



**Growing Up**  
**in Ireland**  
National Longitudinal  
Study of Children

# Growing Up in Ireland

National Longitudinal Study of Children

**3<sup>rd</sup> ANNUAL RESEARCH CONFERENCE**

**Book of Abstracts**





# Paper presentations

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## **The Early Years and Later Development: Evidence and Social Policy**

**Edward Melhuish** (University of London)

### **Keynote speaker**

Much evidence has accumulated in recent decades that the child's experience in the early years has profound consequences for later life. Many studies present a consistent picture indicating that adversity in early life, such as frequently accompanies child poverty, is linked to poor adult mental and physical health, adult mortality, anti-social and criminal behaviour, substance abuse and poor literacy and academic achievement. While much existing research relates aspects of children's environments or experiences to later development, there has been little work that is with a large enough longitudinal sample, with sufficiently detailed data, to delineate the independent long-term effects of demographics, home environments and other factors, including pre-school and school experiences. This paper contributes to the literature by presenting findings from UK longitudinal studies. It is clear from the findings that while demographics are important, particular patterns of experience, some of which are open to policy manipulation and others less so.

In this work upon the effects of early experience it is possible to distinguish two distinct approaches. One approach considers early experience of particular interventions with disadvantaged groups, while the other approach looks at natural variation within the general population. In this paper data from longitudinal studies from both of these approaches will be considered in looking at the evidence and its relevance to social policy.

Recent evidence from large-scale studies in the UK indicate how differing patterns of experience

in the early years, both in the home and outside the home can have long-term impact on children's educational and socio-emotional development. The studies considered will be involving both disadvantaged and general populations. From the studies it is clear that aspects of early experience, in particular the home learning environment and pre-school experience continue to have an impact upon children's development many years later. These studies have used measures of potential predictors including child, family, home learning environment, preschool and school factors to look at educational and social development. The studies estimated the contribution of a range of demographic factors and preschool and school factors to children's educational attainment and social development. Social class, mother's education, family income and the Home Learning Environment are powerful influences upon children's educational and social development. However, preschool, primary school and secondary school experiences are also important influences. There also appear to be interactions between the effects of some of these predictor variables. For example, preschool and primary school effects appear to interact. For example the results indicate that preschool quality is very important and can protect children from the consequences of less effective primary schools. The consequences of early years experiences for both educational and social outcomes are considered.

There is evidence from other countries in Europe, North and South America and Asia that supports the findings described in this paper. Such evidence has influenced policy and practice in the UK and elsewhere, and the potential for further policy applications is extensive. The research described in this paper illustrates the importance and relevance of longitudinal child cohort studies for policy and practice.

## **“Not too fat and not too thin”: A mixed methods analysis of the physical health and well-being of nine-year-olds**

**Brían Merriman** (Trinity College Dublin)

### **Session A, Grosvenor Suite 1**

The physical health and well-being of children, and in particular the relationship between health and physical activity, are of concern in light of the growing childhood obesity problem. Among the Child Cohort of *Growing Up in Ireland*, one quarter of nine-year-olds were overweight or obese. To further explore the issues around physical health and well-being, a sample of 120 children were interviewed using a range of qualitative, child-centred methods about things that they think are healthy and unhealthy and about their activities. The children showed a clear understanding of the need for both healthy eating and regular exercise. Levels of physical activity were higher for boys than for girls, possibly reflecting the wider availability of sport through schools as well as greater encouragement from family and friends. Children’s attitudes to overweight, obesity, and thinness were also explored and likewise illustrated a positive understanding of being neither too fat nor too thin. Overall, the influences of peers, parents, and school, as well as wider social and cultural forces, were evident in how children talked about their health and well-being. These results have implications for the future direction of policy in tackling childhood obesity and for addressing children’s health and well-being in general.

