



PARENTAL RESPONSIVENESS RATING SCALE (PARRIS)

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REEdCh | Research in Effective
Education in Early Childhood

Melbourne
Graduate School
of Education



THE UNIVERSITY OF
MELBOURNE



Birrarung (Yarra river) on Wurundjeri country

Acknowledgement of Country

We acknowledge peoples of the Kulin nation as the traditional custodians of the water, sky and land on which we are learning and living today.

We pay our respects to Elders, past and present are grateful for their enduring care for beautiful country.



Developing PaRRiS



Implementation of PaRRiS



Future plans for PaRRiS



Developing PaRRiS



Implementation of PaRRiS

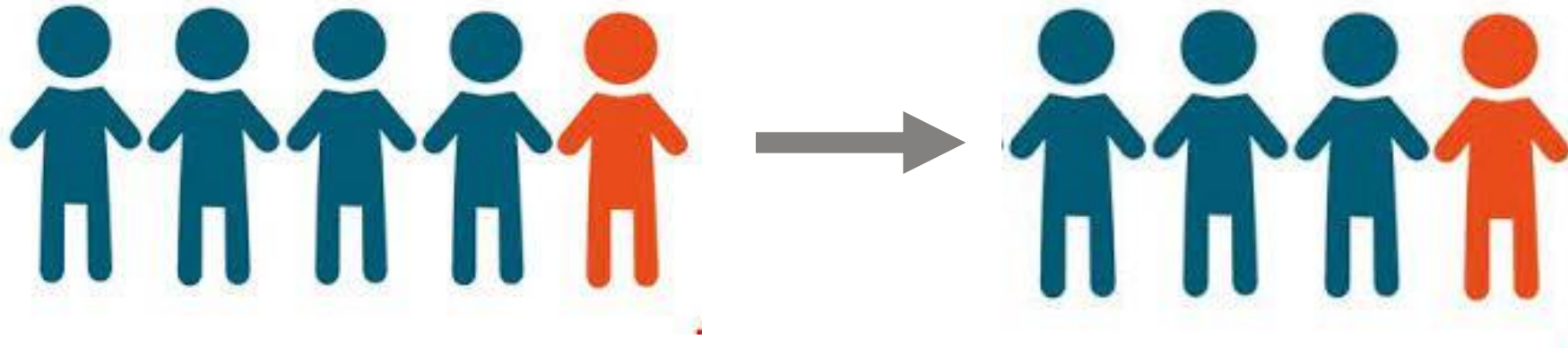


Future plans for PaRRiS

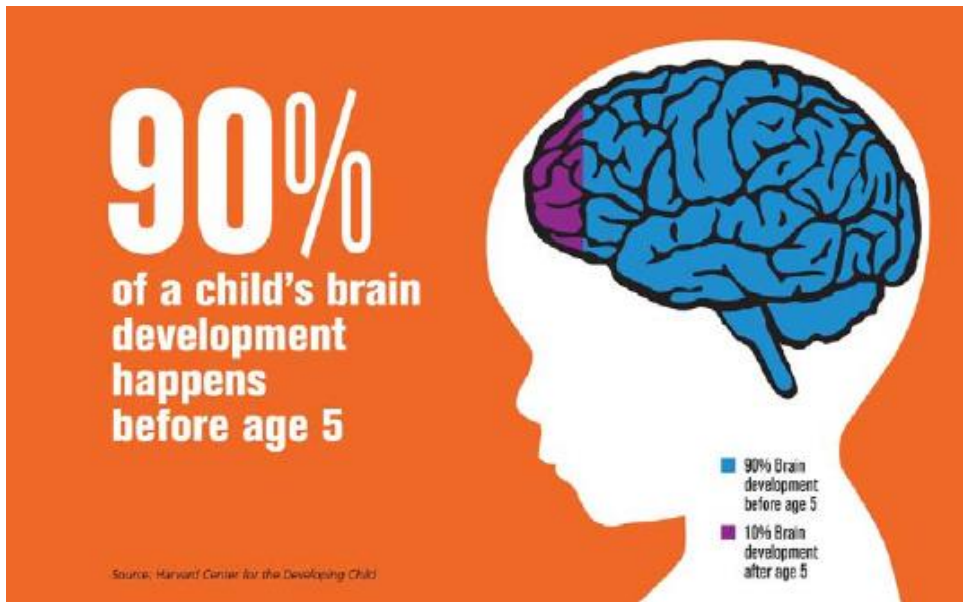
Where it all began – 2008



“While the majority of young children acquire language effortlessly, a significant minority do not.” (Law et al, 2017, pg. 5)



Cheung, et al (2023) *BMJ Paediatrics Open*, 7(1).

