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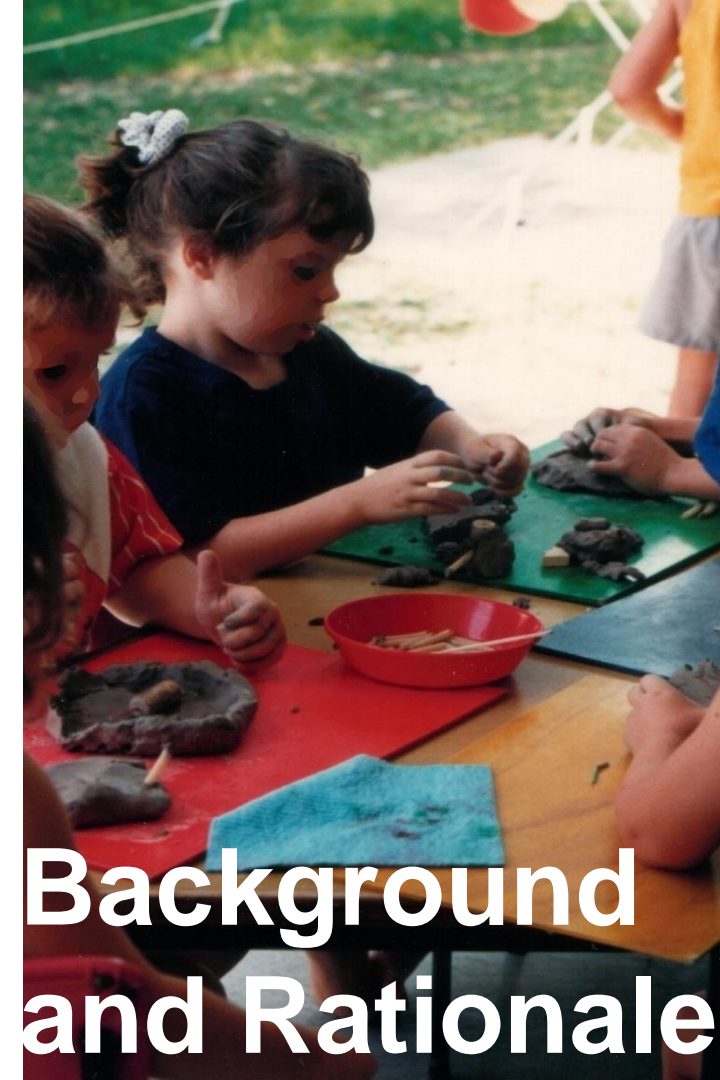
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Gender differences in children's classroom behaviour and teacher-child relationships in early childhood

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Background and Rationale

Children's first years in school are fundamentally important for their later learning. Success in the early years of school has implications for future achievement in school and beyond (e.g., Kurdek & Sinclair 2000; Lonigan 2006; Snow 2006).

Early school success has been linked to the abilities, behaviours and attitudes that young children bring with them as they enter school for the first time (Lonigan 2006; Rathburn & West 2004; Rouse, Brooks-Gunn & McLanahan 2005).

Positive and supportive relationships between children and teachers make a significant contribution to both school achievement and social competence (Myers & Pianta, 2008).

Gender differences in children's classroom behaviours are well established:

- Girls are more likely to display positive classroom behaviours and positive approaches to learning than boys (Walker & Berthelsen, 2008).

Gender differences have also been noted with respect to teacher-child relationships:

- Teachers perceive their relationships with boys to be more conflictual and less close than their relationships with girls (Colwell & Lindsey, 2003).

Research Questions

- Are there gender differences in classroom behaviour (e.g., attentiveness, persistence) and teacher-child relationships in the early years of school?
- Can any gender differences in teacher-child relationships be accounted for by early developmental competencies, level of children's language and emergent academic skills at age 4 years?
- Are gender differences in the teacher-child relationship accounted for by differences in boys' and girls' behaviours in the classroom?



Regression Analyses

- Scores on the **Student-Teacher Relationship Scale [STRS]** Wave 1 and Wave 2 (continuous scores) are used as the outcome measures in these analyses.
- Predictor variables included in multiple regression analyses:
 - *Child characteristics* - sex and age
 - *Family characteristics* – Socio-Economic Position (combined parental income, parental education and occupational prestige)
 - *Child developmental competence, language and cognitive skills at age 4* – Developmental Competence, PPVT, Who Am I?
 - *Classroom behaviour* - Strengths and Difficulties Questionnaire (SDQ) – total score, Approaches to Learning.
 - STRS at Wave 1

