



Emotional/Behavioural Outcomes of Children with Unilateral/Mild Hearing Loss

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Introduction

- Deaf and hard-of-hearing (DHH) children experience emotional/behavioural difficulties.
- Unilateral/mild hearing loss (HL) outcomes are unclear.
- Victorian Childhood Hearing Longitudinal Databank (VicCHILD)
 - ✓ Population-based longitudinal databank
 - ✓ Every child with congenital hearing loss in Victoria
 - ✓ Detected during Victorian Infant Hearing Screening Program (VIHSP) or later.
 - ✓ Assessment during enrolment and various stages of child's life.





Objectives

To investigate emotional/behavioural outcomes of unilateral/mild HL by addressing 3 research questions.

1. What are the emotional/behavioural outcomes of children with unilateral/mild HL compared to children with moderate to profound HL?
2. Which children are at risk of emotional/behavioural difficulties?
3. Are emotional/behavioural difficulties associated with hearing device use?



Methodology

PARTICIPANTS

- 5-12 years old (N=339)
- Enrolled in Vic CHILD
- Any degree/laterality of permanent HL

Assigned into 2 groups:

- ✓ Unilateral/Mild HL (n=169)
- ✓ Moderate to Profound HL (n=170)

GROUP CRITERIA

Unilateral/Mild HL:

Unilateral HL: Mild -profound HL in one ear/ Normal hearing in other ear.

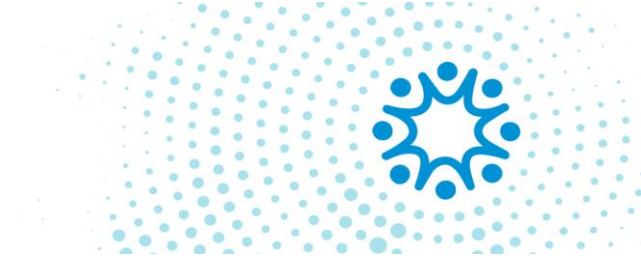
Mild HL: Mild HL (20-39dB) in one ear/ Mild -profound HL in other ear.

Moderate-Profound HL

- Moderate-profound HL in better ear

PROCEDURE

- Data collection/ assessment
- Enrolment, 2yrs, 5-7yrs and 9-12yrs
 - Demographic, audiological & early medical info.
 - Parent reported questionnaires

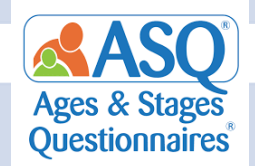


Parent-Rated Questionnaires

Emotional/Behavioural Outcome

Strengths and Difficulties Questionnaire (SDQ)

5 subscales: Emotional symptoms, conduct, hyperactivity, peer problems, prosocial



Early Developmental Profile

Ages and Stages Questionnaire (ASQ)

5 domains: Gross and fine motor, problem solving, communication and social skills

Health Related Quality of Life

Paediatric Quality of Life (Peds-QL)

4 domains: Physical health, emotional, social and academic functioning

Parental Psychological Distress

Kessler Psychological Distress Scale (K6)

Parent self-rated measure of psychological distress.