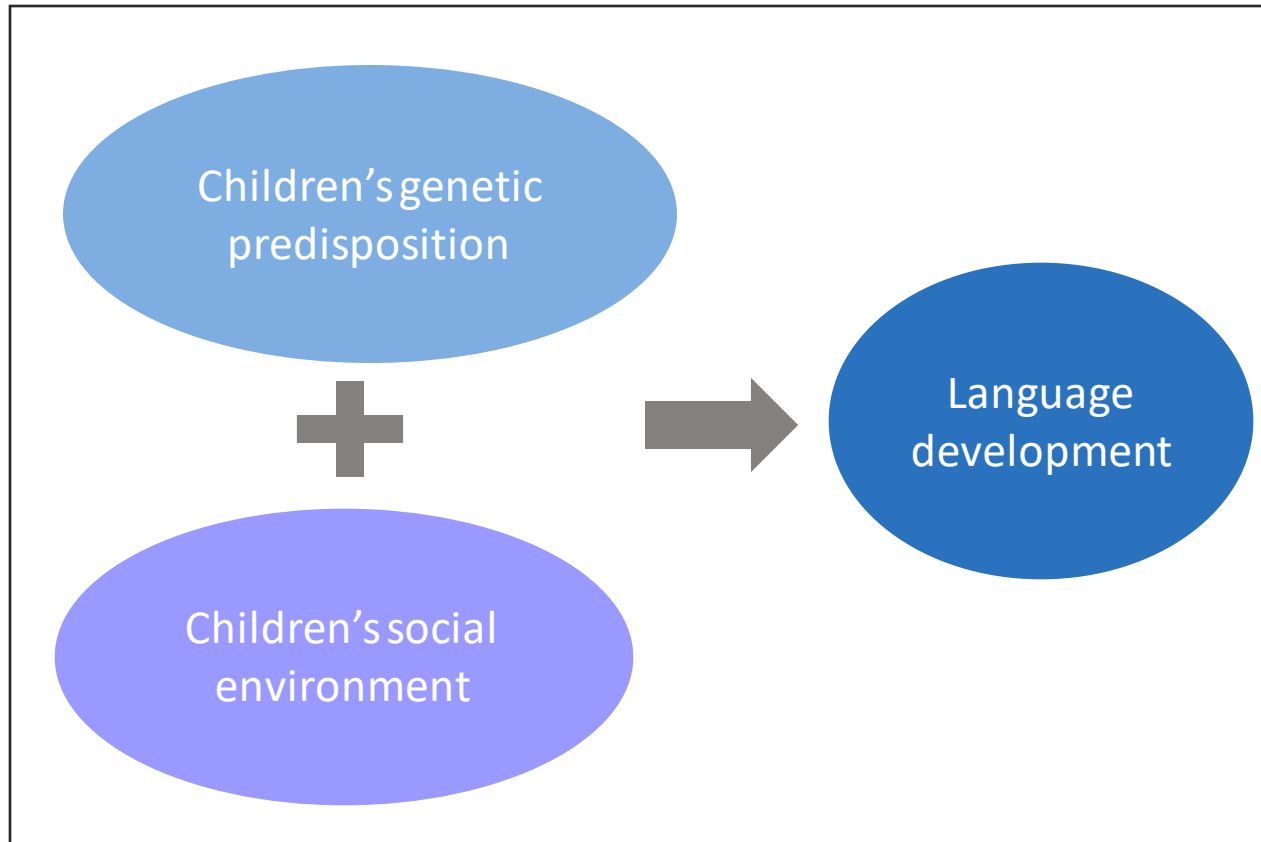


"Development in the early years is both highly robust and highly vulnerable. ... What happens during the first months and years of life matters a lot, not because this period of development provides an indelible blueprint for adult well-being, but because it sets either a sturdy or fragile stage for what follows" (Shonkoff & Phillips, [2000](#))



1. HOW TO DELIVER PREVENTION AND INTERVENTION AT SCALE TO REACH THOSE MOST IN NEED

2. ACCURATE IDENTIFICATION EARLY OF THOSE AT RISK OF LANGUAGE DIFFICULTIES LATER



- Language is easier for children to learn when it occurs in interactions with certain qualities or characteristics
- Responsiveness: Adult behaviours that are *contingent, developmentally appropriate* and *prompt in response to a child's initiations* (Bornstein & Tamis-LeMonda, 1989)

