

AUSTRALIAN TWIN STUDY OF LITERACY AND NUMERACY

**Twin Research and Human Genetics**

The Academic Development Study of Australian Twins: Research Aims and Design

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Supplementary Table S1. *Family Questionnaire items*

Item	Details	Source
Family composition	Family members in household Relationship status of parents Number, age and relationship of siblings	
Parent ancestry	Free text Coded using Australian Census codes	Australian Bureau of Statistics (2016)
Parent education level	9-point ordinal scale e.g. 1, 'some high school but did not finish' through 9, 'Doctoral degree'	
Parent Occupation	Free text Coded using the International Socio-Economic Index of occupational status (ISEI)	Ganzeboom & Trieman (1996), Ganzeboom (2010)
Number of books in the home	5-point ordinal scale e.g. 1 = '0-10'; 2 = '11-25', 3 = '26-100', 4 = '101-200', 5 = '200+'	
Access to educational resources	Select from items including 'Atlas', 'Computer' etc.	Smith & Hausafus (1998)
Parent attitude to mathematics	4 items from Attitudes towards Math and Science Questionnaire 5-point Likert responses [Agree – Disagree]	Smith & Hausafus (1998)
Confusion, Hubbub and Order Scale (CHAOS)	6-item short form 5-point Likert responses [Definitely Untrue – Definitely True]	Some items from Matheny, Wachs, Ludwig & Philips (1995)
Twin zygosity	5 items 3-point responses	Lykken, Bourchard, McGue & Tellegen (1990)
Birth information	Premature birth / weeks gestation Birthweights Birth complications	
Twin similarity	1 item 5-point scale	Kendler & Prescott (2007)

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Supplementary Table S2. *Child-specific Questionnaire items*

Item	Details
Languages spoken*	Free text
Health information - Vision, speech, other language difficulties, hearing - Medical problems (including allergies) - Behavior regulation medication	Severity rating from 1= mild to 5 = severe Text entry for additional details, diagnoses, prescribed care
Preschool or daycare attendance*	Start and finish age Hours attended Type of care
Schooling information - Name of school attended - Class information	Whether twins shared a classroom (Grades K through 9) Reasons for classroom assignment
Inattention and Hyperactivity	Strengths and Weaknesses of ADHD-Symptoms and Normal-Behavior (SWAN) Scale (Swanson et al., 2012); 7-point Likert scale
Reading and Mathematics enjoyment and engagement	5 questions; 7-point Likert scales Reading and maths enjoyment Frequency of self-directed reading or mathematical games (numerical puzzles / pattern games)
Homework behavior	4 questions; hours per day / 7-point likert scales Hours per day Parent involvement with homework Parent help with English and Maths
Tutoring	Subject areas and hours tutored per week NAPLAN preparation outside school hours
Extracurricular activities	Hours per week participating in Sports / Music / Clubs
Screen time	Hours per week- and weekend-day spent on - Television - Video games - Internet Access to technological devices
Sleep	Same / different bedroom 9 items from The Children's Sleep Habits Questionnaire (CSHQ; Owens et al., 2000); 7-point likert scale
Diet	5 questions on usual dietary behaviors; frequency rating
Stressful life events	Free text

Note. \*These items were only asked at Grade 3

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## AUSTRALIAN TWIN STUDY OF LITERACY AND NUMERACY

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