



Fás Aníos in Éirinn
Growing Up in Ireland

Compensatory and Cumulative: Mother, Father and Teacher - Child Relationships Interact to Predict Primary School Adjustment and Achievement

Caoimhe Dempsey



UNIVERSITY OF
CAMBRIDGE



UNIVERSITY OF
BIRMINGHAM



Relationship quality and school adjustment

- A close relationship with at least one caring adult (parent or teacher) is posited to be one of the most important factors for child development
- **Closeness:** warmth, positive affect, and the child's ease in approaching the adult
- **Conflict:** negativity or lack of rapport between the adult and child
- Positive parenting -> small associations with children's academic achievement, externalising and internalising problems, and positive self-representations
- Feeling secure in the teacher-child relationship -> communicate effectively and focus attention on learning
- Teacher-child conflict -> heightened stress for children, reduce school engagement, prompt withdrawal from school



Relationships across home and school

- **Cumulative risk** and ‘spillover’
- Early school experiences can stimulate **developmental change** - widens children’s social horizons, provides opportunities for new relationships
- Nauman et al. 2022: positive teacher-child interactions **attenuated the negative effects** of poor maternal relationship on adolescent academic achievement (classroom emotional climate)
- Wang et al. 2022: **no main effect** of maternal warmth or teacher-child relationships -> however significant interactions between maternal warmth and teacher closeness and problem behaviours
- Roubinov et al. 2020: during the transition to school, children exposed to harsh parenting showed increased externalising symptoms **in the context of low, but not high**, teacher-child closeness



What about fathers?

- Few studies on the links between father-child and teacher-child relationships
- Ferreira et al. 2016: cross-sectional study of 168 Portuguese preschoolers included both mothers and fathers
- Father-child relationships were **directly** associated with children's prosocial behaviour, ($b = .33$), whereas mother-child relationships were indirectly linked to children's prosocial behaviour via the teacher-child relationship ($b = .15$)



Study Aims

1. Assess the **independence and magnitude** of mother, father and teacher-child relationships as predictors of primary school children's academic outcomes: achievement, self-concept, and adjustment.
2. Assess whether early teacher-child relationships **moderated** associations between parental relationships school adjustment and achievement.

Hypotheses

Close / low conflict mother and teacher-child relationships to predict reduced problem behaviours, greater academic achievement, and more positive academic self-concepts.

Fathers?

Moderating effects of teacher-child relationship quality:

High teacher-child closeness would **amplify the beneficial effects** of mother-child closeness

High teacher-child conflict would **amplify the negative effects** of mother-child conflict.

Methods - GUI Infant Cohort

Age 3

Mother-child relationship
Father-child relationship
N = 9,793

Age 5

Teacher-child relationship
N = 9,001

Age 9

Behavioural Adjustment
Academic Achievement
Academic Self-Concept
N = 8,032

- Child-Parent and Student-Teacher Relationship Scale (Pianta, 1992; Pianta & Nimetz, 2001)
 - Conflict: 8-items e.g., child and I always seem to be struggling with each other
 - Closeness: 7-items e.g., it is easy to be in tune with what child is feeling
 - Strengths and Difficulties Questionnaire (Goodman, 1997)
 - Externalising and internalising problems
 - Drumcondra Reading Test – Revised
 - 20 items on vocabulary, 20 items on comprehension
 - Piers-Harris 2 Children’s Self-Concept Scale (Piers, Harris & Herzberg, 2002)
 - Intellectual and School Status subscale
 - Covariates: maternal education, child verbal ability and prior levels of problem behaviours
- ✓ singleton-born
 - ✓ started school at the point of wave 3 data collection
 - ✓ valid data available on children’s parent / teacher relationships and child outcomes

