



Growing Up
in Ireland
National Longitudinal
Study of Children

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Book of Abstracts

Paper presentations

Social class inequalities in education and the life course

Keynote speaker

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Institute of Education
London

Main Conference Hall

What can longitudinal research tell us about inequalities in education and the life course? This presentation will address this question using examples from the British Birth Cohort Studies. This evidence provides insights into inequalities from pre-school level, through the primary and secondary school years, into further and higher education, and into the labour market. Using these rich data resources, we can address the factors that explain the social class gap in education and the link between social origins and social destinations. This presentation will illustrate how longitudinal evidence can challenge common preconceptions about the drivers of inequality in education and beyond.

Bullying and health care utilization in 9-year-old children: A cross-sectional study

Catherine B Hayes, TCD

Session A, President's Room

Objective: To assess whether primary and/or secondary healthcare utilization (HCU) is increased in children who are bullied independent of chronic illness, disability or other factors.

Study Design: Cross-sectional survey of the first wave of the childhood (9-year-old) cohort of the Irish National Longitudinal Study of Children, encompassing 8,568 9-year-olds and their primary carers. Bully victimization was assessed by a self-reported questionnaire completed by the child at home. The principal HCU outcomes obtained by interview-administered questionnaire with the primary caregiver at home were: visits to general practitioner (GP), Mental Health Practitioner (MHP) and nights spent in hospital in the previous 12 months.

Results: In logistic regression models, being victimized by bullying independently increased GP visits (OR=1.13, 95%CI: 1.03-1.25, p=0.02); MHP visits (OR=1.31, 95%CI: 1.05-1.63, p=0.02), though not nights in hospital (OR=1.07 95%CI: 0.97-1.18, p=0.18), irrespective of presence of chronic illness or disability. Gender stratified Poisson models demonstrated that victimized girls made increased GP visits (RR=1.14, 95%CI: 1.06-1.23, p<0.001) and spent nights in hospital (RR=1.10, 95%CI: 1.04-1.15, p<0.001); whereas victimized boys were more likely to contact MHPs (OR=1.21, 95%CI: 1.02-1.44, p=0.03).

Conclusions: 9-year-olds who are victims of bullying are more likely to utilize healthcare services. Different types of HCU patterns were observed by gender. Our study suggests health professionals need to be aware of the prevalence of bullying and be vigilant that medically unexplained symptoms and behavioural problems in children may be manifestations of bully victimization. This has important implications for early detection of bullying and appropriate management of victimized children.

Parental expectations of children with a disability: Impact on educational outcomes at age 13

Bertrand Maître, ESRI

Session A, President's Room

Education is a key determinant of adult life chances and in attempting to understand differences in social and academic outcomes, research has focussed on the influence of parents' expectations on their children's achievement, attitudes and academic performance (Davis-Kean 2005; Jacobs, 1991; McGillicuddy-De Lisi 1985; Vartanian et al. 2007). Previous research has shown that parental expectations are strongly influenced by a child having a disability (Blackorby et al 2007; Russell 2003). In this paper, we draw on the GUI data for the 1998 cohort at age 9 and at age 13 to examine the influence of parental educational expectations of children with a disability at age 9 on their educational performance at age 13. We make use of the longitudinal nature of the data to control for educational achievement at age 9 (the Drumcondra Maths and Reading test results) in assessing educational outcomes at age 13.

Dynamics and consequences of child economic vulnerability in the recession: An analysis of two waves and two cohorts of children

Dorothy Watson, ESRI

Session B,

Main Conference Room

Poverty and economic disadvantage have a range of negative effects on children, including on physical and mental health, educational achievement, emotional and behavioural outcomes (Brooks-Gunn and Duncan, 1997; Department of Work and Pensions, 2007; Duncan et al, 2012; Waldfogel, 2013). In this paper we make use of the first and second waves of the 2008 and 1998 cohorts of the *Growing Up in Ireland* study, to examine the impact on families and children in Ireland of the Great Recession. Economic vulnerability refers to being at risk of economic disadvantage (such as low income, household joblessness and economic stress). We focus on the links between economic vulnerability and child socio-emotional development (as measured by the Strengths and Difficulties Questionnaire, Goodman, 1997; Goodman et al., 2003; Goodman and Goodman, 2009). We address four questions:

1. How did the recession affect material circumstances of families?
2. Does the impact of poverty on child outcomes differ for younger and older children (socio-emotional development)?
3. Is persistent poverty more harmful than transient poverty?
4. Are there factors that protect children in the context of poverty?

