Growing Up in Ireland
National Longitudinal Study of Children

The role of secondary caregiver depression and attachment in developmental trajectories of externalising problems

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Externalizing behaviours

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- Hyperactivity, attention problems and impulsivity (HAI)
- Conduct problems (CP) – aggression, disruptive behaviour
- 1st and 3rd most common presentation to CAMHS[1]
- 30%-50% children with ADHD meet clinical criteria for conduct problems[2]
- Poor outcomes – lower educational attainment, relational difficulties, psychopathology, unemployment and criminality[3]

Developmental Trajectory Models

- Multiple distinct developmental trajectories of childhood externalizing behaviours of varying severity and persistence
- Most pre-schoolers display some CP or HAI peaking between 2-5 years
- Majority of children with low or moderate levels typically decline as children develop
- A small group of children exhibit chronic and relatively stable problems
- Risk factors for severe/persistence groups include low maternal age and education, maternal depression, male child sex, lower socioeconomic status

See: 4. Carbonneau at al., 2016, 5. Girard et al 2019, 6. Shaw et al., 2005, 7. Tremblay, 2010, 8. Vergunst et al., 2019,

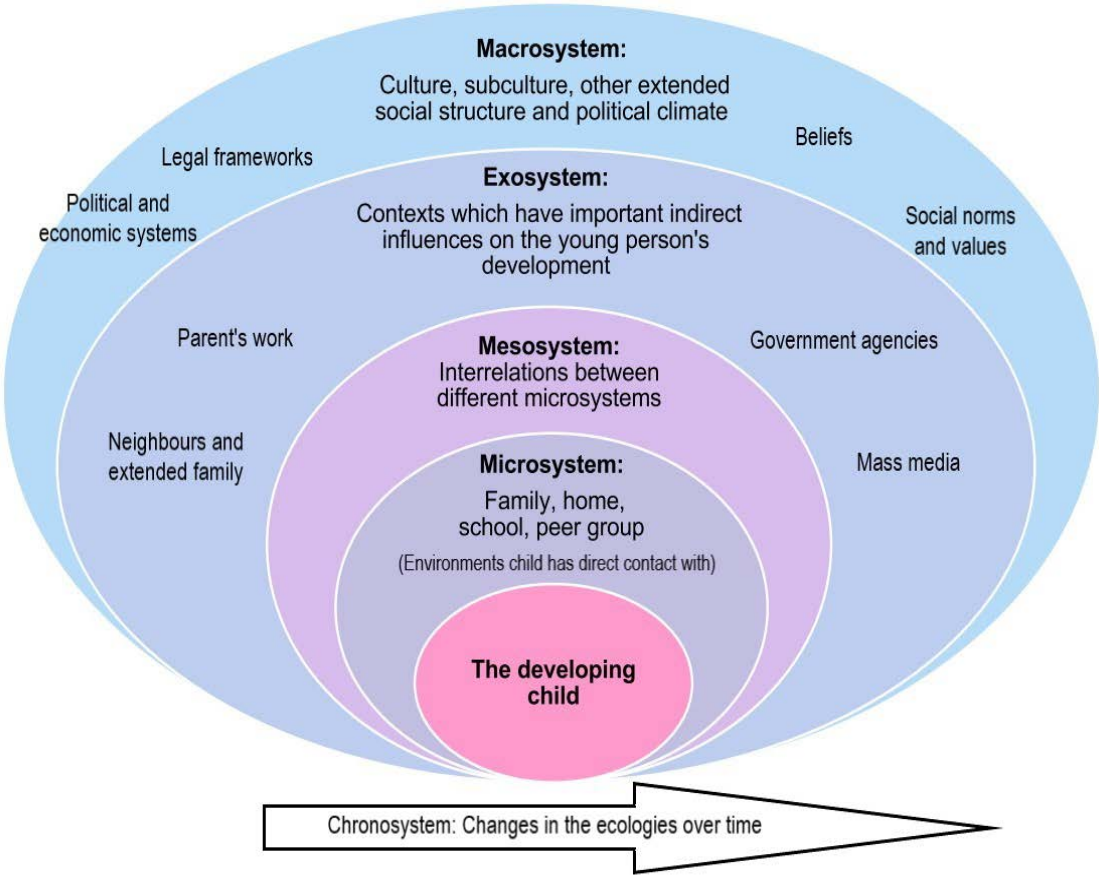
Similar but not the same

- 13% of boys with chronic hyperactivity display chronic aggression[9]
- Different outcomes - High HAI trajectory not associated with adult antisocial behaviour when concurrent conduct problems are controlled for[10]
- Different risk factors? – Compared to controls, lower maternal age, higher maternal depression, rejection and child fearlessness predicted CP trajectory, only maternal depression predicted HAI trajectory[6]