Table 1*Descriptive Statistics for Study Variables*

Variable	Total sample		Boys	Girls	<i>t</i>	Std. test statistic
	<i>M (SD)</i>	Range	<i>M (SD)</i>	<i>M (SD)</i>		
T1 Mother closeness	33.80 (1.97)	7-35	33.67 (2.05)	33.98 (1.76)	-7.727***	-.181
Mother conflict	15.57 (5.38)	8-40	15.64 (5.41)	15.43 (5.30)	1.848	.040
Father closeness	32.95 (2.51)	7-35	32.85 (2.57)	33.06 (2.44)	-3.417***	-.083
Father conflict	15.06 (5.08)	8-40	15.06 (5.07)	15.01 (5.11)	.382	.009
T2 Teacher closeness	30.20 (4.34)	8-35	29.66 (4.52)	30.74 (4.07)	-11.035 ***	-.265
Teacher conflict	11.27 (4.73)	8-39	12.01 (5.34)	10.50 (3.85)	14.145 ***	.390
T3 Externalising problems	3.22 (3.56)	0-20	4.11 (3.85)	2.27 (2.92)	22.59 ***	.631
Internalising problems	2.36 (3.00)	0-18	2.45 (3.10)	2.25 (2.90)	2.79*	.069
Reading ability	77.06 (17.95)	5-100	77.10 (18.18)	77.18 (17.73)	-.180	-.004
Academic self-concept	7.04 (1.35)	0-8	6.93 (1.40)	7.13 (1.29)	-6.22 ***	-.156

Note. Child sex is coded as 0 = female and 1 = male. *** $p < .001$. * $p < .05$.

- Similarities and differences in parent vs teacher child relationships

Table 1*Descriptive Statistics for Study Variables*

Variable	Total sample		Boys	Girls	<i>t</i>	Std. test statistic
	<i>M (SD)</i>	Range	<i>M (SD)</i>	<i>M (SD)</i>		
T1 Mother closeness	33.80 (1.97)	7-35	33.67 (2.05)	33.98 (1.76)	-7.727***	-.181
Mother conflict	15.57 (5.38)	8-40	15.64 (5.41)	15.43 (5.30)	1.848	.040
Father closeness	32.95 (2.51)	7-35	32.85 (2.57)	33.06 (2.44)	-3.417***	-.083
Father conflict	15.06 (5.08)	8-40	15.06 (5.07)	15.01 (5.11)	.382	.009
T2 Teacher closeness	30.20 (4.34)	8-35	29.66 (4.52)	30.74 (4.07)	-11.035 ***	-.265
Teacher conflict	11.27 (4.73)	8-39	12.01 (5.34)	10.50 (3.85)	14.145 ***	.390
T3 Externalising problems	3.22 (3.56)	0-20	4.11 (3.85)	2.27 (2.92)	22.59 ***	.631
Internalising problems	2.36 (3.00)	0-18	2.45 (3.10)	2.25 (2.90)	2.79*	.069
Reading ability	77.06 (17.95)	5-100	77.10 (18.18)	77.18 (17.73)	-.180	-.004
Academic self-concept	7.04 (1.35)	0-8	6.93 (1.40)	7.13 (1.29)	-6.22 ***	-.156

Note. Child sex is coded as 0 = female and 1 = male. *** $p < .001$. * $p < .05$.

- Similarities and differences in parent vs teacher child relationships

Table 3*Robust Maximum Likelihood Estimates for Longitudinal Structural Equation Models*

	T3 Internalising problems			T3 Externalising problems			T3 Reading Ability			T3 Academic Self-Concept		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Model 1												
T1 Maternal closeness	-.050	.023	-.032*	-.082	.024	-.045**	.721	.128	.078***	.034	.011	.053**
T1 Paternal closeness	-.053	.017	-.044**	-.028	.018	-.020	-.212	.092	.030*	.000	.008	.001
T2 Teacher closeness	-.011	.010	-.023	.032	.010	-.041**	.192	.051	.048***	.012	.004	.047**
T2 Verbal ability	-.010	.002	-.064***	-.006	.002	-.030*	.319	.013	.330***	.006	.001	.077***
Maternal education	-.077	.017	-.062***	-.059	.018	-.042**	1.456	0.093	.200***	.035	.008	.064***
T2 Int/Ext ¹	.247	.015	.219***	.418	.012	.454***						
Model 3												
T1 Maternal conflict	.006	.008	.001	.011	.009	.017	-.097	.046	-.029*	-.007	.004	-.028
T1 Paternal conflict	.031	.008	.055***	.018	.009	.027*	-.004	.047	-.001	-.007	.004	-.028
T2 Teacher conflict	.062	.010	.098***	.008	.012	.121***	-.096	.049	-.026*	-.027	.004	-.096***
T2 Verbal ability	-.010	.002	-.060***	-.007	.002	-.035**	.332	.013	.343***	.006	.001	.082***
Maternal education	-.071	.017	-.058***	-.057	.018	-.040**	1.400	.094	.192***	.031	.008	.056***
T2 Int/Ext ¹	.236	.016	.208***	.354	.014	.380***						