- Social interactionist perspective (Bruner, 1983)
 - a process of development, whereby children acquire language within a social environment
- Being responsive encourages a reciprocal relationship and increases the ability to build a conversation between caregiver and child
- The child is able to initiate the topic of interaction and the caregiver then responds in a way that is meaningful to the child

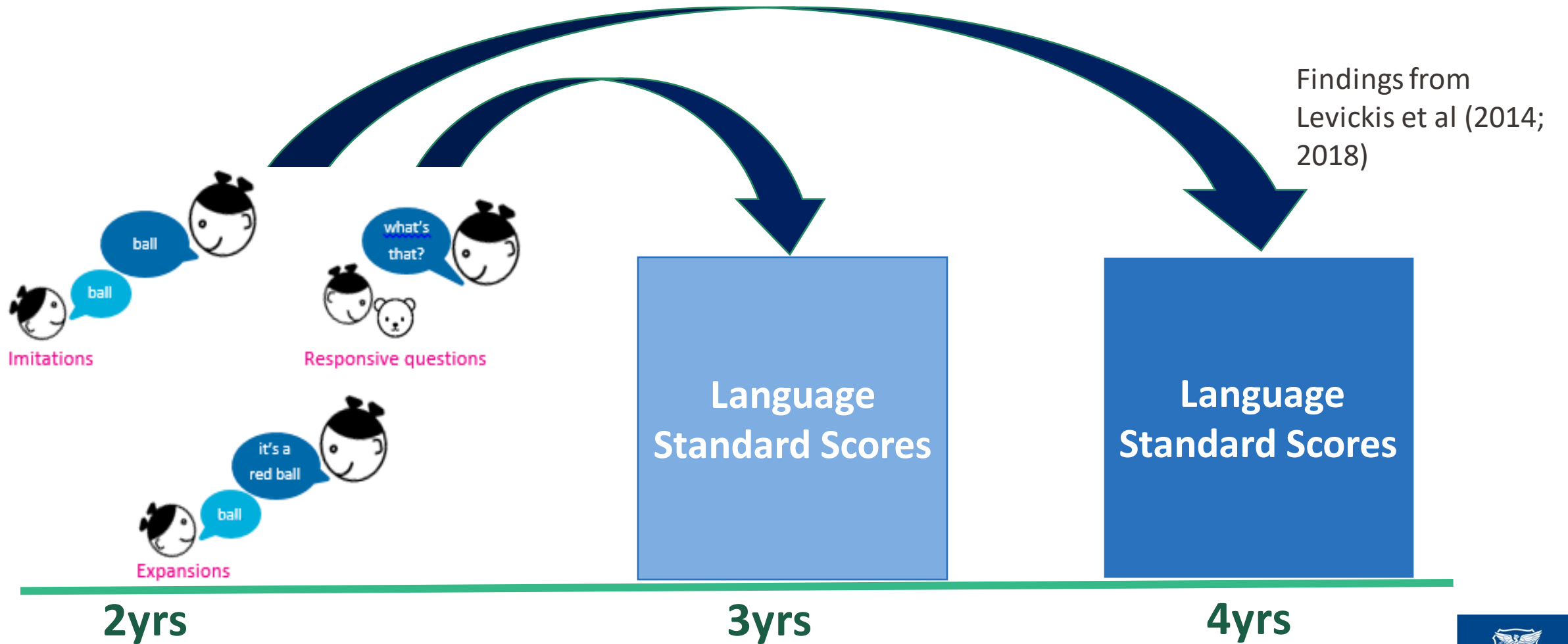




A responsive parent is not directive of their child's attention but follows their child's lead, watching and listening carefully for communication. They respond to their child's communicative attempts with language relating to the child's focus of attention.