- Modelling behaviours separately or aggregating them into one category “may mask essential aspects of [their] development”[7]

Secondary caregiver characteristics

- Relatively understudied in developmental trajectory research
- Rise in active coparenting > increasing influence on child's environmental[11]

- Paternal depressive symptoms have a small significant association with childhood externalizing behaviours[12]
- Lower mother-child attachment has been found to predict externalizing difficulties in toddlers[13]
- Lack of corresponding evidence for secondary caregivers.



Current research

Secondary data analysis of children who participated in at least 4/5 waves in the GUI Infant Cohort (7,507 children, 50.34% boys, 49.66% girls)

Aims:

1. Examine joint developmental trajectories of conduct problems and hyperactivity from infancy to middle childhood
2. Explore if secondary caregiver depressive symptoms and quality of attachment to the infant predict group membership

Measures

Trajectories

- Strengths and Difficulties Questionnaire conduct problems and hyperactivity sub-scales
- Scores indicating above average levels: CP = 3/HAI = 6
- Collected from primary caregivers at waves 2-5

Predictors

- Centre for Epidemiological Studies Depression Scale (8-item)
- Quality of Attachment sub-scale of the Paternal Post-Natal Attachment Scale
- Collected from secondary caregivers at wave 1

Controls

- Child factors– sex, prematurity, low birth weight, neonatal care, temperament
- Parent factors– PCG education, age, ethnicity, depression, quality of attachment and stress levels
- Family factors – Smoked during pregnancy, living with partner, sibling status and socioeconomic status indicators
- Collected at wave 1 entered into the model sequentially

Analysis

Step 1

- Group based multi-trajectory modelling[14] of conduct problems and hyperactivity

