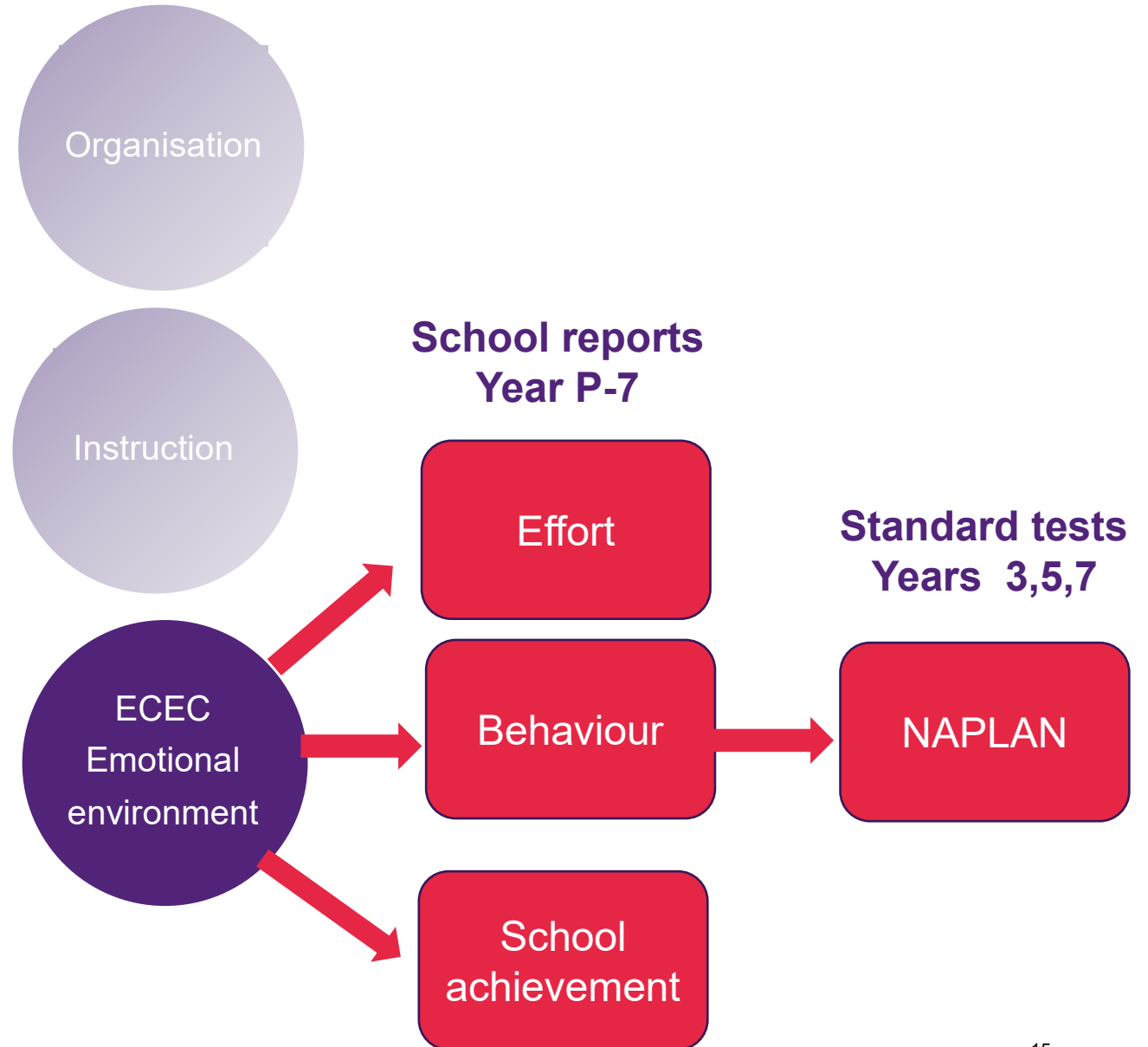
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Queensland Govt Education Horizon