They are also responsive to the child's developmental level so the language they use is in the child's Zone of Proximal Development (Vygotsky, 1978) – one step ahead of the child's development

Responsive behaviours predict child language outcomes





Detailed ratings of parent-child interaction are typically time consuming and costly (Wysocki, 2015)

A brief observational tool, which could be used in a clinical context in place of complex coding schemes as a measure of parent-child interaction

Prospective longitudinal study in Melbourne, Australia

18 mths: 1,139 parents completed a 100-word expressive vocabulary checklist → 301 children scored ≤ 20 th percentile

Observational data from the 251 'slow-to-talk' toddlers and their mothers was used to develop **PaRRiS**; a measure of parental responsiveness



Parental Responsiveness Rating Scale (PaRRiS)

1 = very low Caregiver rarely responds in a developmentally appropriate way either verbally or non-verbally to any of Child's gestures or verbalizations AND Caregiver attempts to redirect Child's behaviour, rather than following Child's interests

2 = low Caregiver responds occasionally in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalizations AND/OR Caregiver spends more time attempting to redirect Child's behaviour than following Child's interest

3 = moderate Caregiver spends some time responding in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalizations, and some time ignoring them AND/OR Caregiver spends equal time following Child's interest and redirecting Child's behaviour

4 = high Caregiver often responds in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalizations AND/OR Caregiver spends more time following Child's interest than redirecting Child's behaviour

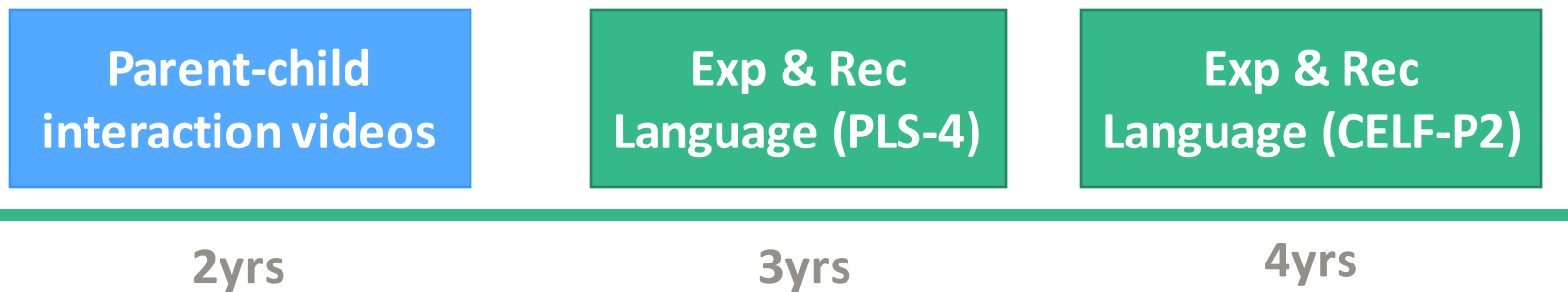
5 = very high Caregiver frequently responds in a developmentally appropriate way either verbally or non-verbally to Child's gestures or verbalizations AND Caregiver rarely attempts to redirect Child's focus from the current activity, but follows Child's interests

Parent-child interaction example



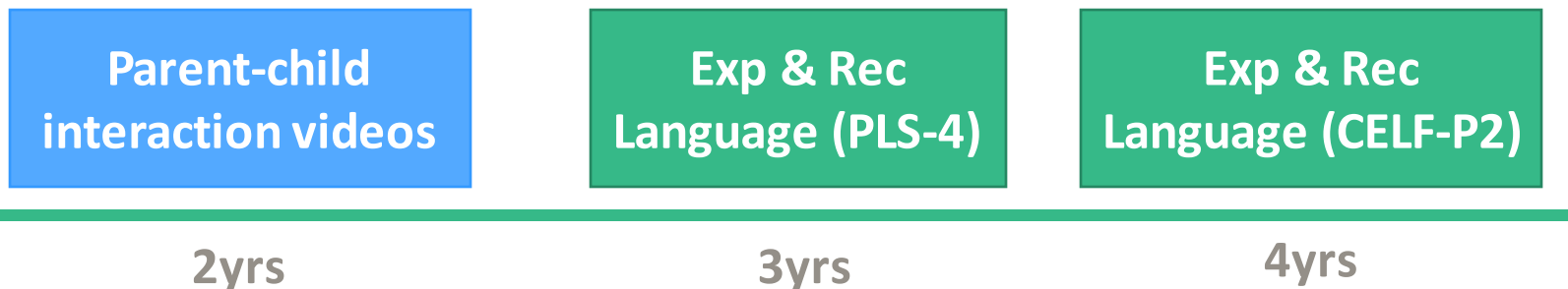
PaRRiS rating at age 2 on standardised language scores at ages 3 and 4

