







Family Structure and Children's Achievement

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Family Structure and Achievement Objectives

This paper uses Growing Up in Ireland data to:

- explore the association between family structure and children's achievement
- examine the extent to which individual, familial, school and neighbourhood factors mediate this association



Family Structure and Achievement Research overview

- 'Non-traditional' family structures is associated with a host of poor outcomes for children including:
 - Lower test scores
 - Lower school completion rates
 - Internalising problems such as depression and anxiety
 - Externalising problems such as aggression and hyperactivity
- Some of these effects are short-lived, pronounced only during a period of transition (e.g. separation, divorce, remarriage) while others are more enduring and persist well into adulthood



Family Structure and Achievement Theoretical explanations

- Social selection
- Reduced economic and other resource
- Reduced parental time and attention
- Increased family conflict and stress



Family Structure and Achievement Measures

Achievement:

Standardized reading and math scores

Family structure:

Intact- married, intact- cohabiting, continuously single-mother, divorced, separated single-mother, stepfather

Family characteristics:

Number of children, resident half/step-sibling(s) or grand parent(s)

Child characteristics:

Gender, breastfed, chronic illness, learning difficulty, 'difficult' temperament, 'always likes reading', 'always likes math'

• Maternal characteristics:

Maternal age, mother has a degree

School and neighbourhood characteristics:

Child attends a school designated as disadvantaged, level of neighbourhood disadvantage



Family Structure and Achievement Measures

- Economic and other resources:
 - Equivalised income quintiles, enforced deprivation, books in the home
- Parental time and attention:
 - Parenting style, third level aspirations
- Family conflict and stress:
 - Maternal depression, 'high conflict' in the mother-child relationship, number of stressful live events experienced by the child

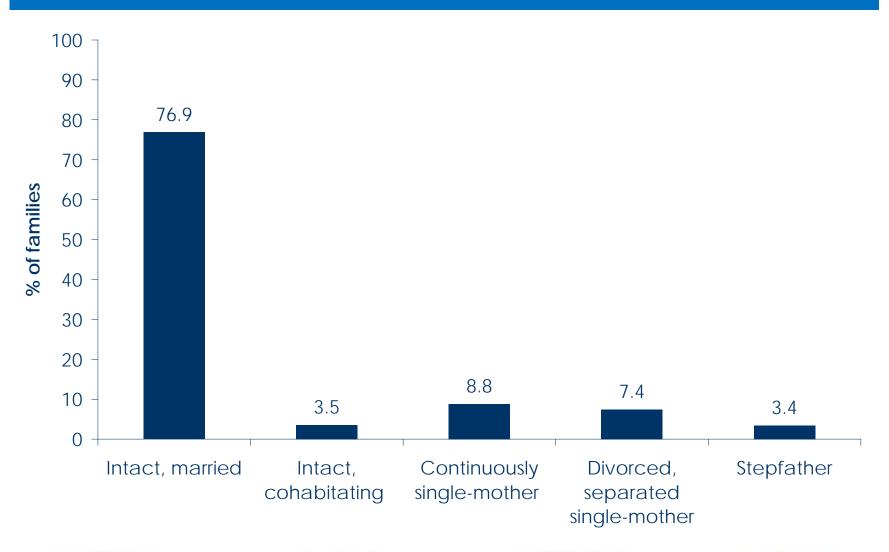


Family Structure and Achievement Data analysis

- Descriptive analysis:
- Multivariate analysis:
 - Model 1 traditional null model
 - Model 2 adds family structure
 - Model 3 adds family characteristics
 - Model 4 adds child characteristics
 - Model 5 adds maternal characteristics
 - Model 6 adds school and neighbourhood characteristics
 - Model 7 adds economic and other resources
 - Model 8 adds parental time and attention
 - Model 9 adds family conflict and stress



Descriptive Results: Children's family structure





Descriptive Results: Children's achievement

		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single-mother	Stepfather	All
	Average standardized reading	101.0***	94.4***	96.8***	97.6***	95.6***	100.0
nent	score	()				
Attainn	Average standardized math	101.3***	94.0***	94.9***	96.6***	96.1***	100.0
Att	score						