Step 2

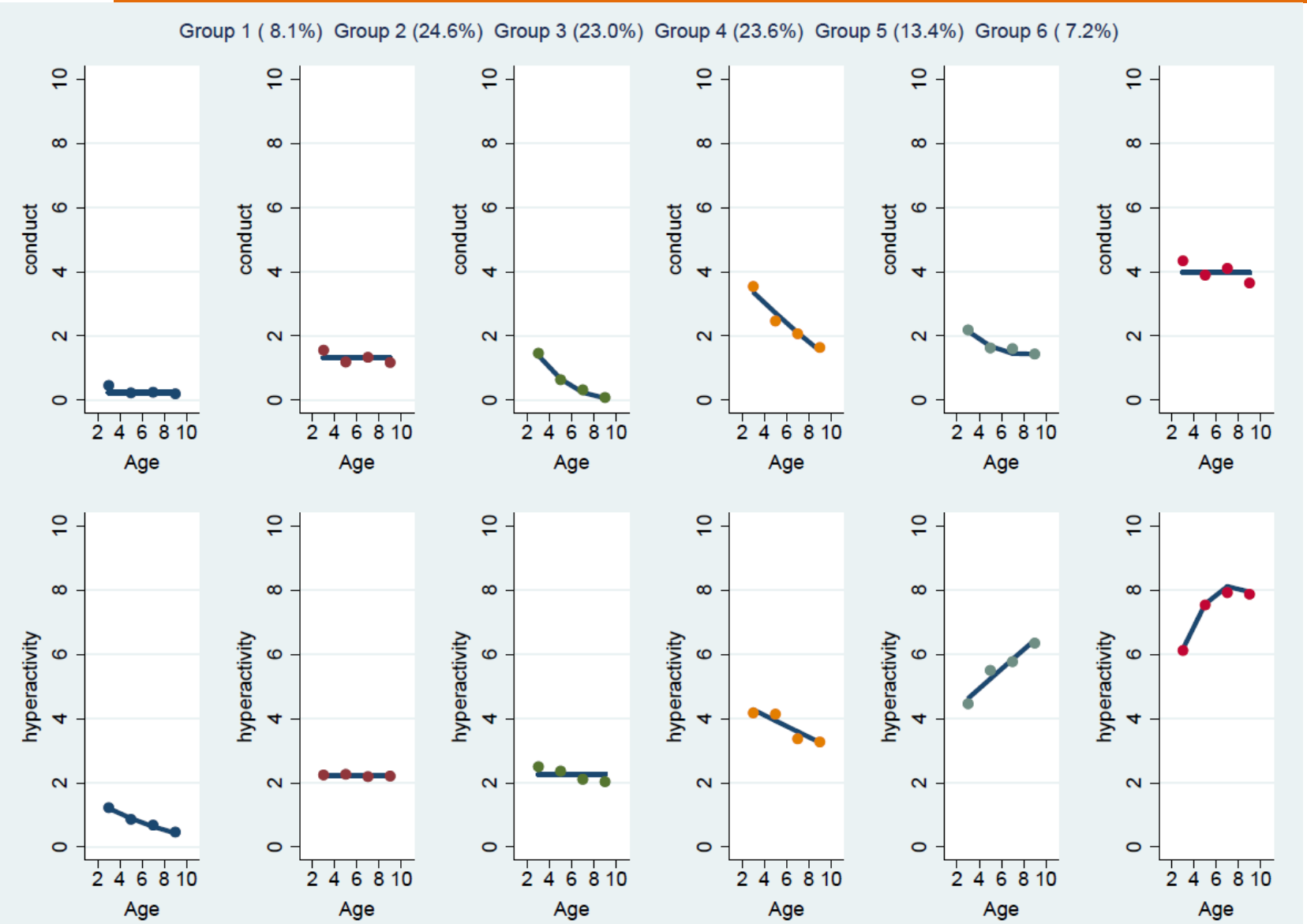
- Hierarchical multinomial logistic regression

Developmental Trajectories

Six groups of children with distinct developmental trajectories of concurrent conduct problems and HAI found

Group	Posterior Probability	Odds of correct classification
1	78.4	37.2
2	75.3	9.4
3	72.4	7.2
4	76.3	11.2
5	76.1	24
6	87.9	117.9

Developmental Trajectories



Predictors

- Group 4 decreasing behaviours
- Group 5 increasing hyperactivity
- Group 6 moderate conduct problems and high increasing hyperactivity

	Model 1	Model 2	Model 3	Model 4
Group 4				
SCG depressive symptoms	2.315*	1.71	1.71	1.575
Quality of Attachment - Secondary Caregiver	0.941	0.97	0.97	0.942
Group 5				
SCG depressive symptoms	1.754	1.267	1.267	1.144
Quality of Attachment - Secondary Caregiver	0.969	0.989	0.989	0.96
Group 6				
SCG depressive symptoms	2.683*	1.727	1.727	1.459
Quality of Attachment - Secondary Caregiver	0.873**	0.889*	0.889*	0.869**

Relative Risk Ratios
Significance levels: * p<0.05 ** p<0.01 *** p<0.001

Conclusions

- Supports previous research indicating the majority of children do not exhibit externalizing problems
- Early presentation and influence of perinatal factors indicates intervention pre-school may be beneficial
- Evidence that secondary caregiver's attachment is a protective factor for the CP-HAI group
- May be beneficial for interventions engage with secondary caregivers and promote sense of attachment

Future directions

- Gender differences in joint trajectories
- Interactions between predictors

Thank you!

Questions, comments and thoughts are very welcome

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