



Cumulative Incidence of Autism Spectrum Disorder with Longitudinal Evaluation of Cognition and Behaviour

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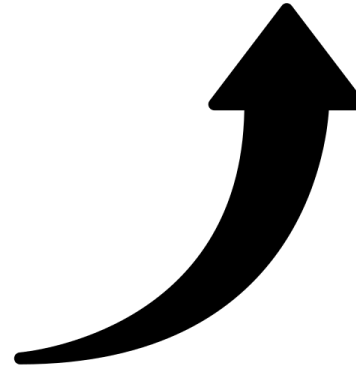
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Autism Spectrum Disorder



Neurodevelopmental

- Wide range of presentations
- Genetic & environmental contributors

Increasing prevalence

- Global ~ 1%¹
- M:F ratio (4:1)¹
- Australia²
 - 2003 0.6%
 - 2018 2%

Pre-diagnosis period

- Identify developmental vulnerabilities
- Informative for earlier support

Aims

To estimate the cumulative incidence of ASD among children in the Barwon region of Victoria, Australia.

Examine the association between early childhood cognitive and behavioural measures and a subsequent ASD diagnosis.



Recruitment
1064 Mothers
1074 Children

2-year review
Child Behaviour Checklist
Bayley-III

4-year review
Strengths and Difficulties
Executive Function
Receptive Vocabulary

9-year review
81% (868 /1074)
retention
80 Parent-reported
ASD diagnosis

11.5 years old
ASD validation
64/80 ASD DSM-5
diagnosis



2010-2013



2012-2015



2014-2016



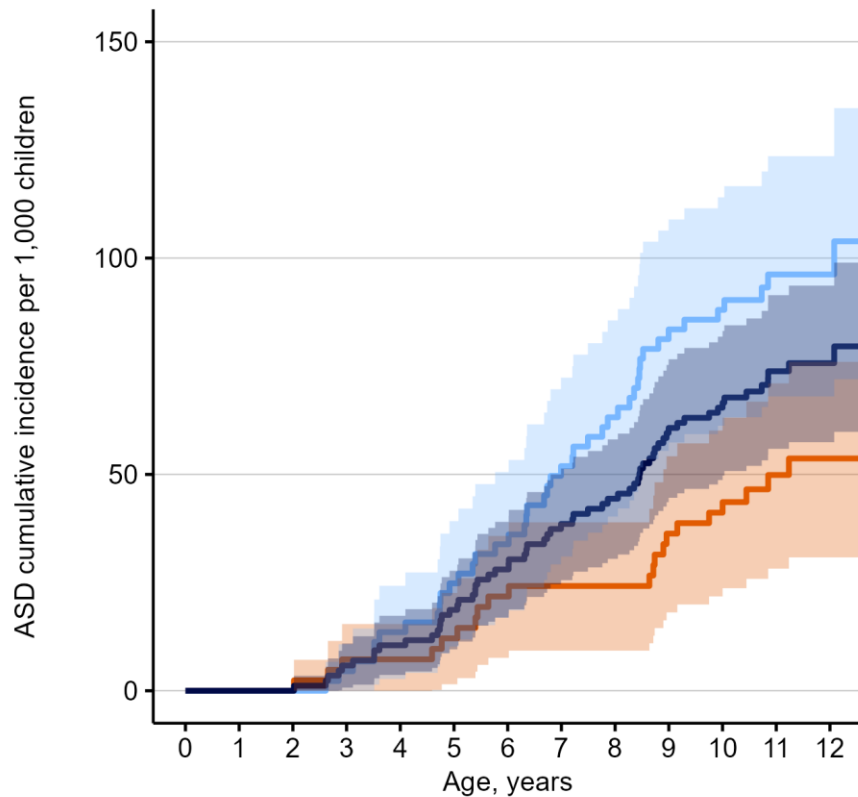
2020-2021



2022-2023



Cumulative incidence of ASD in the Barwon region of Australia is 7.5%

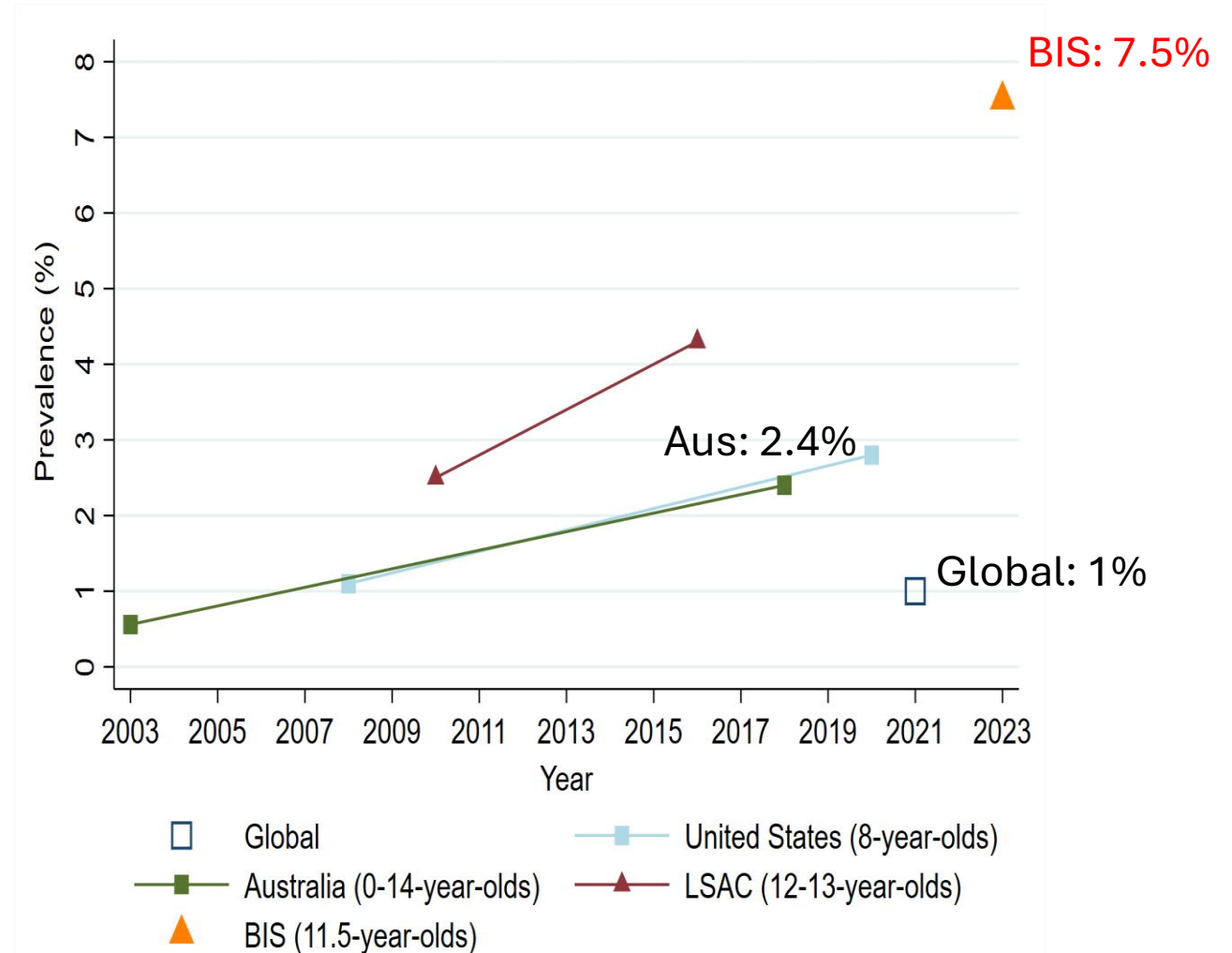
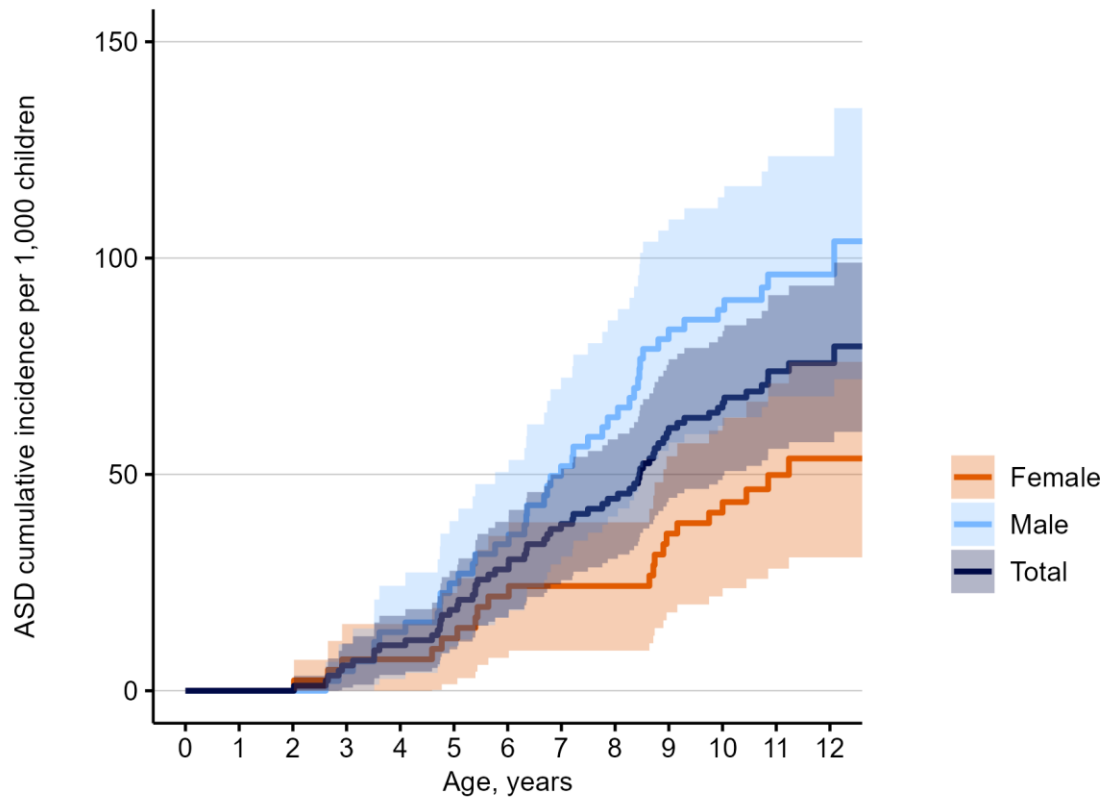