Are all Irish children cherished equally? Measuring structural inequality and its effect on children's outcomes

Niamh Kelly, Barnardos

Session B, Main Conference Room

In 1916 the Proclamation of Independence declared Ireland 'would cherish all children equally' – but has that been achieved? In the lead up to the Easter Rising centenary Barnardos is examining the effect that structural inequality has on Irish children and, as the country emerges from one of the worst economic crises in its history, asking how we can ensure that all children in Ireland have a fair and equitable share of our prosperity. UNICEF research revealed that during the recession Irish families with children lost the equivalent of ten years of income progress. Indeed statistics on child poverty and deprivation have dramatically worsened over the last five years, with the EU SILC data (2013) presenting the horrifying reality that 12% of Irish children are now living in consistent poverty and 38% are experiencing enforced deprivation. Examining data from Growing up in Ireland, alongside a comprehensive range of other datasets, Barnardos' research investigates the scale and depth of inequality in Ireland, and its impact on children. The research spans the last decade, with focus on the experience and outcomes of different income deciles across the areas of income, taxation, early childhood development, education, health and environment. The results show the deep-rooted inequality in Ireland and highlight the fundamental and enduring link between parents' income and a children's opportunity in life. Conclusions comprise a far-reaching suite of policy recommendations aimed at reversing the tide of inequality and calling on the next Government to honour this commitment to truly cherish all children equally.

Factors impacting sleep patterns of preterm infants

Joanne Fallon, Enable Ireland

Session C, La Touche Room

Context: Preterm infants (>37 weeks gestation) represent the largest child patient group in the European Union (EU) accounting for 6% of all births in Ireland in 2009 (European Foundation for the Care of Newborn Infants, 2011). Sleep problems in the aftercare of preterm infants has been identified as an area requiring professional support (EFCNI, 2013). The purpose of this study was to identify infant and parent characteristics that promote optimal sleep in preterm infants and to establish whether the parent-infant relationship mediates this association.

Methods: Structural equation modeling was used to investigate factors that may impact sleep patterns of infants born early and late preterm, as outlined by the transactional model of sleep-wake regulation.

Results: Results of this study suggest that the paternal-infant relationship has a mediating impact on the association between infant temperament and nighttime waking in the early preterm group only, while the maternal-infant relationship has a mediating role in both groups. Infant development and feeding, parent mental health and socio-demographics were not associated with infant sleep.

Conclusions: The paternal and maternal-infant relationships are important factors influencing preterm infant temperament and sleep. This study was completed as part fulfillment of a Ph.D in Health Related Sciences from Virginia Commonwealth University, Richmond, Virginia, USA.

Maternal stress in pregnancy and child atopic disease in infancy

Richard Layte, TCD

Session C,
La Touche Room

Asthma, eczema and rhinitis, collectively known as atopic disease are the most prevalent chronic disease group in childhood. Existing research suggests the risk of atopic disease is influenced by genetic and environmental factors. It has also recently been suggested that atopic disease is linked to maternal experience of stress in pregnancy. This paper explores the role of stress in pregnancy on reported atopic disease up to age 5.

Methods: The first three waves of the Infant Cohort of the Growing Up in Ireland Study are used to examine atopic disease defined as parental report that the child has a longstanding experience of asthma, eczema (or other skin allergy) or other respiratory allergy at age 9 months, three and five. Logistic latent growth models are used to test the hypothesis that maternal stress in pregnancy is associated with child atopic disease after statistical adjustment.

Results: Eleven percent of mothers report that their children had asthma, eczema or another respiratory allergy at age 5, 13.2%, of boys and 8.6% of girls ($P < 0.001$). In the fully adjusted model, 'a great deal of stress' in pregnancy was associated with an OR of 2.17 ($P < 0.01$) in the probability of child asthma and an OR of 1.75 ($P < 0.01$) of eczema, compared to women who experienced no stress in pregnancy.