All predictor variables were categorised and dummy coded

Growing Up in Australia: The Longitudinal Study of Australian Children

- ❖ National research study of children funded by the Australian Government
- ❖ Nationally represented sample of 10,000 children, followed every 2 years from **2004 to 2010**
- ❖ 2 age cohorts recruited in 2004 (infant cohort and kindergarten cohort 4-5 year old's)
- ❖ Multi-disciplinary
- ❖ Ecological model
- ❖ Holistic view of children
- ❖ Extensive multi-source data
- ❖ Data accessible to researchers



*These analyses use data for the Kindergarten cohort,
From both Wave 1 (2004) and Wave 2 (2006), for children in Year 1 at school*

Sample Demographics

Number of children in analyses - 2490

- *Mean age: 6 years 9 months (SD = 2.56)*
- *Sex: 51% male and 49% female*
- *CALD status: 23%*
- *Aboriginal and Torres Strait Islander Children: 3%*
- *Family type: two-parent family – 88%; single parent - 13%*
- *Number of siblings: none - 9%; 1– 45%; 2 – 30%; 3 or more – 15%*
- *Mother's education: less than Year 12 - 16%; complete Year 12 - 19%; completed tertiary qualification – 65%*
- *Combined parental income: lowest quintile - 18%; highest quintile - 34%*



Measures



- Classroom behaviours at age 6 years

- **Approaches to learning:** a subscale (6 items) of the ECLS-K Social Rating Scale used in *Early Childhood Longitudinal Study - Kindergarten (ECLS-K)*. National Center for Education Statistics (n.d.). Washington, DC: Department of Education. ($\alpha = .92$)
- **Strengths and Difficulties Questionnaire (SDQ):** Respondents use a 3-point Likert scale to indicate how 25 attributes apply to the target child: 5 subscales of 5 items each (Emotional symptoms; Conduct problems; Hyperactivity; Peer problems; and Prosocial behaviours).

- Competencies at age 4 years

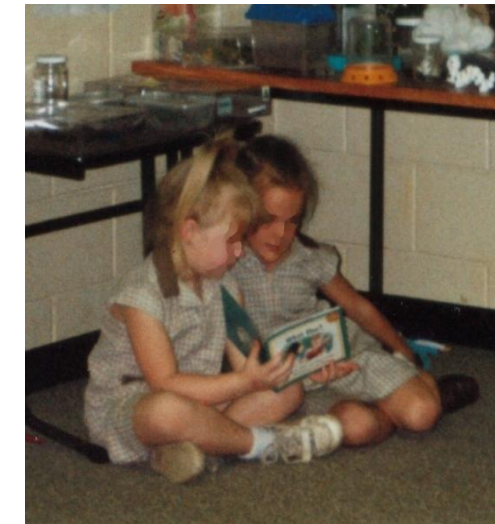
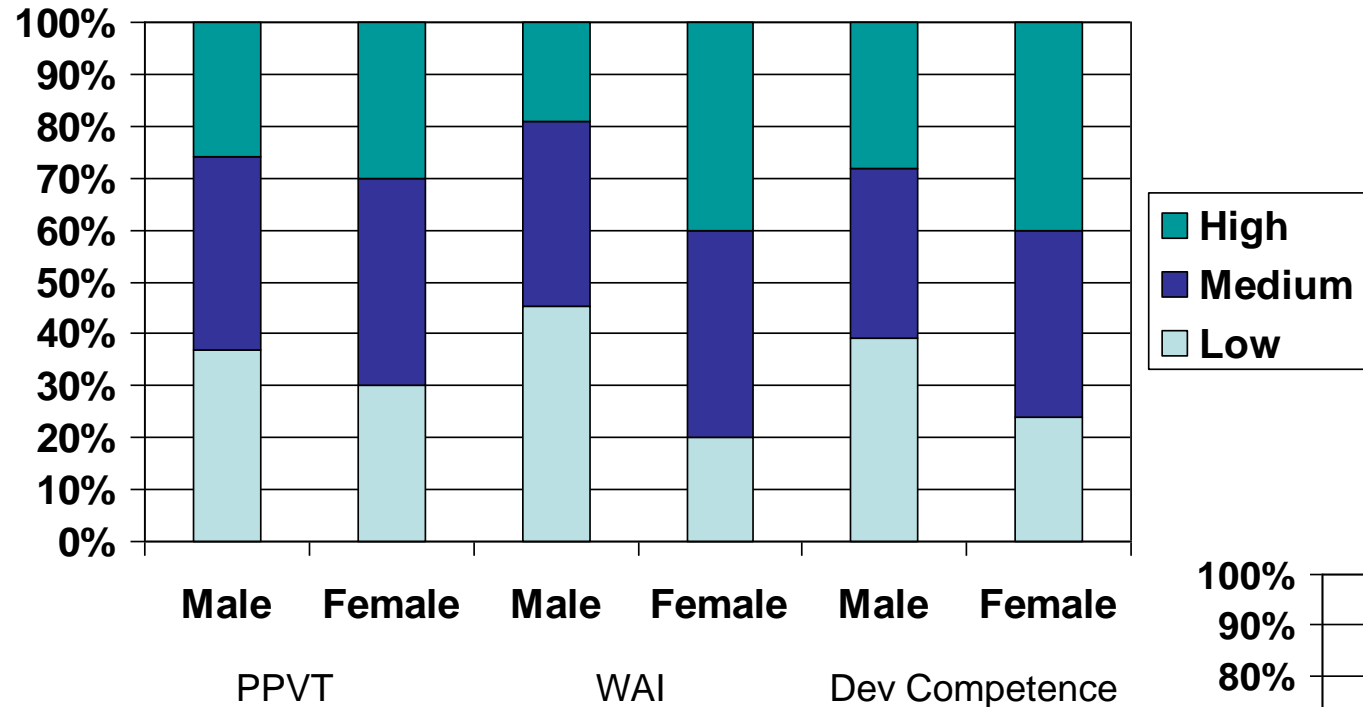
- **Developmental competence:** 6 items adapted from PEDS (Glascoe – Authorised Australian version, 2000) assessing children’s physical functioning, pre-school coping, and receptive and expressive language skills
- Peabody Picture Vocabulary Test (PPVT-III Form IIA, 1997)
- ‘Who Am I?’ (WAI, ACER, 1999), an Australian measure which assesses a child’s ability to perform a range of tasks such as:
 - reading, writing, copying, and symbol recognition, as a measure of school readiness.