Female	51 per 1,000	5.1%	M : F
Male	97 per 1,000	9.7%	2.05 : 1
Total	75 per 1,000	7.5%	

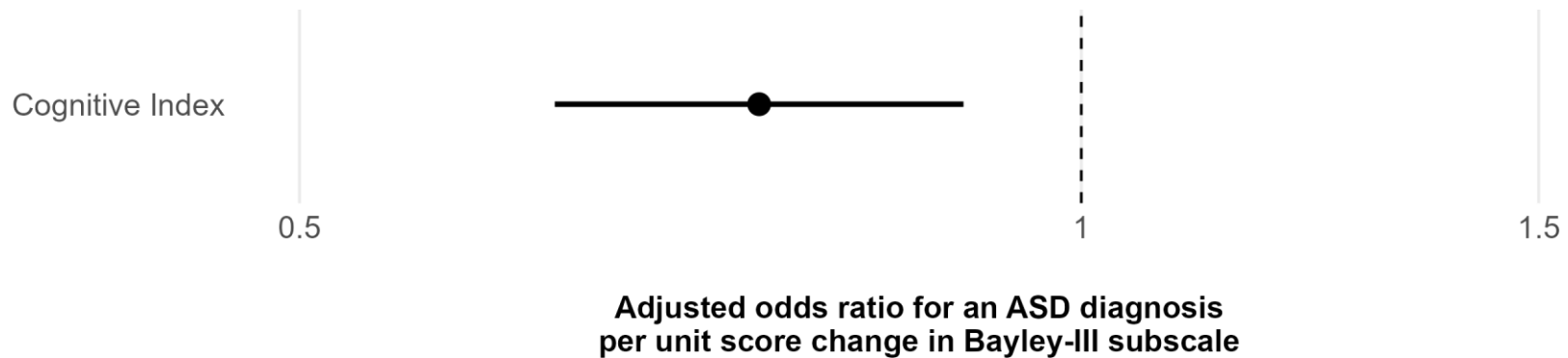
11.5 years old



Cumulative incidence of ASD in the Barwon region of Australia is 7.5%



Cognitive and behavioural difficulties at two years are strongly associated with a subsequent ASD diagnosis