Conclusions: Maternal experience of stress in pregnancy is strongly associated with child's subsequent risk of atopic disease.

Neighbourhood effects on 9-year-old children's behavioural outcomes

Amanda Quail, ESRI

Session D, President's Room

In understanding the lives of children, it is important to consider all the various domains of their lives – their family, school, friendships and neighbourhoods. This presentation focuses on the last of these domains and aims to explore the relationship between children's behavioural outcomes and the neighbourhoods in which they live.

Using data from the GUI Child Cohort at 9-years old, this research uses a series of multilevel models to examine the effects of neighbourhood socioeconomic composition, residential instability, service availability, perceived safety and physical condition on children's behavioural outcomes (as measured by the Strength and Difficulties Questionnaire) while taking account of the child's family, parental and own individual characteristics. Preliminary results show that most variation in children's behavioural outcomes is at the individual child level with characteristics such as parental education, family social class, child's gender and learning difficulties having strong effects. However, they do also vary by the neighbourhood in which the child lives, with children from more disadvantaged neighbourhoods having more behavioural difficulties. Issues of neighbourhood safety and physical condition seem to have the strongest effect on child behaviour.

Minor dissertation: Maternal educational disadvantage and children's academic outcomes - the Irish case

Carmen Kealy, NUI Galway

Session D, President's Room

Maternal education is an important indicator of children's academic performance over time. The aim of this study was to explore the association between academic outcomes among 9 and 13 year olds, maternal education and demographic but also income/deprivation related variables. The study was based on a representative sample of nine and thirteen year olds and their biological mothers in the Republic of Ireland. Academic outcomes were measured by using the Drumcondra maths, reading, numerical ability and verbal reasoning tests, and maternal education, demographic and income/deprivation related variables were measured, using the primary care giver questionnaire from the Growing up in Ireland study (GUI). Spearman's rank-order correlation and hierarchical multiple regression analyses were used to measure the association between maternal variables (age, SES, family structure, neighbourhood deprivation, consistent poverty and education) and children's academic outcome variables. There was a significant negative effect on all four academic outcomes through maternal educational disadvantage even after controlling for income/deprivation related and demographic variables. The association was observed in the full sample, but was stronger for reading at age 9 and verbal reasoning at age 13 than for maths at age 9 and numerical ability at age 13. The findings may support previous studies (Chevalier,2004; Carneiro, Meghir & Parey,2011; Chevalier et. al,2011; Dickson, Gregg & Robinson,2013;),which suggest stronger effects of maternal education than paternal, remaining significant even when household income is included. However, there was also evidence of a positive effect of larger family size with regards to maths and numerical ability scores.

Digital childhoods: A cross-sectional and longitudinal investigation into technology use using Growing Up in Ireland data.

Mira Dobutowitsch, Maynooth University

Session D, President's Room

Context: There is overwhelming consensus that play benefits children's health and psychosocial development (e.g. Gleave & Cole-Hamilton, 2012; Gray, 2013). In recent years there has been considerable change in the nature of children's pastime activities, due particularly to the increased use of technology and the decrease in perceived 'safe' play spaces. Many authors have raised concerns about the potential impacts of these changes on children's health and wellbeing (Gray, 2011; Tremblay et al., 2011, 2015).

Methods: Bivariate and regression analyses are used to explore cross-sectional and longitudinal relationships between children's pastime activities (technology consumption in particular), and a range of outcomes at ages 9 and 13 (health and socio-emotional functioning). Variables at individual child, family, and community levels are incorporated to explore possible mediators.

Results: Preliminary results show that sedentary activity in forms of technology use is prevalent at both ages; 70% of 9 year olds spent at least one hour using technology, even though their self-reported preference is for physically active play. Higher consumption at age 9 is associated with higher consumption at age 13 (60% now spend more than 3 hours using technology). While parents generally perceive their neighbourhoods as safe, high technology consumption is linked to a lower perception of safety and lower household income. Higher technology consumption at age 9 is associated with higher BMI scores at age 13 and increased social/emotional difficulties.

Conclusions: Results will be discussed in relation to empirical and conceptual literature on the potential effects of technology consumption in childhood.