Model fit closeness:

CFI = 0.999

TLI = 0.981

RMSEA = 0.020

Variance = 7%, 22%, 18%, 2%

Model fit conflict:

CFI = 0.997

TLI = 0.954

RMSEA = 0.031

Variance = 9%, 23%, 18%, 3%

Note. ¹Regression coefficient for corresponding internalising or externalising problems at T2; Est = Unstandardised Estimate; β = StandardisedEstimate. * $p < .05$. ** $p < .01$. *** $p < .001$.

- Comparable magnitude of effect sizes for mothers, fathers and teachers

Table 3*Robust Maximum Likelihood Estimates for Longitudinal Structural Equation Models*

	T3 Internalising problems			T3 Externalising problems			T3 Reading Ability			T3 Academic Self-Concept		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Model 1												
T1 Maternal closeness	-.050	.023	-.032*	-.082	.024	-.045**	.721	.128	.078***	.034	.011	.053**
T1 Paternal closeness	-.053	.017	-.044**	-.028	.018	-.020	-.212	.092	.030*	.000	.008	.001
T2 Teacher closeness	-.011	.010	-.023	.032	.010	-.041**	.192	.051	.048***	.012	.004	.047**
T2 Verbal ability	-.010	.002	-.064***	-.006	.002	-.030*	.319	.013	.330***	.006	.001	.077***
Maternal education	-.077	.017	-.062***	-.059	.018	-.042**	1.456	0.093	.200***	.035	.008	.064***
T2 Int/Ext ¹	.247	.015	.219***	.418	.012	.454***						
Model 3												
T1 Maternal conflict	.006	.008	.001	.011	.009	.017	-.097	.046	-.029*	-.007	.004	-.028
T1 Paternal conflict	.031	.008	.055***	.018	.009	.027*	-.004	.047	-.001	-.007	.004	-.028
T2 Teacher conflict	.062	.010	.098***	.008	.012	.121***	-.096	.049	-.026*	-.027	.004	-.096***
T2 Verbal ability	-.010	.002	-.060***	-.007	.002	-.035**	.332	.013	.343***	.006	.001	.082***
Maternal education	-.071	.017	-.058***	-.057	.018	-.040**	1.400	.094	.192***	.031	.008	.056***
T2 Int/Ext ¹	.236	.016	.208***	.354	.014	.380***						

Model fit closeness:

CFI = 0.999

TLI = 0.981

RMSEA = 0.020

Variance = 7%, 22%, 18%, 2%

Model fit conflict:

CFI = 0.997

TLI = 0.954

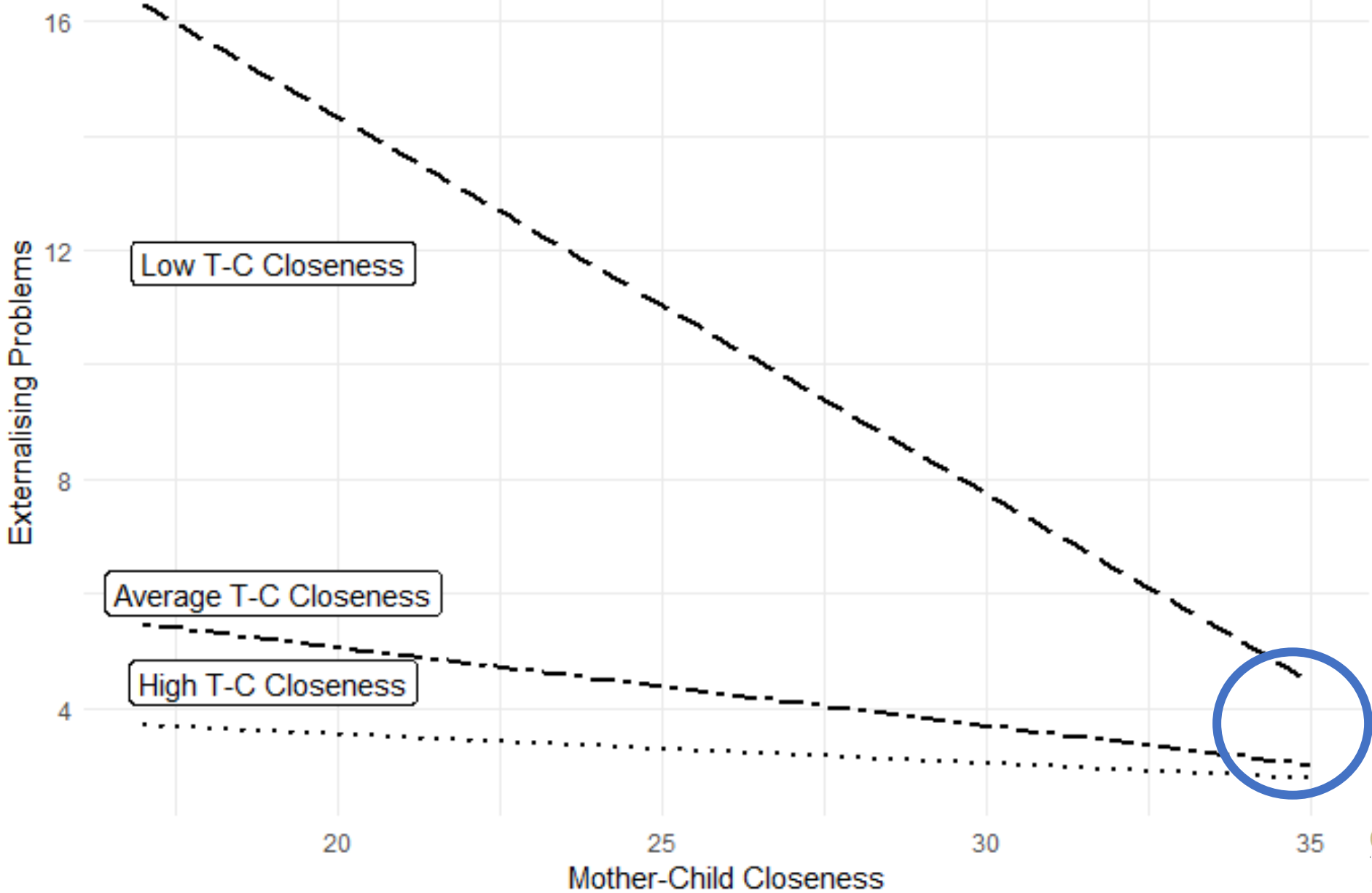
RMSEA = 0.031

Variance = 9%, 23%, 18%, 3%

Note. ¹Regression coefficient for corresponding internalising or externalising problems at T2; Est = Unstandardised Estimate; β = Standardised

Estimate. * $p < .05$. ** $p < .01$. *** $p < .001$.