1. Emotional/behavioural outcomes: unilateral/mild vs moderate-profound

18.3% vs 20.6%
 $p > 0.05$

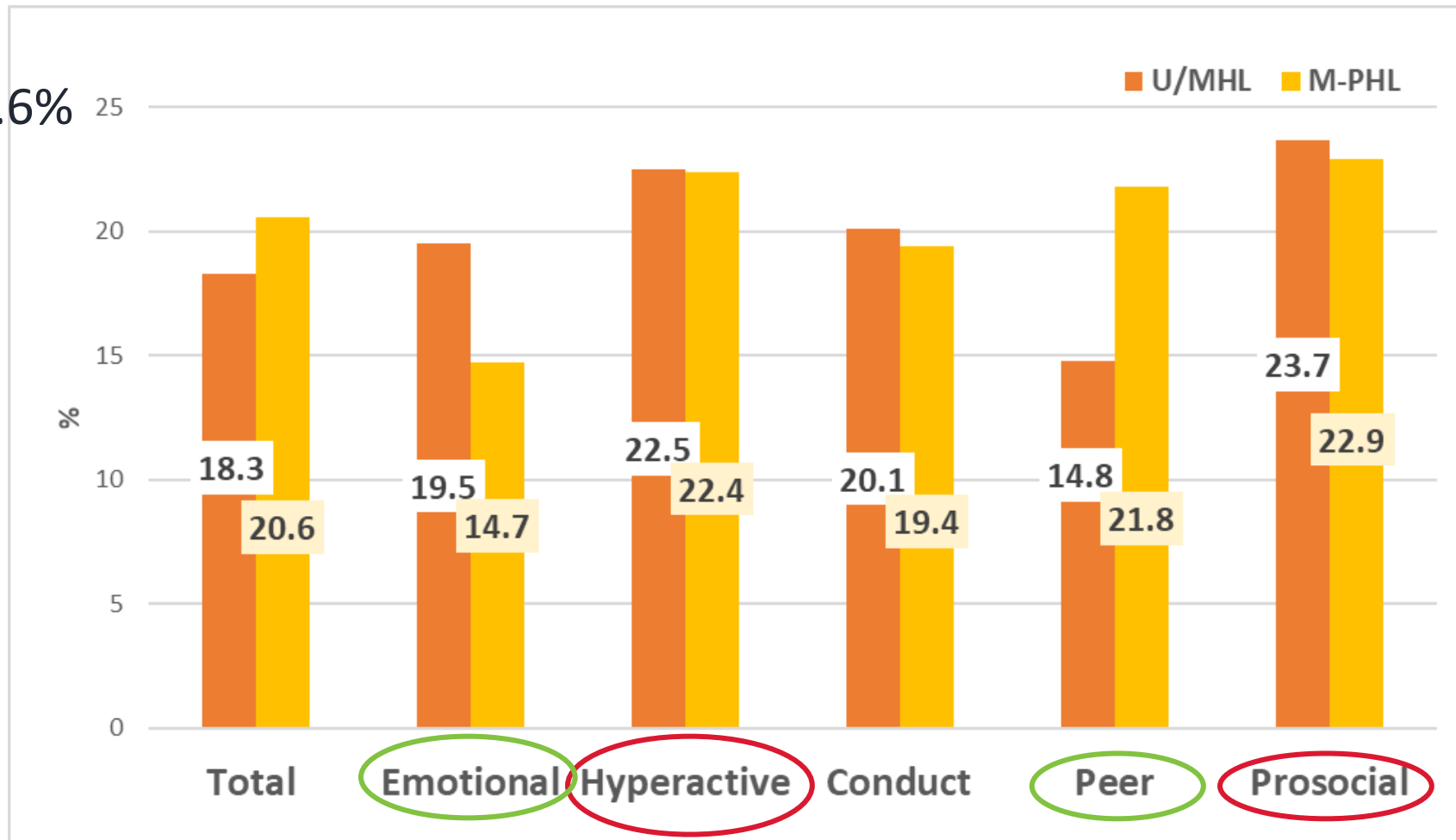