	Receptive language			Expressive language			Total language		
	Coefficient (95% CI)	<i>P</i>	Partial <i>R</i> ²	Coefficient (95% CI)	<i>P</i>	Partial <i>R</i> ²	Coefficient (95% CI)	<i>P</i>	Partial <i>R</i> ²
Maternal responsiveness									
3 years	5.9 (3.8–8.1)	< 0.001	12.1	5.4 (3.4–7.4)	< 0.001	11.8	6.2 (4.1–8.4)	< 0.001	13.1
4 years	4.6 (2.5–6.7)	< 0.001	8.4	3.1 (1.0–5.2)	0.004	4.1	4.0 (2.0–6.0)	< 0.001	7.2



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- Speech and language therapy students efficiently and reliably rated parent-child interactions in a large community-based sample of mother-child dyads
- **PaRRiS** ratings +ve associated with language outcomes
- **PaRRiS**: potential to be used by child health nurses to provide a cost-effective method for identifying children most likely to benefit from parent-child interaction interventions





Developing PaRRiS



Implementation of PaRRiS



Future plans for PaRRiS

Training community health nurses to measure parent-child interaction: A mixed-methods study

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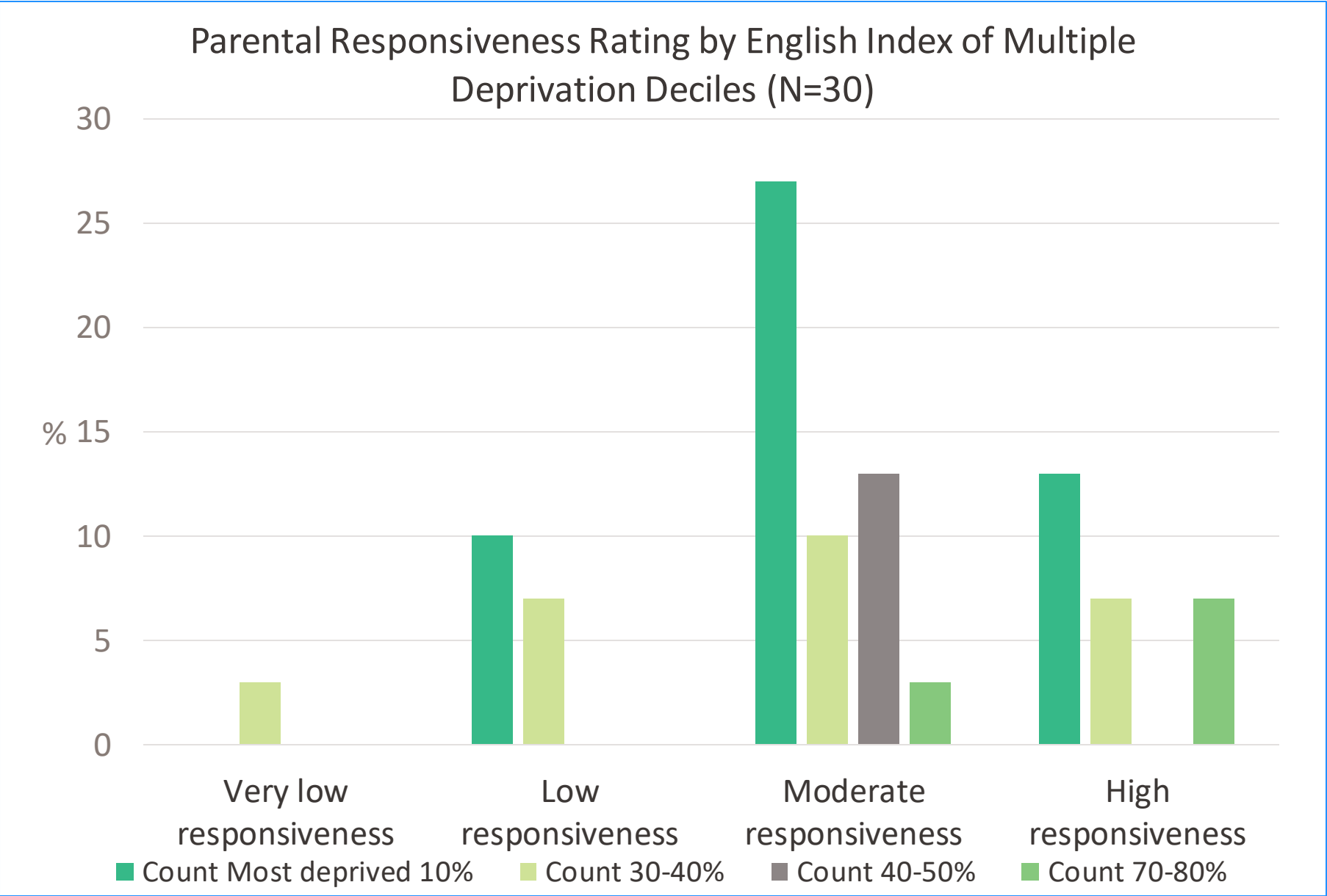
Aim: To determine whether an observational parent-child interaction rating scale (**PaRRiS: Parental Responsiveness Rating Scale**) can be used by Child Health Nurses (health visitors and nursery nurses) to identify families most likely to benefit from parent-focused language interventions