- Student Teacher Relationship Scale (STRS) Teacher ratings (short form)

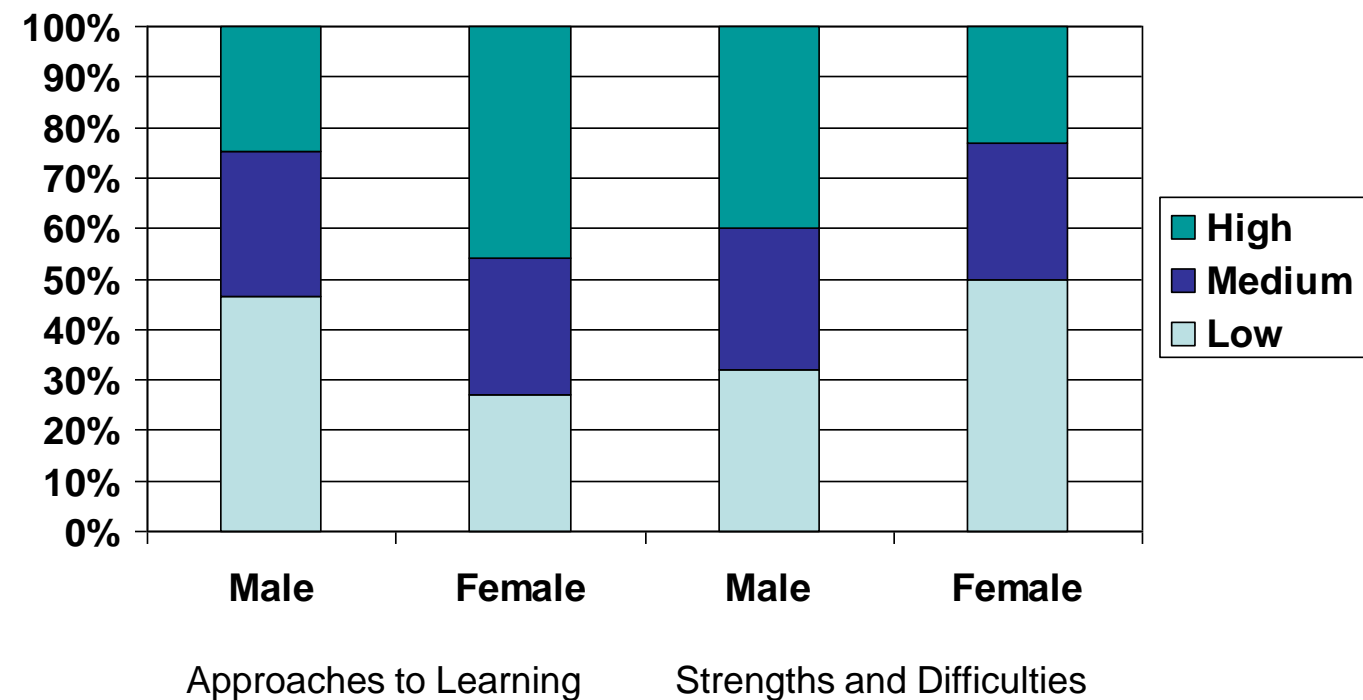
- Fifteen items assessing carer/teachers’ perceptions of their relationship with the child. A 5 point scale that yields three relationship quality scores (closeness, conflictual, dependency)