Figure 1:
Proportion with
emotional/
behavioural
difficulties

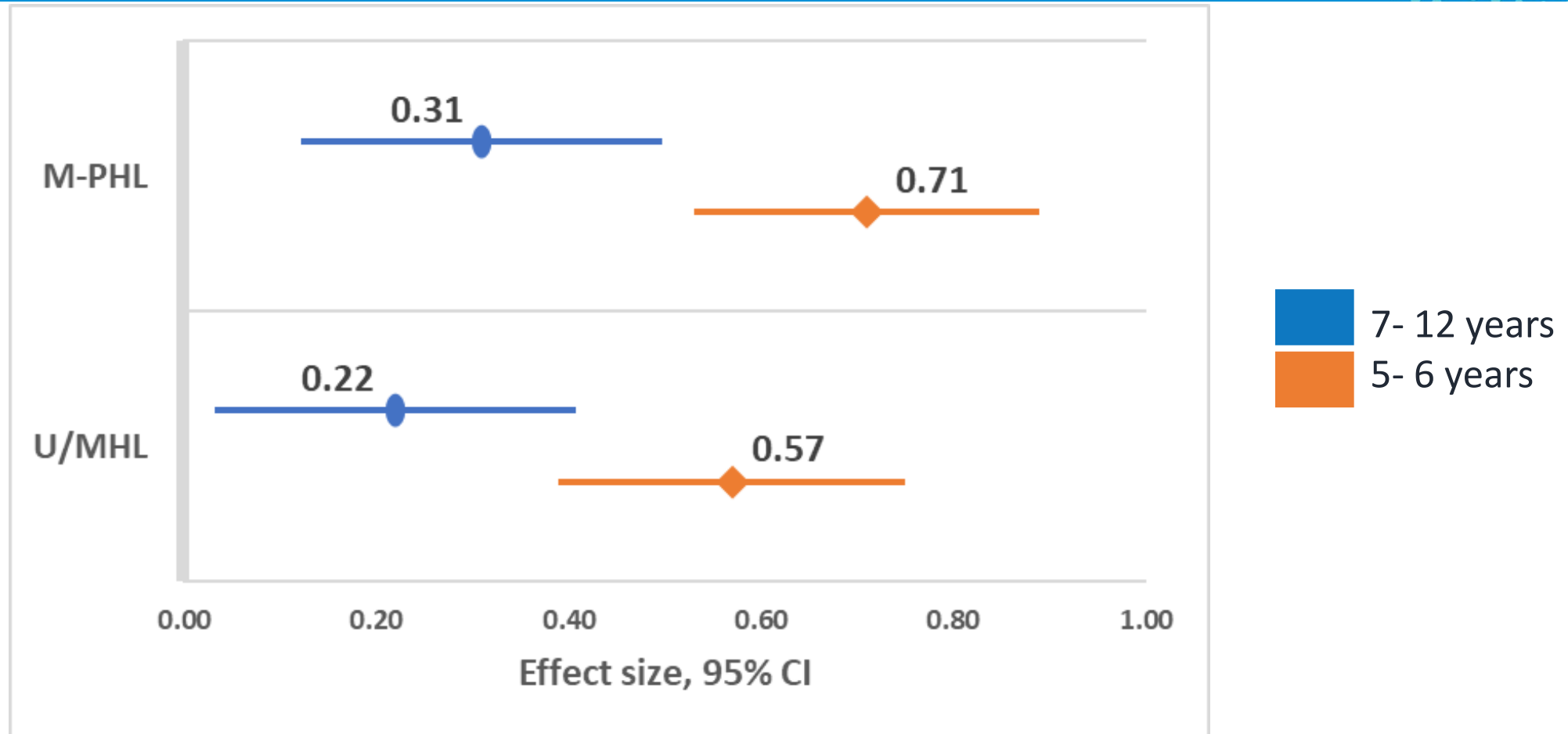
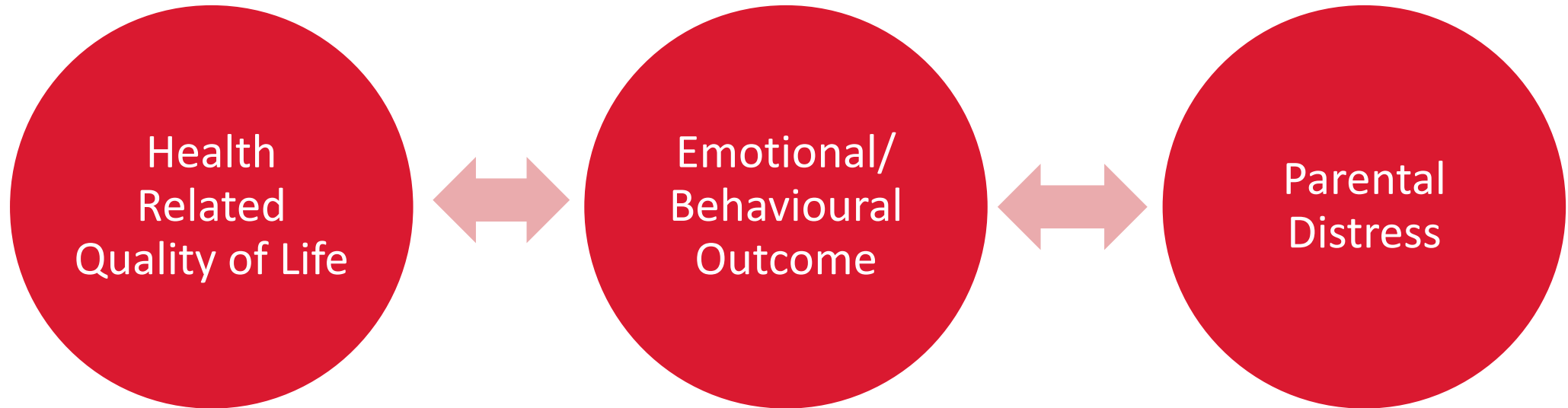