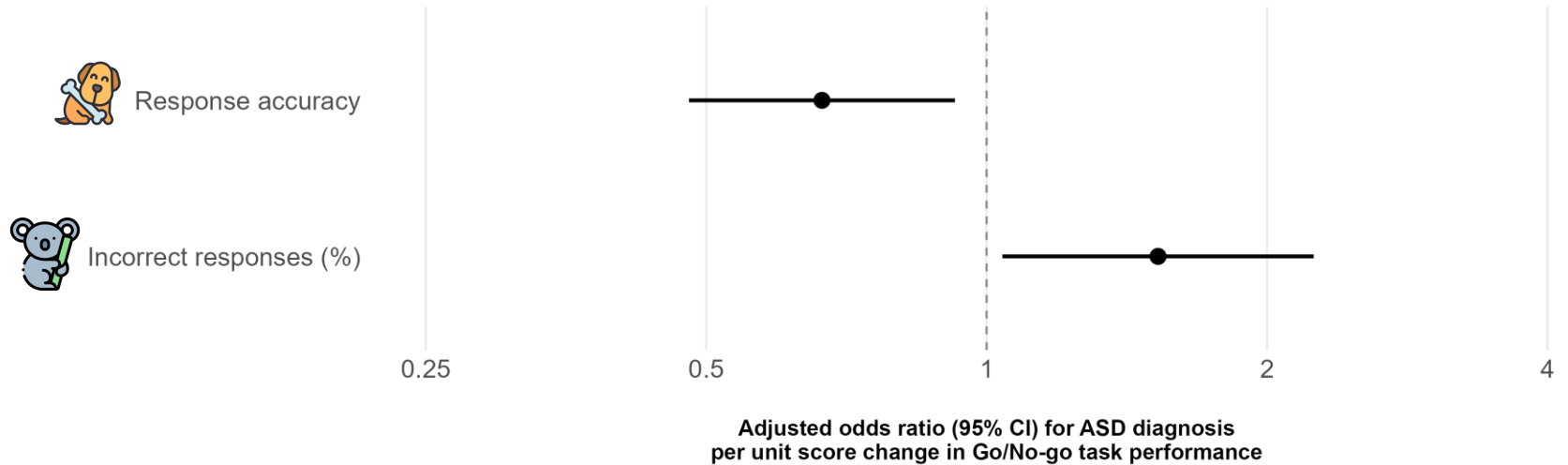
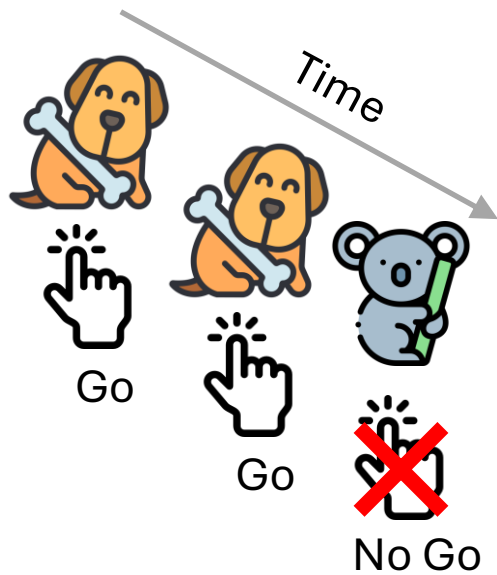


2-year review

11.5 years old

Adjusted for age, sex and administrator

Lower executive function at four years is associated with a subsequent ASD diagnosis



4-year review

11.5 years old

Conclusions

Highest ASD incidence reported to date

Contributing factors

- Awareness and diagnostic changes^{1,2}
- Gene x environment interactions³

Developmental differences in pre-diagnostic period

- Opportunities for early support

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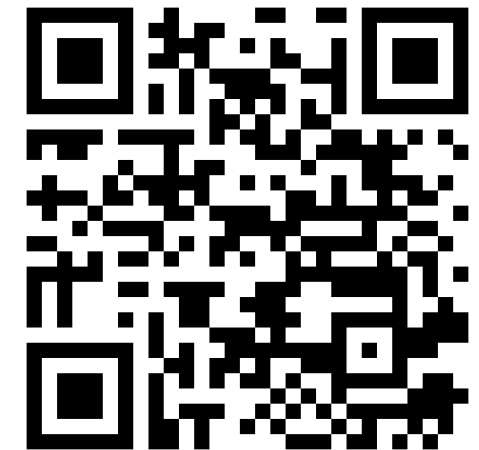
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www.barwoninfantstudy.org.au