Social relationships and the transition to second-level education

Emer Smyth, ESRI

Session E,

Main Conference Room

There is a large body of research internationally on the difficulties young people experience in making the transition to second-level education. Previous Irish research has highlighted the significant role of relations with teachers in facilitating integration into the new school setting. This paper develops upon this work to look at the relative influence of social relationships with teachers, parents and peers in shaping transition difficulties.

The paper uses multilevel modelling techniques to examine the influence of the quality of relationships with parents, peers and teachers on the likelihood of experiencing difficulties settling into second-level education, controlling for a rich range of individual and family background factors.

Levels of closeness and conflict between the young person and the primary care-giver decline over time. At the same time, young people's friendship networks generally expand and are characterised by a high degree of trust and a low degree of alienation. The quality of these social relationships is found to be predictive of the extent of transition difficulties. Frequent communication with parents, parental involvement in the school, a larger friendship network characterised by trust, and more positive interaction with teachers, all act as protective factors in easing the transition to the second-level school setting. In contrast, conflict with parents and/or teachers is associated with greater transition difficulties.

The paper adds to the body of evidence on the importance of social relationships in shaping school experiences and demonstrates the complex social world of school transitions.

Youth social capital and educational expectations: a secondary analysis of 13-year-olds in Ireland

Emma Chubb, TCD

Session E,

Main Conference Room

Students from disadvantaged backgrounds are consistently shown to have lower educational expectations compared to their more advantaged peers, and are less likely to expect to attain a third level qualification. Attempts to explain this are often informed by Bourdieu's forms of capital (1986) and have drawn on the impact of family background and the contextual effects of school. This has led to a disproportionate focus on top-down, structural explanations. There has been very little discussion about the role of agency for these young people and how they can influence their own educational outcomes. Using a novel measure of youth social capital, this study tested the hypothesis that higher levels of youth social capital lead to higher educational expectations for young people. This study is based on wave two of the child cohort of Growing up in Ireland. Multilevel modelling techniques were used to test the hypothesis while controlling for family characteristics and school context. Findings revealed that students who expect to attain a degree or higher had significantly higher levels of youth social capital than those with lower expectations. This study points to a previously overlooked explanation for different levels of educational expectations, and offers new insights for policy aimed at reducing social differentials in educational outcomes. It also highlights the importance of acknowledging young people as active agents, rather than passive recipients, in the accumulation of social capital.

There's (dis)engagement everywhere: person-oriented profiles of engagement with learning and school and their predictors in the age 13 child cohort

Jennifer Synonds, Chicago School of Professional Psychology, USA
Ela Polek, University of Cambridge, UK

Session E, Main Conference Room

Children's engagement with school and learning at age 13 years were examined in a three phase study. First we used multilevel modelling to uncover the individual and school level predictors of how much children liked school, were interested in learning and found learning easy. Second we identified seven main ways in which those indicators were expressed by individual children across the sample, using latent profile analysis. Third, we used multilevel modelling to identify what predicted children being in specific (dis)engagement profiles. All analyses were conducted with Mplus 7.1 and SPSS 23.0.

Across the sample, engagement with school and learning were predicted by a range of individual and school level variables, most notably individual experiences of teacher motivation and discipline. Gender had mixed effects across the engagement indicators, likewise extracurricular activities predicted engagement with school and interest in subjects but not ease of learning. Having more support staff in schools facilitated all engagement types, and students found learning easier in Irish speaking schools and schools without a religious orientation. Next, seven main engagement profiles emerged where students were either highly engaged (18.7%), had average scores (17.5%), enjoyed school but not learning (11.4%), disliked learning but had average feelings about school (16.2%), liked learning but not school (13.3%), were generally disengaged (11.4%) or hated school (10.1%). The profiles were fairly evenly distributed across different schools although each profile had interesting individual characteristics. This calls attention to the importance of individual processes in the formation of (dis)engagement.