Figure 2: Emotional/behavioural outcome standardized mean difference compared with Australian normative data



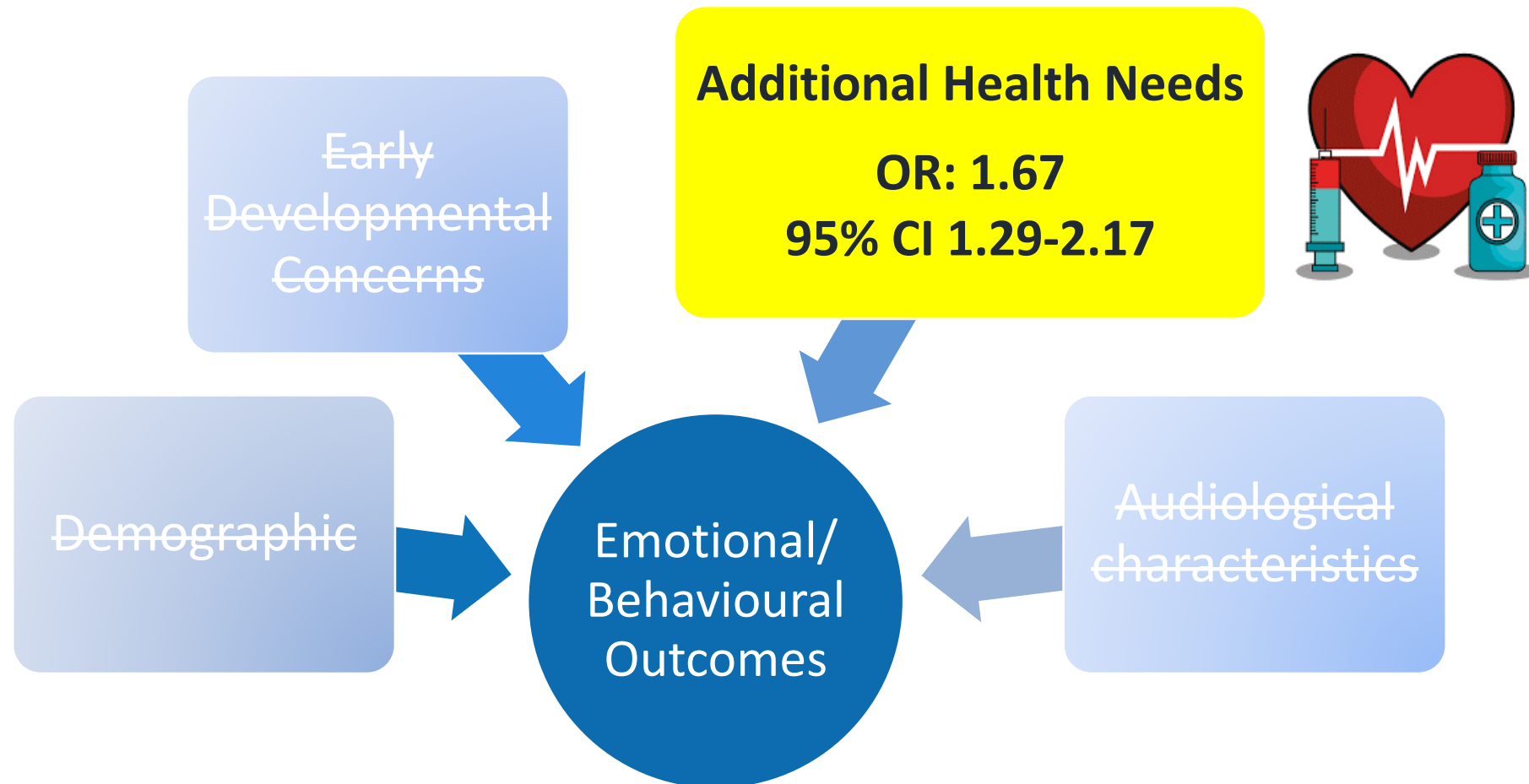
Associations with other outcomes

25% vs 22.9%
(U/MHL vs M-PHL)