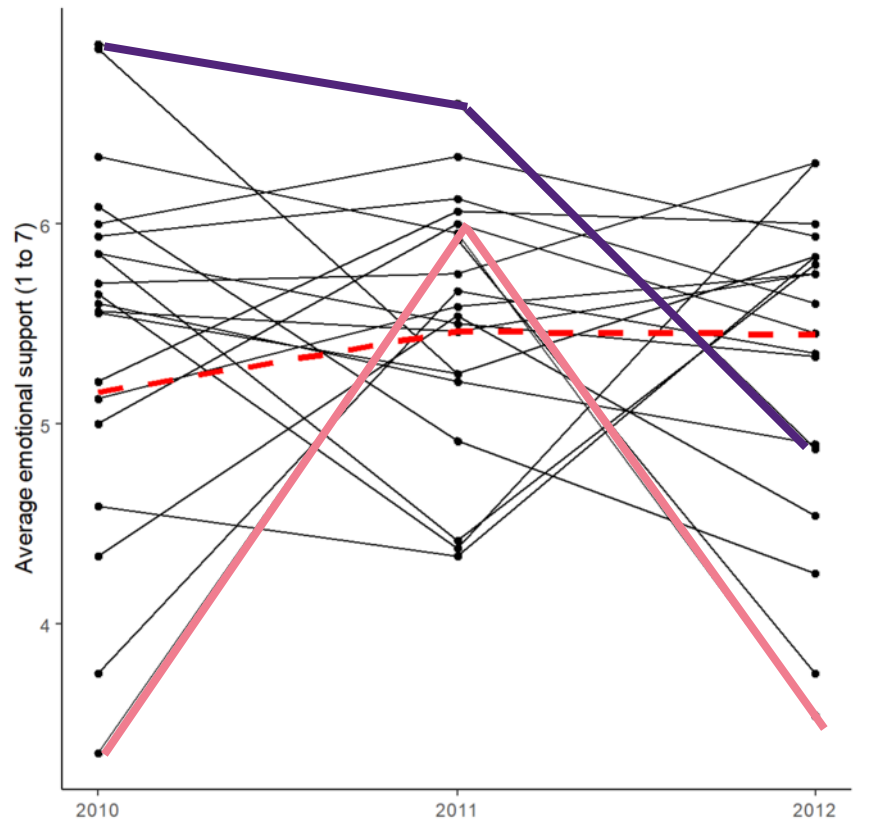
# What matters?



Relationships matter



# Looking another way : Within child analyses



Individual child experiences of CLASS emotional support across 3 years

- ✓ Children's experiences of quality across 3 years of their educational journey

ECEC → Prep. → Year 1

- ✓ Analysing E4Kids we asked how these variations in quality relate to each child's learning across the same time (WJIII)