Fetal macrosomia and early childhood obesity- findings from the Growing Up in Ireland Cohort Study

Regien Biesma, RCSI

Session F, La Touche Room

Background/ aims: Macrosomia is associated with adverse maternal and infant outcomes and increases the risk of becoming obese and developing type 2 diabetes later in life. GDM is a risk factor of macrosomia. The aim of this study is to determine the prevalence of macrosomia and GDM in Ireland and to examine the association between macrosomia, GDM and early childhood obesity.

Methods: This population-based cohort study was carried out in over 8,000 nine month old infants and their caregivers in Ireland and included 2 waves. We performed an ordered logit regression analysis to determine the association between macrosomia and childhood obesity in 3 year old children.

Results: Seventeen percent (n=1417) of the infants were macrosomic while the incidence of GDM was 3%. At the age of 3 years old, 24% (n=1971) of the children were overweight or obese. The multivariate adjusted odds ratio (OR) of childhood obesity, was 2.14 (95% CI: 1.82-2.50) in macrosomic babies and 2.59 for extreme macrosomic (95% CI: 2.02-3.32). Other significant risk factors were rapid weight gain from birth to 3 years, high gestational weight gain, maternal obesity, starting solids between 4-5 months, smoking throughout pregnancy, and paternal obesity.

Conclusion: Macrosomia, but not treated GDM, is an independent risk factor of early childhood obesity. The high incidence of macrosomia may be indicative of undiagnosed GDM in Ireland. Public health strategies targeting the period before and during pregnancy are essential for the early prevention of childhood obesity.

Classification tree analysis of diet, dental problems and obesity in 3 year old children in Ireland

Michael Crowe, Dublin Dental University Hospital

Session F, La Touche Room

Background/Aim: There is increasing interest in the relationship between obesity and dental caries and poor dietary quality is a common risk factor for both conditions. While obesity and dental caries are dietary induced health problems their aetiology is multi-factorial and the relationship between them is complex. Classification Trees have been widely used in clinical research but less so to analyse public health data. This study used classification tree analysis to explore factors related to obesity and dental problems in a cohort of Irish pre-school children.

Methods: Data were derived from the second (2010/2011) wave of the GUI infant cohort at 3 years of age, n=9,793. Classification tree methodology was used to investigate interaction of factors related to dental problems and child obesity.

Results: Classification trees were generated that separated the data into subgroups in a stepwise manner using the most significant predictor at each level. Classification tree analysis highlighted relationships between dental problems, childhood obesity, Primary Care Giver (PCG) characteristics including body mass index (BMI), socio-demographics, health related behaviours and dietary intake. Interesting interactions were noted for certain variables, including specific food group intakes and PCG characteristics.

Conclusion: Classification tree analysis is a novel way to explore the effect of multiple independent variables on the target variables of obesity and dental problems in pre-school children and can help explain their complex non-linear relationship. This is a useful exploratory data analysis tool that uses a non-parametric approach to explore survey data and shows promising potential value for future public health research.

The role of adiposity in perceived ability within Ireland's primary education system

Michelle Queally, NUI Galway

Session F, La Touche Room

The stigmatization of obese individuals is documented in the literature as having variations in the degree and nature of stigmatization related to gender.

Using the first wave of the Growing Up in Ireland Survey we examined whether a teacher's assessment of their pupil's academic ability was influenced by: the child's; the child's primary caregiver and both child and the child's primary caregiver body shape.

Multivariate regression analyses of the teacher's assessment, controlling for the child's actual test performance, its BMI and month of birth, as well as its primary caregiver's BMI, religion, marital status, equivalised household income and educational attainment were undertaken. Separate analyses examined assessments in respect of mathematics and reading and adjustments made for within school clustering effects.

Data on 6,363 children were analysed. The study found that those children whose primary caregiver is overweight or obese were more likely to be predicted to be in the average and below average quintile for maths and reading compared to those whose primary giver was leaner when other variables were controlled. Variations in predicted ability related to gender were found – females being predicted to have lower maths but higher reading ability, primary caregiver's marital status, income and education.

The study demonstrates that predicted ability is a function of factors including primary caregiver's adiposity, marital status, income and education as well as the child gender. These findings warrant close scrutiny given the potential repercussions for educational attainment in a system where teachers are involved in grading their pupils in State exams.