Test whether child health nurses can be trained to use **PaRRiS** to measure parent-child interaction during routine health visits



- Child health nurse recruitment: 5 nurses trained to use **PaRRiS** during routine 27 mth child health visits
- Parent and child are videotaped for 7 mins, child health nurse rates interaction
- 30 free-play sessions completed
- Phone interviews with nurses
- Parents/caregivers completed a short q'naire post-observation to give basic demographic info and evaluate observational process





- ✓ **Reliability:** High correlation found between PaRRiS author and child health nurses was excellent
- ✓ **Validity:** Global rating scale correlated with detailed coding of responsive behaviours, and there was a moderate-strong, positive correlation between the detailed rating and child health nurse ratings

Acceptability & Feasibility of PaRRiS

We look to see how responsive parents are and we use that saying don't we, 'responsive parenting'... by really pinpointing it down to a scale will make it really clear how responsive they are and in what way we mean they're responsive to their child... I think we use that term quite widely without being really clear what we're seeing.

I think sometimes we refer to speech and language a bit too soon. And by the time they get there, because of waiting lists, often things have improved. And I think this might just give us a bit more understanding I think of where we may need to go with it.

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- Findings demonstrate that Community Child Health Nurses (with a range of years of experience and qualifications) can be trained to reliably measure parental responsiveness using the PaRRiS tool during a brief five minute free-play observation
- Qualitative evidence suggests it is an acceptable and feasible supplementary tool for use in everyday practice to provide additional information about the parent's quality of responsiveness if there is concern regarding the child's language development and/or parent-child interaction
- The demonstrated acceptability, feasibility and reliability of PaRRiS suggests further development and evaluation work is worthwhile



PaRRiS has been used recently in the Tiny Happy People Evaluation (led by Prof Danielle Matthews) as a pre- and post-measure of parent responsiveness following a language intervention

Evidence supporting the use of PaRRiS as a measure of maternal responsiveness in the first year of life, predictive of vocabulary size at 18-months, over and over maternal mental health (Brookman et al., 2023)

Evidence to support the use of PaRRiS to measure responsiveness in culturally and linguistically diverse populations: validity and reliability of a Turkish version (Yoldaş, T.Ç., 2020, *Turkish Journal of Pediatrics*)



Developing PaRRiS



Implementation of PaRRiS



Future plans for PaRRiS



- In the very early years, targeting interventions based **solely** on children's language abilities is not recommended (McKean & Reilly, 2023)
- Developmental surveillance to identify children within the first few years of life who are at an increased risk of language difficulties (Eadie et al., 2022)
- Clinical tools: Early Language Identification Measure and Interventions (ELIM-I) which integrates child language abilities with other risks for use at 2-2.5 years (McKean et al., 2022) and key measures of environmental risk factors such as PaRRiS (Hudson et al. 2015; Levickis et al., 2019)



**Research in Effective Education in Early Childhood (REEaCh)
Centre**

**Purpose: make a sustained impact upon the lives of young
Australians through advancing the quality of early learning
experiences for all children**

- Early childhood education and care settings provide an important space for promoting child language development
- Evidence demonstrates high-quality early childhood education programs can result in long term benefits (McCartney, 1984; NICHD Early Child Care Research Network, 2000)
- Promoting more high-quality adult-child interactions provides children with the types of experiences that can promote growth in their language skills





While there are tools for measuring and improving the quality of educator-child interactions, they are often labour-intensive and costly (Sokolovic et al., 2022)

Next steps: determine the validity, reliability and feasibility of educator use of PaRRiS-E to reflect on their own practice, and the practice of colleagues, to promote responsive, language-promoting educator-child interactions

In conclusion...



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THANK YOU

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