## **Multigrade teaching: the influence on academic and social outcomes**

**Amanda Quail** (ESRI), **Emer Smyth**, (ESRI)

### **Session B, Grosvenor Suite 1**

A third of nine year old children in Ireland are taught in multigrade settings, that is, they are taught in classes with students from other year groups. Although multigrade classes are such an important feature of the Irish primary school landscape, very little research has been conducted on the potential impact of these structures on children’s experiences and outcomes. This paper sets out to address this gap by comparing the academic and social outcomes of children in multigrade and single grade classes, controlling for gender and social background. Academic outcomes will be assessed in terms of reading and mathematics test scores while social outcomes will be assessed in terms of prosocial behaviour, popularity and friendships. The paper will go further than a simple binary comparison by investigating whether the composition of the multigrade class (especially whether the child is taught with older and/or younger children) has differential effects on child outcomes. The analysis will provide an important evidence base for policy development, feeding into the current debate on school size and potentially contributing to the design of initial and continuing education.

## **Growing Up in a One-Parent Family: The relationship between family structure and child outcomes.**

**Carmel Hannan**, (University of Limerick)  
**Brendan Halpin**, (University of Limerick)  
**Carol Coleman**, (University of Limerick)

### **Session C, Herbert Suite**

This paper employs propensity score matching and multilevel modelling to assess the differential effects of family structures on children's educational, psychological and physical development in the *Growing up in Ireland* 9 year old cohort. One-parent families are examined by reference to the distribution of the one-parent population in the GUI data over three categories: currently separated/divorced, currently widowed and those who have never been married. Initial analyses suggest that once selection bias is taken into account, differences in children's' outcomes remain evident across one-parent as opposed to two-parent families but, in most cases, the size of the differences is not as large as reported in models which do not take account of unmeasured background factors. This has important policy implications in terms of how best to promote the wellbeing of children growing up in different family types. Simple comparisons of intact and non-intact families have informed much of the debate to date in this area. The paper represents an important first step in exploiting the nature of the *Growing up in Ireland* survey to document the causal effects of loneparenthood on child wellbeing.

## **Caregiver and child weight perception versus measured BMI: Who under-estimates their weight?**

**Mark Ward** (Trinity College, Dublin)  
**Evelyn Mahon** (Trinity College, Dublin)

### **Session A, Grosvenor Suite 1**

Childhood obesity is recognised as a growing public health concern and it is estimated that over 60% of children who are overweight before puberty will be overweight in early adulthood. Therefore, effective prevention of adult obesity and its co-morbidities will require the prevention and management of childhood obesity. Many adults under-estimate their own weight so do they also under-estimate the weight status of their children? The analysis here considers differences between children's measured weight status and their perceived weight as reported by both the child and their primary care-giver.

The sample analysed was the cohort of nine-year-old children (N=8,570; response 57%) from the first wave of the GUI study. Using the guidelines proposed by the International Obesity Task Force (IOTF), children were classified as obese (7%), overweight (19%) or normal weight (75%) based on their measured BMI.

There were important differences between caregivers and children's perception of their weight status when compared to their measured weight. Only 8% of children and 16% of caregivers consider the child to be overweight or obese when the actual figure, using the IOTF BMI cut-offs, is 26%. One-in-ten (12%) of primary caregivers and 20% of children under-estimated the child's weight status. Caregivers who under-estimated their child's weight were significantly more likely to be obese themselves and have lower secondary education. They were also significantly more likely to under- estimate girls' weight than boys. This research finding has implications for public health promotion policies.