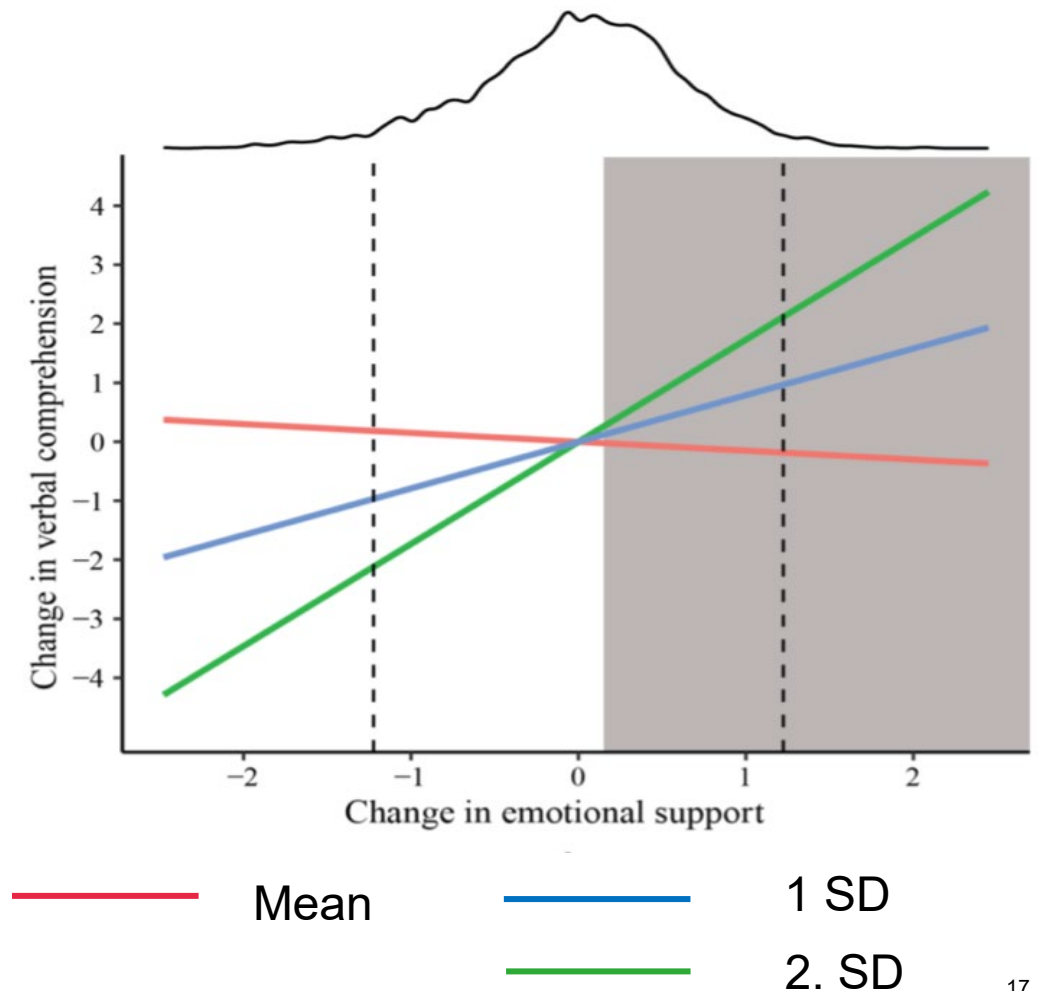




# Change in Emotional Support predicts rate of language development

Increase in emotional support higher rates of growth in language

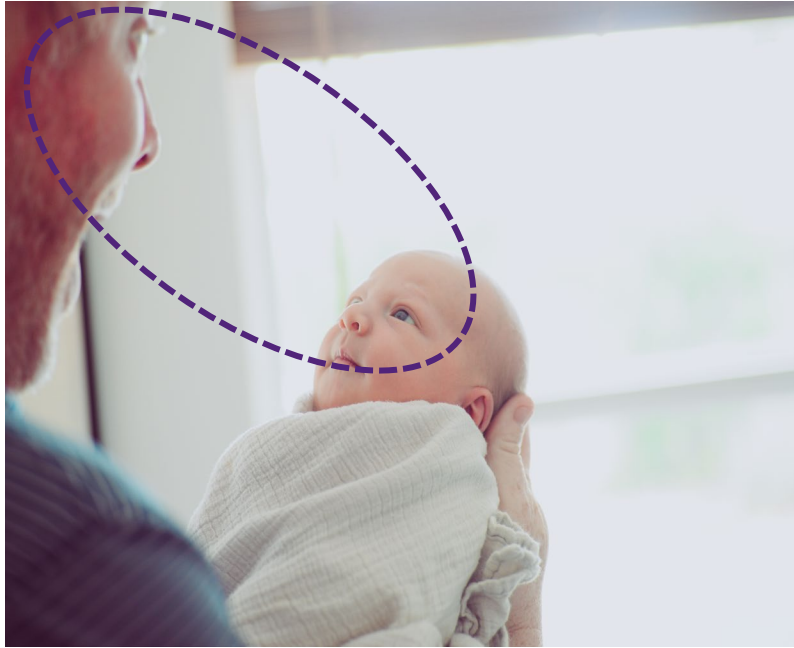
Decrease in emotional support reduced growth in language