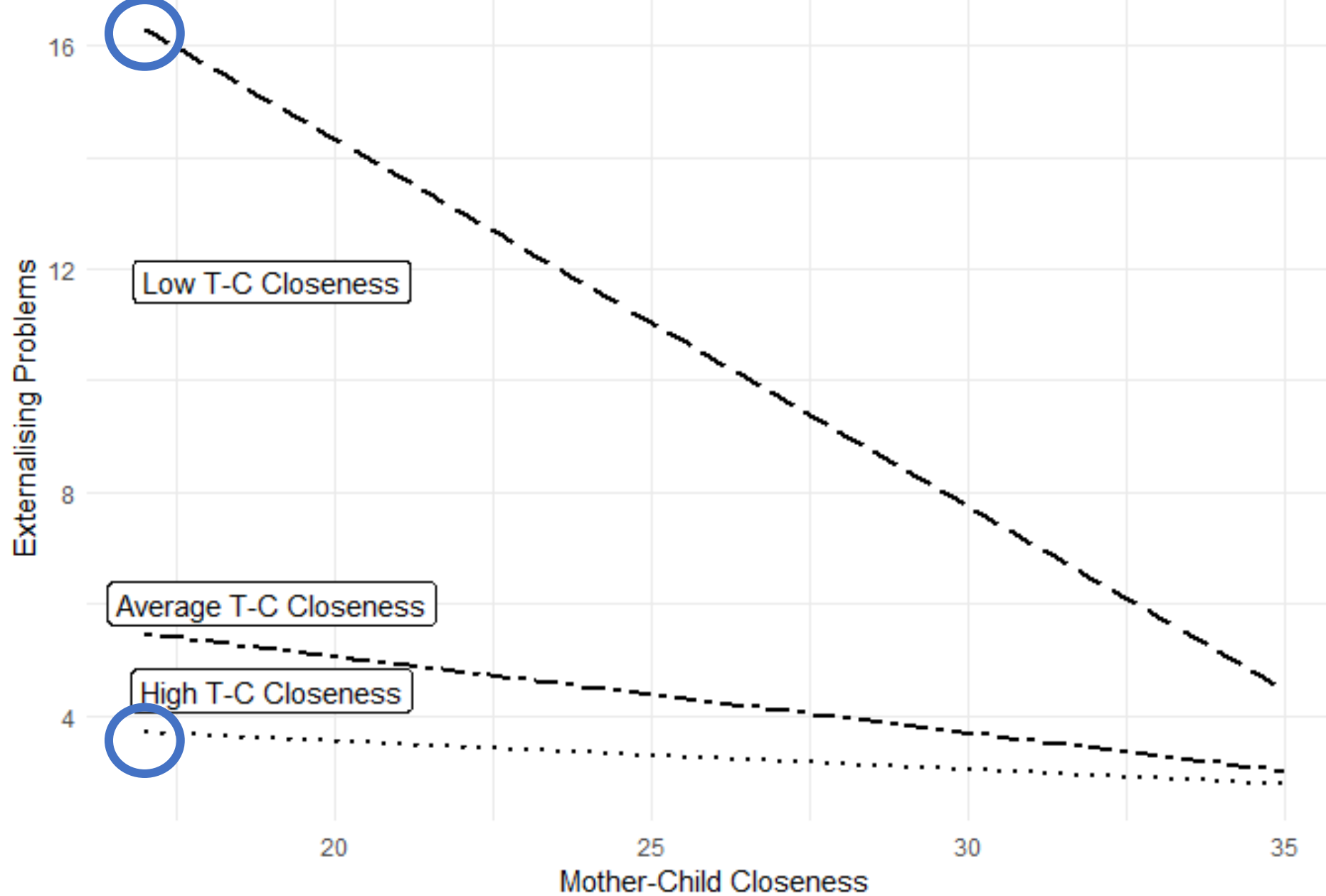
- Context matters – heightened effects of lower levels of conflict