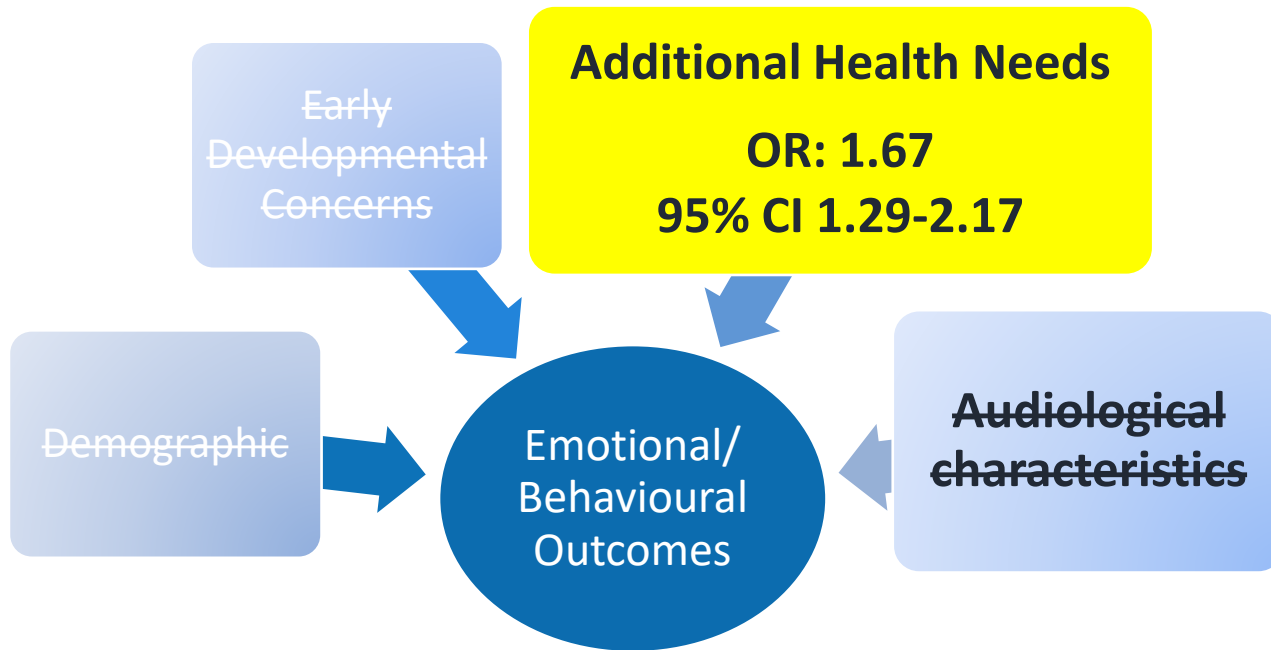


2. Who are at risk of emotional/behavioural difficulties?





3. Does wearing hearing devices make a difference?



	Emotional/Behavioural Scores, n (%)	
	Normal	Clinical
Hearing device		
• Unaided	55 (48.7)	11 (44.0)
• Hearing aid/s	53 (46.9)	13 (52.0)
• Cochlear Impl.	5 (4.4)	1 (4.0)



Summary

1. Children with unilateral/mild HL experienced emotional/behavioural difficulties, poor HRQOL and high parental distress comparable to children with moderate-profound HL
2. DHH children with additional health needs were at risk of emotional/behavioural difficulties
3. Hearing device use was not associated with emotional/behavioural difficulties





Conclusion/ Implication



- Provision of early access to intervention and support for children with unilateral/mild hearing loss is justified.
- Screening for additional health needs important to identify children at risk of emotional / behavioural difficulties.



Acknowledgements



The Royal Australasian
College of Physicians
Foundation



Australian Government
**National Health and
Medical Research Council**

**The Kyle Patrick
Lamsam Convery
Foundation**



Thank You

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The Centre for Community Child Health is a department of The Royal Children's Hospital and a research group of the Murdoch Children's Research Institute.



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