# Implications: Caregivers are central



# Brain building –



relationships shape brains

# 3

## Essential actions to support relationships and build brains

1. **Improve** pay and lives of educators
2. **Reimagine** ratios for equity in brain health
3. **Deliver** supports for educators and families especially those encountering complex lives

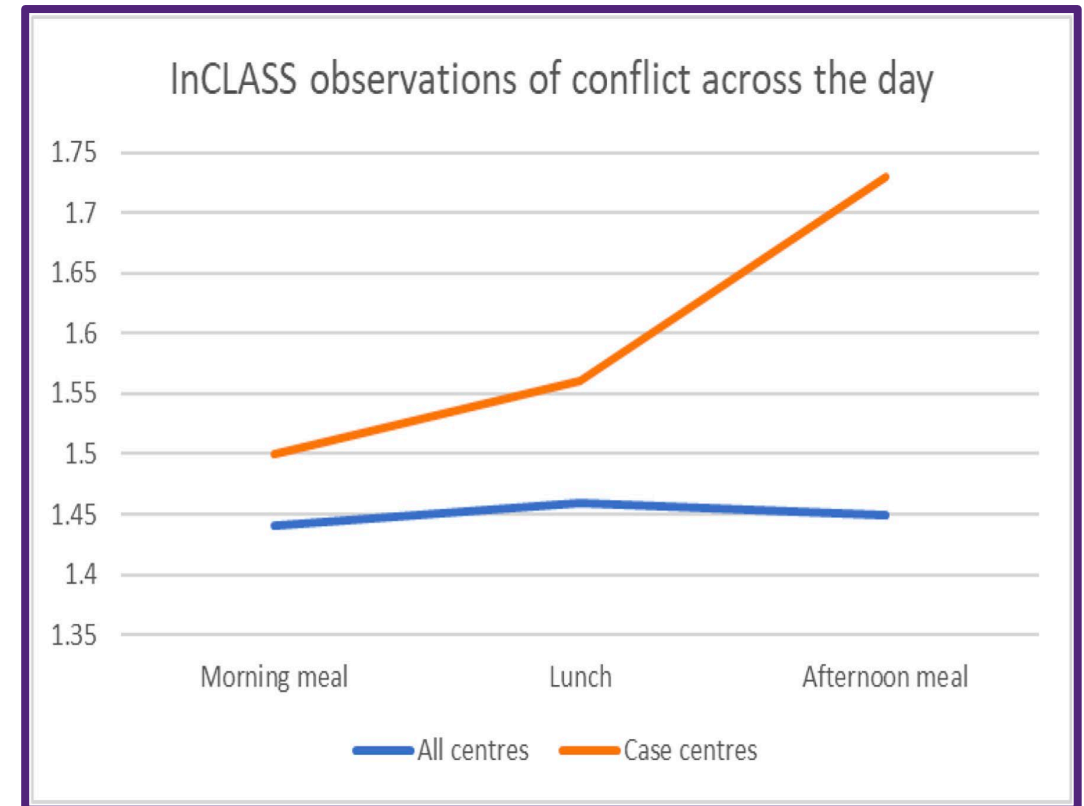
# 1. Children and educators going hungry

Thorpe et al 2022 *Social Science and Medicine*

# 2. Reduced learning and escalating conflict

Searle et al 2023 *Children and Society*

# 3. Provide high quality food to support children's brain development and life chances



1

# Australian children and educators going hungry in ECEC



Meal provision in early childhood education and care programs: Association with geographic disadvantage, social disadvantage, cost, and market competition in an Australian population