‘Good-enough’ pattern for adult-child closeness



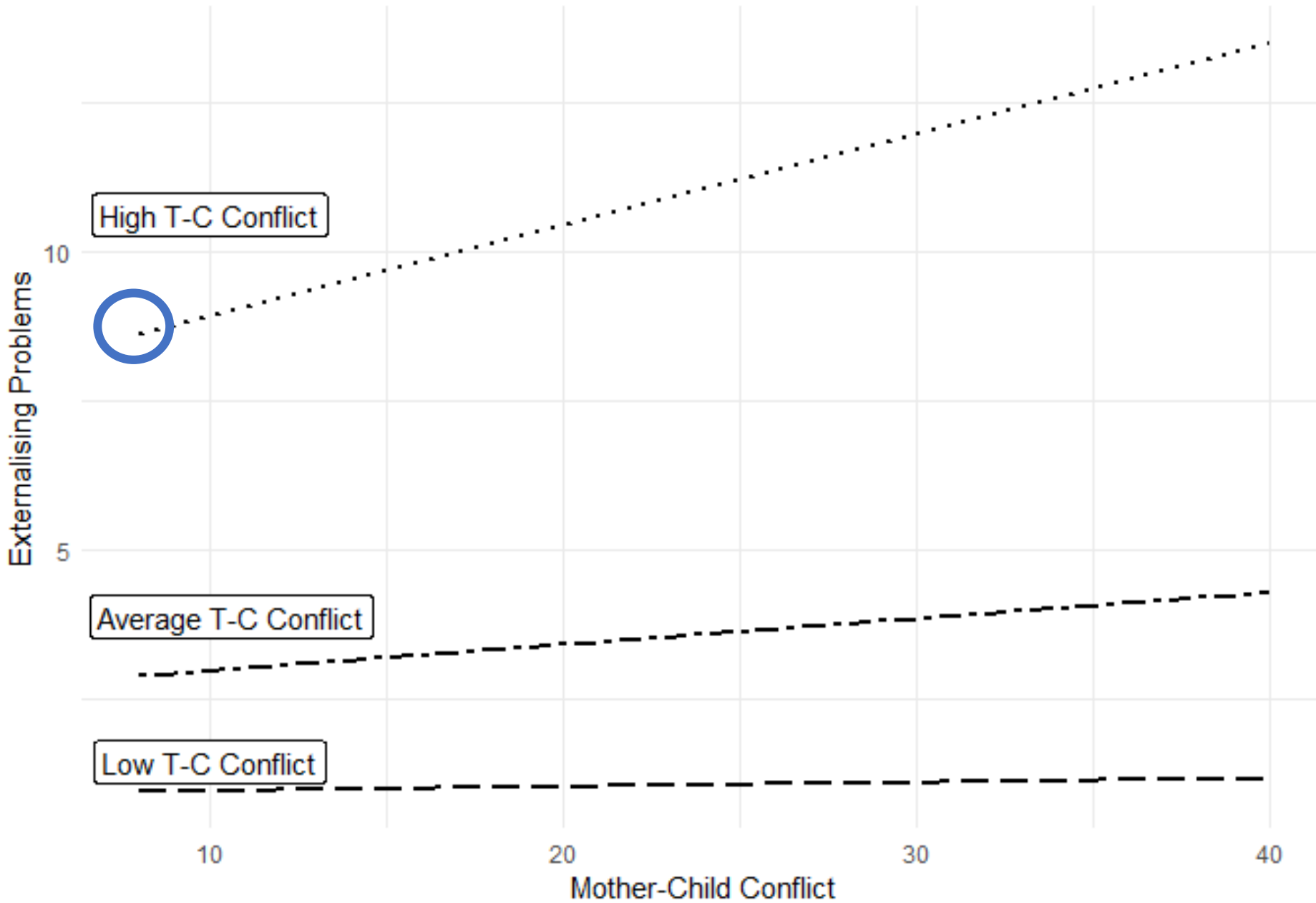
- Reading ability ($\beta = -.720, p < .01$)
- Internalising problems ($\beta = .603, p < .05$)
- Externalising problems ($\beta = .551, p < .05$)