Changing public healthcare entitlements and the utilisation of GP services by children in Ireland

Anne Nolan, ESRI

Session G, President's Room

The current Irish system of entitlement to free public health care is unusual internationally, with the requirement for a large proportion of the population to pay the full out-of-pocket cost of general practitioner (GP) care a particular concern. A key commitment in the current Programme for Government is the introduction of free GP care at the point of use for all, and the first step, free GP care for all children under 6, has been introduced. In this paper, we use data from the first three waves of the Infant Cohort and the first two waves of the Child Cohort of Growing up in Ireland (GUI) to examine the impact of gaining and losing a medical card (i.e., entitlement to free GP care) on GP visiting levels. We use difference-in-difference propensity score matching methods, which allow us to control for pre-treatment differences in observed characteristics between treatment (e.g., gaining a medical card between waves) and control groups (e.g., remaining without entitlement to free GP care between waves). We find that those who gain a medical card increase their level of GP visiting significantly, while those who lose a medical card decrease their level of GP visiting significantly. This research has direct implications for policy, not only in highlighting the extent to which the current system of financing leads to financial barriers to accessing GP services, but also in forecasting the likely demand implications of providing free GP care to further cohorts of children in Ireland.

Family factors associated with high antibiotic use in children

Dervla Kelly, TCD

Session G, President's Room

Background: Unlike most other western countries where antibiotic prescribing has been declining, in Ireland outpatient antibiotic use is increasing, at a rate of 3% per year.

Aim: To assess parental factors in high antibiotic use (three or more per year) in children

Method: The study population consists of 9793 three year olds and their parents from the National Longitudinal Growing up in Ireland Study of Children. Antibiotic use was measured by parental recall.

Results: 18.4% of children aged 3 had three or more courses of antibiotics in the previous 12 months. After adjusting for potential confounders, higher antibiotic use was more likely if the parents perceived the child to be in poor health (adjusted OR = 21.48, 95% CI = 15.01-31.31), the number of conditions the child had (adjusted OR = 1.99, 95% CI = 1.32-3.01), if the child was attending a crèche (adjusted OR = 1.45, 95% CI = 1.29-1.63 and if the parents had decided to tolerate the symptoms to wait and see if the child got better before visiting the GP (adjusted OR = 1.4, 95% CI = 1.20-1.63). Parental anxiety was not associated with increased antibiotic use (adjusted OR = 1.01, p = 1.06).

Conclusion: Having a medical card, increasing number of health conditions, attending a crèche and perceived poor health by the parents were significantly associated with high antibiotic use in a 12-month period (p=0.001). Surprisingly, willingness of the parents to tolerate symptoms was also associated with increased antibiotic use among three year olds (p=0.001).

After-school care arrangements and their influence on children and families

Delma Byrne, Maynooth University

Session H, Main Conference Room

For some time now academics and advocates for children and families have pointed to the need for greater after-school care for school-age children (Byrne and O'Toole 2015; Barry 2011; Hennessey and Donnelly 2005). In comparative terms, Ireland is defined as a country with a high unmet demand for out-of-school services, where services are perceived to be a private rather than public responsibility, and are classified at the lower end of quality of after-school provision (Plantenga and Remery 2009, 2013). As a result, the sector has been described as fragmented, costly for working parents, a barrier for mothers who want to return to work and unregulated with regard to the formal requirements for the qualification of staff. This paper builds on the work by Byrne and O'Toole (2015) which considered the uptake and influence of non-parental out-of-school care arrangements on child wellbeing using wave 1 of the GUI Child study. The report highlighted that out-of-school care arrangements had little influence on children's reading and mathematics scores, and identified a negative association between attending a centre-based after school care setting and socio-emotional outcomes. This paper will use longitudinal data from wave 1 and wave 2 of the GUI Child study to consider the short-term effects of after-school care arrangements at age 9 on outcomes at age 13, and the impact of after-school care on family employment dynamics. Findings will contribute to current debate around childcare policy.

Non-cognitive development in early childhood: the influence of maternal employment and the mediating role of childcare

Thérèse McDonnell, UCD

Session H, Main Conference Room

This study examines the relationship between maternal employment during infancy and the non-cognitive development of pre-school children. Non-cognitive skills, such as personality traits, character, goals, motivations and preferences, are at least as important as cognitive skills for personal development and later labour market success.