## The Gender Maths Gap and Single Sex Schooling

Aedin Doris, (NUI Maynooth)

Donal O'Neill (NUI Maynooth)

Olive Sweetman(NUI Maynooth)

### Session B, Grosvenor Suite 1

In many countries, there is a significant gender difference in maths scores. The importance of maths skills has been well documented and good maths skills are seen as essential for Ireland's development. The gender maths gap is typically particularly apparent at the top end of the distribution. Suggested reasons for this gap fall broadly into two strands: biological theories e.g. differences in innate spatial ability; and societal factors such as differences in expectations of girls and boys. Fryer and Levitt (2010) find that Middle Eastern countries have no gender gap in maths despite having a high degree of gender inequality and suggest that this may be due to the prevalence of single-sex schools in these countries. They put forward a number of reasons why single-sex schooling might reduce the gender gap in maths scores. However, they note that there has been little rigorous empirical testing of the effects of gender-segregated education due to the small numbers attending single-sex schools in many countries and the difficulty of overcoming the problem of students self selecting into school types. In this paper we use the *Growing Up in Ireland* survey to examine the effect of single-sex schooling on the gender gap in maths scores. An Irish data set is particularly useful for such a study as a sizeable proportion of students attend single-sex primary schools in Ireland and, unlike other countries, most of the single-sex primary schools are not private. As well as having a maths and reading score for each child, the GUI data set is a rich source of family background and school level variables, which allow us to control for other factors when examining the gender gap in achievement scores.

## Partnership, Parenthood and Children in Ireland: Contextualising the Analysis of GUI data

Tony Fahey, (University College Dublin)

### Session C, Herbert Suite

This presentation examines two major trends in family life in Ireland that have shaped the circumstances of children's lives – the growth of lone parenthood and the decline in family size. The presentation first highlights certain features of the patterns of partnership and parenthood that give rise to these trends, including their distribution by socio-economic status and their possible interaction with aspects of public policy. It then draws on data from the GUI nine year-old sample to assess the significance of these patterns for children's development, referring especially to cognitive and behavioural outcomes. When the influence of confounding factors is controlled for, effects related to family size, especially those connected to the child's birth order, stand out, though these effects do not all work in the same direction. The implication drawn is that while there are understandable policy reasons for focusing on the growth of lone parenthood, both researchers and policy makers need to maintain a wider perspective on the aspects of family structure that can shape children's well-being.

## Childhood obesity: Impacts of Lifestyle, Parental factors and Ethnicity: A Cross sectional Study in Ireland

Vivienne Vanni-Igbinomwanhia,  
(University College Dublin)

Ela Polek (University College Dublin)

### Session D, Grosvenor Suite 1

Childhood Obesity has reached epidemic levels and is forecasted to continue to raise leading to health related concerns. Obesity has been demonstrated to be a risk factor for several medical conditions such as cardiovascular diseases; hyperglycemia, type 2 diabetes and hypertension.

Studies consistently show that parental obesity is one of the strongest determinants of offspring obesity and there is significant correlation between the body mass index (BMI) of parents and their offspring at various ages. Identification of genetic factors related to obesity suggests that parent-child BMI association are partly due to genetic influences. Nevertheless, the rapid increase in obesity prevalence worldwide illustrates the importance of environmental over genetic factors. There are valuable studies on childhood obesity in many countries including the United States, China, and Germany. Presently, little data is available on childhood obesity in the Irish population. Previous studies have shown that along with socioeconomic status ethnicity is a significant determinant in obesity. With the recent trend in Irish demographics showing more immigration from the African and Asian countries, it becomes also vital to investigate to the role of ethnicity in childhood obesity. The primary aim of this study is to examine predictors of childhood obesity including parental predictors, compare obesity patterns among Immigrants' and Caucasian children in Ireland. This research will be carried out using data from the *Growing Up in Ireland* (GUI) study.