^{*} p<.05 ** p<.01 ***p<.001



Descriptive Results: Family and child characteristics

		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single-mother	Stepfather	All
	(%) number of children:						
	1 child	4.5***	14.8***	41.5***	8.6***	23.6***	9.1
	2 children	31.1	39.5	32.9	34.0	33.8	31.9
	3 children	36.2***	24.2***	14.9***	29.4***	25.4***	33.0
	4 children	19.1***	9.5***	8.9***	18.5***	11.0***	17.5
	5 or more children	9.2***	12.0***	1.8***	9.4***	6.2***	8.5
Family	(%) with step- or half-sibling(s)	2.5***	13.4***	14.3***	14.2***	42.6***	6.2
Far	(%) with resident grandparent	1.7***	3.5***	16.6***	1.7***	3.1***	3.1
	(%) male	52.5	45.2	47.6	50.0	50.2	51.5
	(%) breastfed	47.4***	28.7***	32.0***	45.9***	33.6***	44.8
	(%) with chronic illness	10.2*	11.6*	16.2*	13.6*	14.3*	11.1
	(%) with learning difficulty	9.3	13.2	13.1	12.9	11.3	10.1
	(%) with 'difficult' temperament	16.2*	23.2*	20.8*	24.1*	19.2*	16.0
	(%) who always like reading	59.4	50.0	55.5	56.8	58.6	58.5
p	(%) who like always math	46.3	50.3	53.7	47.6	52.5	47.4
Child	(%) with four of more friends	51.2	51.7	50.8	45.8	52.4	50.8

^{*} p<.05 ** p<.01 ***p<.001



Descriptive Results: Mother, school, neighbourhood

_		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single-mother	Stepfather	All
Mother	Average maternal age (years)	40.1***	35.1***	33.2***	39.1***	32.7***	39.0
Mo	(%) of mothers with a degree	18.9***	6.5***	10.5***	12.8***	11.9***	17.0
	(%) of children attending	14.7***	40.6***	34.8***	25.2***	26.8***	18.6
	schools designated as being						
	disadvantaged						
þ	(%) of relevant population in the	46.8***	53.1***	52.3***	49.5***	50.8***	47.8
hoc	neighbourhood who a) were						
lnoc	classified as being in the						
ighk	'unskilled' social class b) whose						
l ne	education ceased at lower						
School and neighbourhood	secondary or less c) who are						
loot	unemployed, having given up						
Sch	or lost a job						

^{*} p<.05 ** p<.01 ***p<.001



Descriptive Results: Economic and other resources

		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single- mother	Stepfather	All
	(%) Income quintile:						
	First (lowest)	14.6***	29.8***	40.5***	42.8***	21.4***	20.0
	Second	18.5**	23.4**	25.9**	26.2**	22.2**	20.0
	Third	20.8*	19.2*	16.7*	15.5*	18.6*	20.0
	Fourth	22.8***	15.2***	11.6***	8.2***	15.2***	20.0
Si	Fifth (highest)	23.3***	12.4***	5.3***	7.4***	22.7***	20.0
nrce	(%) experiencing deprivation	2.8***	6.3***	12.2***	14.5***	4.1***	4.6
eso.	(%) Books in the home:						
nicı	Low (ten or less)	8.5***	14.8***	18.3***	14.1***	17.1***	10.3
Economic resources	Medium (11-19)	17.1**	27.1**	20.7**	25.7**	21.6**	18.6
Ecc	High (20 or more)	74.4***	58.1***	61.0***	60.2***	61.3***	71.2

^{*} p<.05 ** p<.01 ***p<.001



Descriptive Results: <u>Parental time and attention</u>

		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single-mother	Stepfather	All
	(%) Parenting style of						
_	mother:						
and attention	Authoritative	77.1	74.5	78.4	72.9	81.0	76.9
atte	Authoritarian	4.1	5.0	5.2	5.0	3.4	4.3
pur	Permissive	16.5	16.7	13.7	17.4	14.5	16.3
	Neglectful	2.3	3.8	2.6	4.7	1.0	2.5
a ≓	(%) of mothers with						
Parental time	aspirations for their child to						
Par	go on to third level	73.7***	56.0***	63.6***	66.1***	59.7***	71.2