Drawing on recent advances in the economics literature on the theory of skill formation, this study uses data on Irish pre-school children (Growing Up in Ireland, Infant Cohort) to examine the influence of maternal employment in early childhood on non-cognitive skills. Propensity score matching addresses the issue of potential selection bias and mediation analysis is used to investigate possible mechanisms for the effect of maternal employment, in particular the role of childcare, parental stress, quality of parent-child attachment and income.

Full-time maternal employment in early childhood has a significant and detrimental effect on the non-cognitive development of pre-school children from less advantaged backgrounds, as measured by maternal education. This effect is primarily mediated by childcare choice, such that many children in informal childcare at 9 months old, particularly unpaid grandparental arrangements, are more likely to have behavioural difficulties, as defined by the Strengths and Difficulties (SDQ) score, at 3 years old. While parent-child attachment has a modest role in this effect, income and parental stress do not explain the effect of maternal employment for these children. When selection on observables is used to assess bias arising from selection on unobservables, maternal employment estimates are determined to be a lower bound.

The association between infant temperament and the breastfeeding duration in 9-month old Irish infants

Cristina Taut, TCD

Session I, La Touche Room

Little is known about the mutual influences between infant temperament and breastfeeding. Mixed results were previously reported. Some suggest that breastfed babies are “easier”, and that difficult babies are breastfed for shorter duration, others report opposing results or no association.

This study investigated possible associations between infant difficult temperament and breastfeeding duration in a nationally representative cohort of Irish 9 month-old infants (Growing Up in Ireland Study).

Only breastfed, normal birth weight singletons were considered (n=5,955). The Infant Characteristics Questionnaire, completed by the mothers, was used to assess four different dimensions of difficult temperament: fussy/difficult, unpredictable, unadaptable and dull. Our main interest was the fussy/difficult dimension as this is best captured by the ICQ. We initially constructed a logistic regression (LR) model having the binary version: short (<90 days) or long breastfeeding (≥90 days) as outcome and then we developed a proportional odds logistic regression (POLR) model having the five-level categorical version (≤1week, 2weeks-<1month, 1-<3months, 3-<6months, and ≥6months) of breastfeeding duration as outcome, for increased granularity.

All regression models were adjusted for relevant socio-demographic data.

3,341 infants were breastfed for less than 90 days while 2,885 were breastfed for 90 days or longer. The LR and POLR models showed that infant fussiness/difficultness is inversely associated with breastfeeding duration (LR: OR=0.98, 95%CI:0.97-0.99, POLR respectively: OR=0.98, 95%CI:0.97-0.99). Higher infant unpredictability is associated with longer breastfeeding duration (LR: OR=1.04, 95%CI: 1.02- 1.07, POLR respectively: OR=1.04, 95%CI: 1.02-1.06).

Breastfeeding duration is inversely associated with infant fussiness and positively associated with infant unpredictability.

The impact of breastfeeding on children’s cognitive and non-cognitive development: One step closer to addressing the notion of causality

Lisa-Christine Girard, UCD

Session I, La Touche Room

Background: Despite recommendations for exclusive breastfeeding during the first six months and non-exclusive breastfeeding in the first two years, put forth by the WHO and the Department of Health and Children in Ireland for babies overall health and development, there is still large debate as to whether or not breastfeeding is causally related to infants’ cognitive development. Further, little is known about potential impacts on language and behaviour problems. **Aims/Methods:** We examine the impact of breastfeeding on children's cognitive (Ages and Stages Questionnaire), language (British Abilities Scale), and behavioural development (Strengths and Difficulties Questionnaire) during the first three years of life. This study uses data from the infant cohort of GUI (nine months and three years of age). **Statistical Plan:** Through the use of propensity score matching (PSM), this study matches mothers who breastfed and those who did not, mimicking random assignment, on 13 covariates found to impact upon both breastfeeding choices and children’s development. Multinomial logistic regression will then test the impact of breastfeeding on child outcomes. The expected contributions in using PSM techniques are to progress towards a better understanding surrounding the notion of causality. Results will be discussed from a programming perspective with recommendations put forth corresponding to the results found.



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