Percentage distribution of males and females by assessment category

Early Learning Competence in the year prior to school (Wave 1)



Approaches to Learning and Strengths and Difficulties in Year 1 (Wave 2)



	Total $N = 2490$ $M (SD)$	Girls ($n = 1227$) $M (SD)$	Boys ($n = 1263$) $M (SD)$
STRS – W1	4.46 (0.50)	4.55 (0.44)	4.37 (0.55)
STRS – W2	4.43 (0.48)	4.55 (0.41)	4.32 (0.51)
SDQ (total) – W2	6.12 (5.52)	4.92 (4.81)	7.28 (5.90)
App Learn	3.26 (0.69)	3.44 (0.62)	3.09 (0.71)
PPVT (W 1)	65.00 (6.75)	65.42 (6.72)	64.58 (6.76)
WAI (W 1)	64.73 (7.97)	67.00 (7.61)	62.52 (7.70)
Dev Comp	1.97 (0.54)	1.87 (0.50)	2.06 (0.56)

One way ANOVAs revealed significant gender differences on:

- STRS (total) – Wave 1 and Wave 2 $p = 000$;
- SDQ (total) – Wave 2, $p = 000$;
- Approaches to Learning, $p = .000$;
- PPVT (Wave 1), $p = 003$;
- WAI (Wave 1), $p = 000$;
- Dev Comp (Wave 1) $p = .000$

Variable	PPVT	WAI	Dev comp	Approaches to Learning	SDQ	STRS
PPVT (W1)29**	-.32**	.21**	-.25**	.11**
WAI		...	-.35**	.33**	-.17**	.14**
Dev Comp			...	-.43**	.36**	-.24**
Approaches to Learning (W2)				...	-.72**	.52**
SDQ (W2)					...	-.60**
STRS (W2)						...

Correlations between early competencies (PPVT, WAI, Dev comp), later teacher-child relationship outcomes and classroom behaviour

Note – All correlations significant ($p < 0.01$, 2-tailed)

Significant Variables in Predictive Model – STRS Wave 1

<i>N</i> = 2490; Adj R ² = 15.5%	Coefficient (95% CI)	p-value
<i>Child characteristics</i>		
Male	-.103 (-.142, -.064)	<0.001
<i>Family Characteristics</i>		
SEP	.054 (.007, .100)	.023
<i>Early competencies</i>		
PPVT	.051 (.000, .101)	.049
Dev Comp	-.401 (-.451, -.351)	<0.001
WAI <i>ns</i>		



Significant Variables in Predictive Model – STRS Wave 2

<i>N</i> = 2490; Adj R ² = 32.6%	Coefficient (95% CI)	p-value
<i>Child characteristics</i>		
Male	-.126 (-.161, -.092)	<0.001
<i>Family characteristics</i>		
SEP	.052 (.005, .099)	.029
<i>Early competencies</i>		
Dev Comp	.048 (.002, .093)	.041
WAI (Wave 1)	-.064 (-.111, -.016)	.008
<i>Behaviour in classroom</i>		
SDQ (total score)	-.394 (-.444, -.344)	<0.001
Approaches to learning	.208 (.157, .259)	<0.001
<i>STRS Wave 1</i>		
STRS Wave 1	.146 (.105, .187)	<0.001
PPVT <i>ns</i>		

Variables that made a significant contribution to children's relationships with their teacher

- Being female
- High Socio-economic position
- High early competencies (particularly WAI)
- Fewer problem behaviours on SDQ
- High scores on Approaches to Learning
- High teacher-child relationship quality at Wave 1



• Conclusions

- Significant gender differences in teacher-child relationship quality are present in the first year of school
- Early competencies at school entry are associated with higher quality teacher-child relationships
- Positive teacher-child relationships are significantly related to more positive classroom behaviours
- The quality of the teacher-child relationship at Wave 1 (prior to school) is a significant predictor of teacher-child relationship quality at Wave 2 (first year of school).

Implications

- At the start of their formal schooling, where the foundation for 12 subsequent years of educational progress is established, there is already a significant gender difference in the quality of children's relationships with their teachers
- The teacher's role
 - school activities and culture may be biased against young boys and their learning styles
 - to what extent do pedagogical approaches, learning tasks and teacher expectations in the early years of school favour girls?
- The role of classroom behaviours
 - The gender differences in classroom behaviour help to explain why young girls are developing higher quality relationships with their teachers
 - small differences in behaviour, attitudes and school performance (whether in the form of a male advantage or a female advantage) can grow into large gender differences over time
- Continued attention to the important role of the teacher-child relationship with respect to children's adjustment during early schooling will be important.