^{*} p<.05 ** p<.01 ***p<.001



Descriptive Results: Family conflict and stress

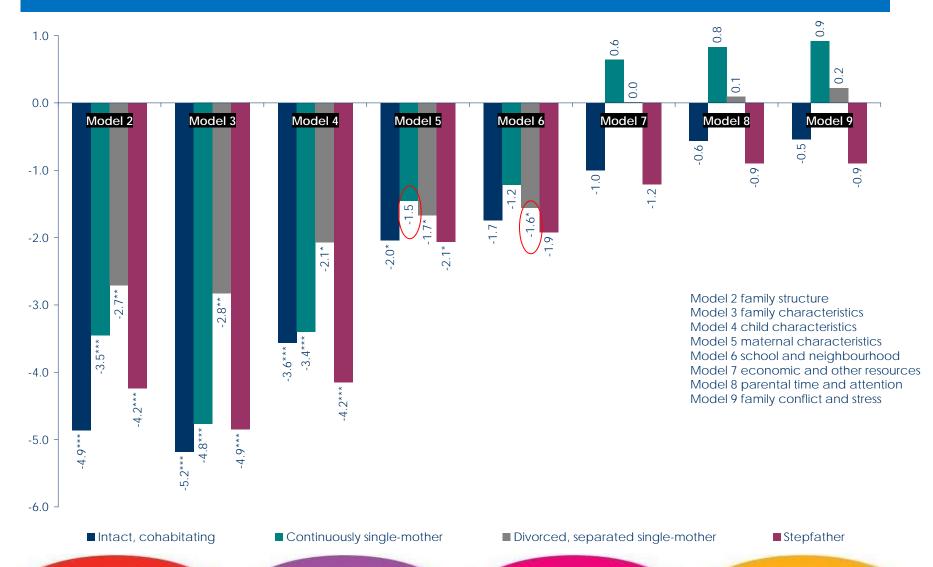
stress		Intact, married	Intact, cohabitating	Continuously single-mother	Divorced, separated single-mother	Stepfather	All
	(%) of mothers classified as	6.9***	11.3***	15.8***	20.5***	12.0***	9.0
and	'depressed'						
conflict	(%) of mother-child relationships	14.4***	19.9***	23.1***	24.8***	17.2***	16.3
	classified as 'highly conflicted'						
Family	Average number of stressful life	1.7***	2.0***	3.2***	3.4***	3.0***	2.0
Far	events experienced by the child						