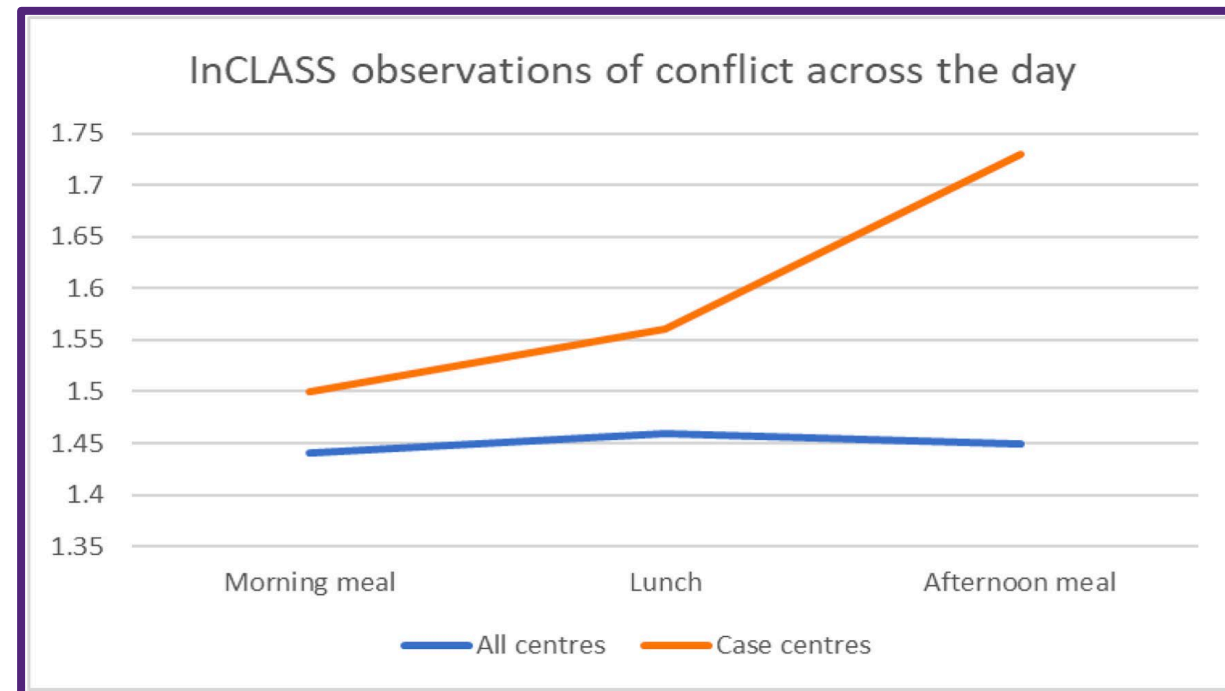
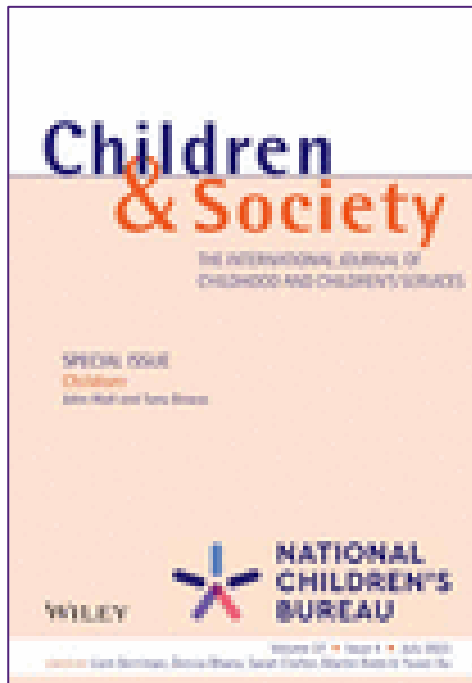
Karen Thorpe<sup>a,b,\*</sup>, Azhar Hussain Potia<sup>b,c</sup>, Bonnie Searle<sup>b,c</sup>, Olivia Van Halen<sup>c</sup>, Nicole Lakeman<sup>c</sup>, Candice Oakes<sup>c</sup>, Holly Harris<sup>b,d</sup>, Sally Staton<sup>b,d</sup>

2

# Reduced learning and escalating conflict

## Poverty for lunch: A case study of agency and food scarcity in mealtimes in disadvantaged ECE

Bonnie Searle<sup>1,2</sup> | Emma Cooke<sup>1,2,3</sup> | Sally Staton<sup>1,2</sup> | Karen Thorpe<sup>1,2</sup>



# 3 Provide high quality food to support children's brain development and life chances