‘Good-enough’ pattern for adult-child closeness

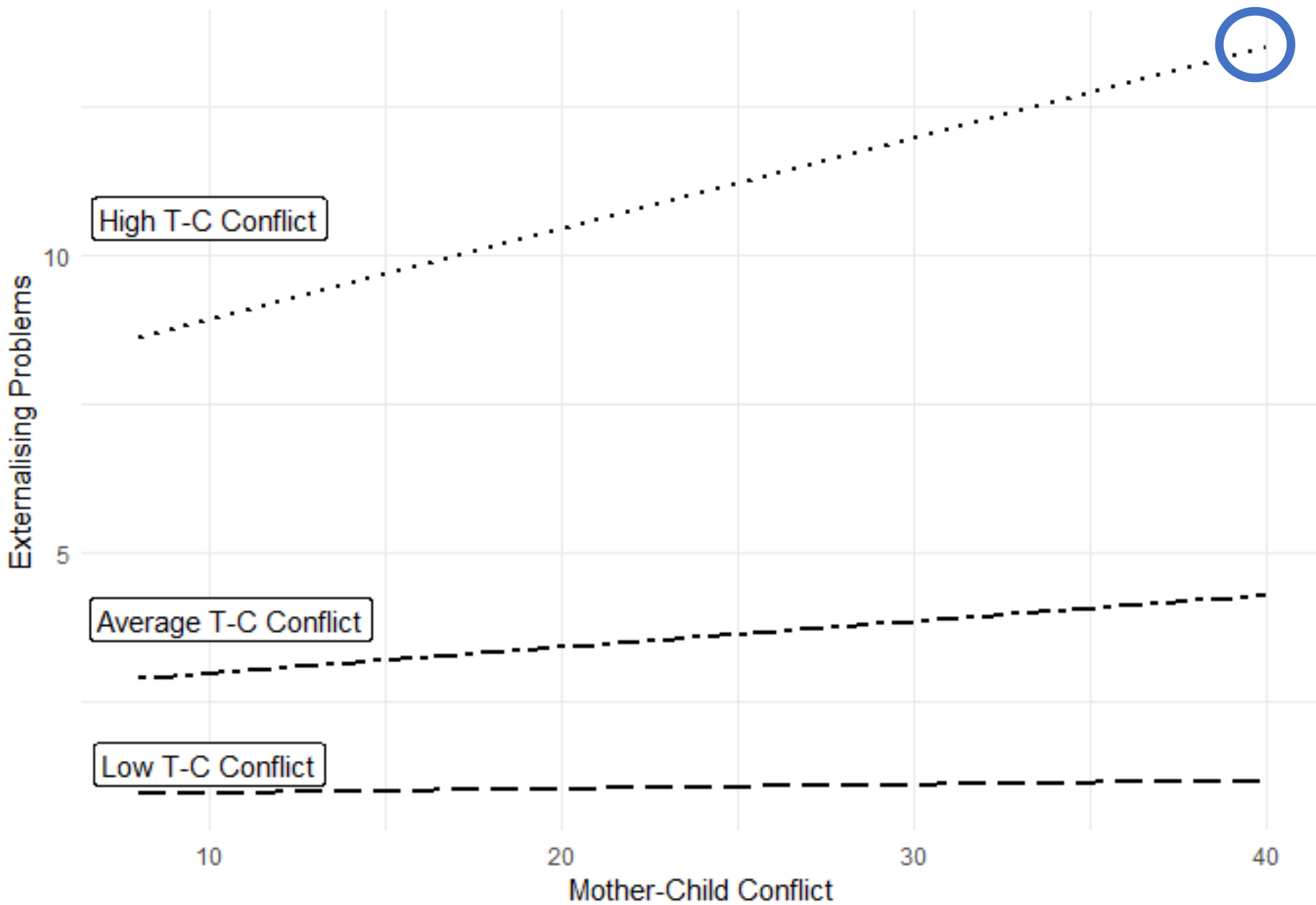


- Reading ability ($\beta = -.720, p < .01$)
- Internalising problems ($\beta = .603, p < .05$)
- Externalising problems ($\beta = .551, p < .05$)



Cumulative risk pattern for adult-child conflict

- Externalising problems ($\beta = -.114, p < .05$)



Cumulative risk pattern for adult-child conflict

- Externalising problems ($\beta = -.114, p < .05$)

Summary of findings

- Comparable impact of mother, father and teacher-child
- Broad ranging: spanning several academic achievement, self-concept and behavioural adjustment
- Fathers' roles are independent from teacher influences – as in previous cross-sectional findings
- Teacher and mother influences interact with two different patterns – close enough versus cumulative conflict
- Causes of parental differences? Interaction style? Childcare duties? Children's internal model of relationships?



Take home messages

- Teacher-child relationships in the early years play a critical role in primary school outcomes
- Teacher-child relationships are especially important for children exposed to relational risk at home
 - Fill the gap in supportive adult relationship and / or amplify negative consequences of exposure to conflict
- Focused attention in schools on forming positive teacher-child relationships with vulnerable children at school entry
- Efforts to directly target engagement with fathers





Fás Aníos in Éirinn

Growing Up in Ireland

Email: csd48@cam.ac.uk

Twitter: @CaoimheDempsey2

Dempsey, C., Devine, R., Symonds, J., Sloan, S., & Hughes, C., (2023).
Compensatory and Cumulative Mother, Father and Teacher-Child
Relationships Interact to Predict School Adjustment and Achievement.
Under review at Journal of Applied Developmental Psychology.

Preprint: <https://doi.org/10.31219/osf.io/6zw2y>