^{*} p<.05 ** p<.01 ***p<.001

	0-		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
		nstant (school mean reading score)	100.34***	101.09***	103.78***	100.22***	87.82***	93.00***	83.75***	80.52***	80.67***
	2	Family structure (Ref: Intact married)		4.0/***	-5.18***	2 5/***	2.04*	1 74	1.00	0.57	0.54
		Intact cohabitating		-4.86*** -3.45***	-5.18 -4.77***	-3.56*** -3.40***	-2.04* -1.45	-1.74 -1.22	-1.00	-0.56 0.83	-0.54 0.92
		Continuously single		-3.45 -2.71**	-4.77 -2.83**	-3.40 -2.07*	-1.45	-1.22	0.64	0.83	0.92
		Divorced, separated		-2.71 -4.24***	-2.83 -4.85***	-2.07 -4.15***	-1.67 -2.06*	-1.92	-1.21	-0.90	-0.90
	2	Stepfather		-4.24	-4.85	-4.15	-2.06	-1.92	-1.21	-0.90	-0.90
	3	Number of children (Ref: 1 child) 2 children			1.07*	1.02*	-1.62*	-1.58*	1.0/	-0.85	0.05
		3 children			-1.97*	-1.83* -1.74*	-1.02 -1.73*	-1.58 -1.74*	-1.06 -0.86	-0.85	-0.85
					-1.91* -3.91***	-1.74 -3.25***	-1.73 -3.43***	-1.74 -3.29***	-0.86 -1.81*	-0.66 -1.49	-0.64
		4 children			-3.91 -6.75***	-3.25 -6.16***	-3.43 -6.22***	-3.29 -5.97***	-1.81 -3.64***	-1.49	-1.48 -3.32**
		5 or more children Resident helf, and (or step sibling (c))			-0.75 -0.28	-0.10	-o.22 0.28	-5.97	-3.64 0.51	-3.31 0.68	-3.32 0.72
		Resident drandparent(s)			0.26	1.08	1.45	1.49	1.60	1.40	1.37
	4	Resident grandparent(s) Male			0.26	0.67	0.46	0.41	0.70	1.40	1.08*
	4	Breastfed				3.97***	2.89***	2.64***	2.02***	1.10	1.56***
		Chronic illness				0.08	0.23	0.23	0.24	0.37	0.43
ts		Learning difficulty				-13.68***	-13.49***	-13.59***	-13.40***	-11.93***	-11.89***
ec		Difficult temperament				-2.06***	-13.49 -1.85***	-13.39	-13.40	-11.93 -1.48**	-11.69
eff		Always likes reading				4.54***	4.50***	4.49***	4.21***	3.94***	3.94***
Random effects	5	Mother's age				7.57	0.30***	0.28***	0.27***	0.27***	0.26***
ρ	J	Mother has a degree					4.87***	4.61***	3.61***	2.85***	2.84***
Rar	6	0isadvantaged school					1.07	-2.23**	-1.42*	-1.36*	-1.37*
		Disadvantaged neighbourhood						-0.08***	-0.06***	-0.05**	-0.05***
	7	Income (Ref: Quintile 1 (Lowest))						0.00	0.00	0.00	0.00
		Quintile 2							1.89**	1.70**	1.70**
		Quintile 3							2.18**	1.98**	1.97**
		Quintile 4							4.11***	3.65***	3.65***
		Quintile 5 (Highest)							3.97***	3.42***	3.42***
		Enforced deprivation							-0.50	-0.39	-0.21
		Books in the home (Ref: Small)									
		Medium							2.84***	2.54***	2.54***
		Large							6.56***	5.87***	5.83***
	8	Parenting style (Ref: Authoritative)									
		Authoritarian								0.05	0.03
		Permissive								-0.54	-0.54
		Neglectful								-2.94*	-2.89*
		Third level aspirations for child								5.27***	5.24***
	9	'Conflict' mother-child relationship									-0.69
		Mother is 'depressed'									-0.59
		Stressful life events									-0.04

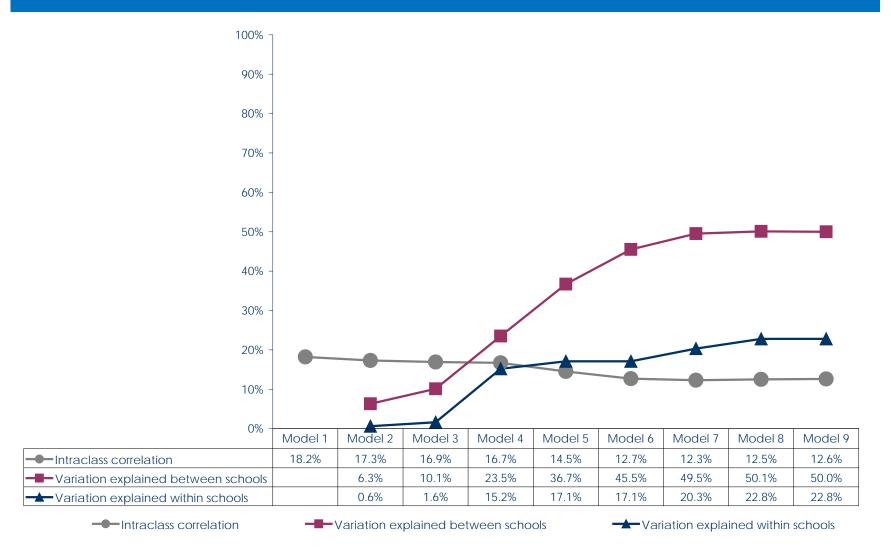


Multivariate Results: Family Structure and Reading



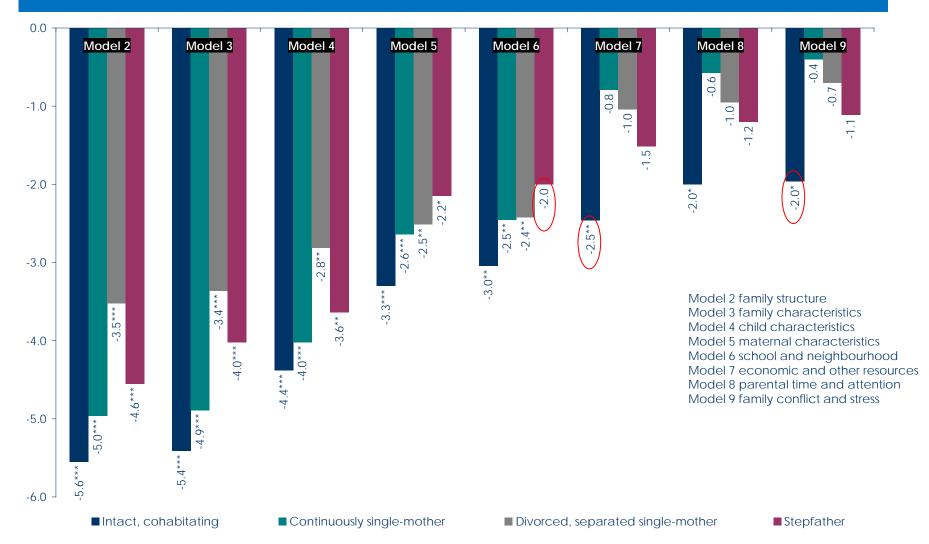


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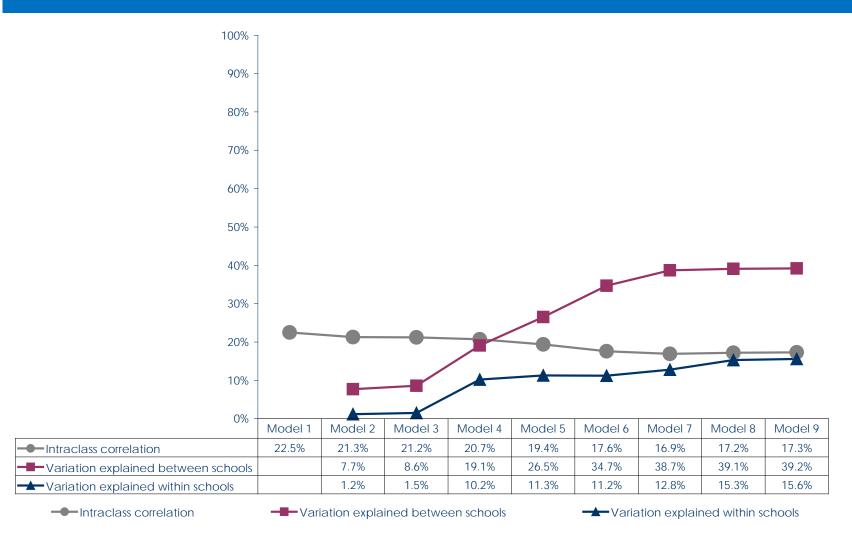


Multivariate Results: Family Structure and Math





Multivariate Results: Family Structure and Math





Family Structure and Attainment Conclusion

In the final models:

- There was no significant differences in reading scores for children in non-traditional family structures.
- Significantly lower math scores persisted but only for children in intact, cohabiting families

Certain child, family, school and neighbourhood characteristics were associated with significantly better scores (i.e. smaller families, boys, breastfed children, children with no learning difficulty and easy temperaments, children whose mothers are older and have third level qualifications and children who attend or reside in more advantaged schools and neighbourhoods)



Family Structure and Attainment Conclusion

Economic and other resources variables:

- Income and books in the home were positively associated with reading and math scores
 - Parental time and attention variables:
- A neglectful parenting style and third level aspirations
 Family conflict and stress variables:
- Generally had no effect, however there was one exception to this (i. e. conflict in the parent-child relationship and math scores)