## Child Well-Being in Ireland and Denmark: A Comparative Analysis of data from the Growing up in Ireland Study and the Danish Longitudinal Survey of Children

Patricia Keilthy, (University College Dublin)

### Session E, Grosvenor Suite 2

The aim of paper is to compare well-being of 9 year old children in Ireland and 8 year old children in Denmark. This is within the context of growing policy emphasis on child well-being and the factors that influence it, in particular the role of family policy. In terms of family policy, Denmark and Ireland differ significantly. For example, the Irish welfare state emphasises income support as opposed to subsidised childcare services (NESC 2005). Denmark, on the other hand, actively promotes maternal employment through the provision of generous parental leave and highly subsidised universal childcare services (OECD, 2002). Given the large body of evidence suggesting that early childhood care and education and maternal employment are positively linked to child well-being and outcomes (Esping-Anderson, 2009; Waldfogel, 2002), one would expect that (a) children in Denmark would have better outcomes than children in Ireland and (b) inequalities in child well-being by socio-economic status would be narrower in Denmark than in Ireland. However, existing indicators throw some doubt on this expectation. For example, PISA scores for 15 year olds (OECD Programme for International Student Assessment) are marginally higher in Ireland than in Denmark (OECD, 2010). This paper seeks to explore these expectations by means of a detailed comparison of child well-being in Ireland and Denmark using two rich data sources that comprehensively measure children's cognitive and developmental well-being: the GUI and the DALSC.

## Births following fertility treatment within the *Growing Up in Ireland* Infant Cohort

Aisling Murray, (ESRI)

### Session F, Herbert Suite

Individuals and couples who experience difficulty conceiving have an increasing range of fertility treatments available, albeit frequently at significant cost. Although such treatments have been available in Ireland for some time, there is still relatively little information on the number and characteristics of children born using assisted reproduction techniques in this country. This paper will outline some of the issues that may be considered in relation to these types of birth in the Irish context using *Growing Up in Ireland* data including usage, health implications and relationship implications.

**Usage:** Data from the infant cohort of *Growing Up in Ireland* indicates that approximately 4% of the children in the sample were conceived after some form of fertility intervention. The first part of the paper will look in more detail at the types of treatment used including drug treatment in isolation and IVF, and the characteristics of parents who used them.

**Health:** Other studies of fertility treatment births (Allen et al, 2007; Basit et al, 2010) have pointed to an increased risk of pregnancy and birth complications that may affect the health of the baby and/or the mother which include multiple births, low birth weight and premature birth. We shall examine whether these trends are also found in the GUI data when controlling for other parent characteristics, as well as the overall health status of infants.

**Relationships:** While the birth of a child is likely to be a major event for any couple, is it perceived any differently when the child has been conceived with the assistance of a fertility treatment? Some European research (Golombok et al, 1996) suggests that mothers of infants born

after fertility treatment report more positively on their relationship with the child, and with their partners (Golombok et al, 1995).

Overall, this paper will provide an overview of an increasingly-relevant but under-researched issue relating to Irish family life.

## Weight, Body image and Bullying in nine-year-olds

Udo Reulbach, (Royal College of Surgeons)

Emma Ladewig, (Trinity College Dublin)

Elizabeth Nixon, (Trinity College Dublin)

Mona O' Moore, (Trinity College Dublin)

James Williams, (ESRI)

Tom O' Dowd, (Trinity College Dublin)

### Session D, Grosvenor Suite 1

**Introduction:** Childhood obesity is a major personal, family and public health challenge. The prevalence of overweight and obesity in children has increased dramatically throughout Europe in the past two decades. An association between overweight and obesity and bullying has been found among children and adolescents.

**Methods:** This study is based on the first wave of data collection from *Growing Up in Ireland* - the National Longitudinal Study of Children. Analysis was based on statistically reweighted data to ensure it was representative of all nine-year-olds in Ireland.

**Results:** Children with an abnormal body weight had a significantly ( $p < 0.001$ ) higher rate of an ongoing illness, with a higher prevalence rate in boys than girls. This gender gap widened with increasing body weight. Children who were BMI classified as overweight or obese were significantly ( $p < 0.001$ ) more likely to be victimised when compared to children not BMI classified as overweight or obese (43.3% versus 39.0%). Children who described their body image as a bit or very overweight were also significantly more likely to be victimised than those with the right size (49.8% vs 39.0%). Objectively measured thinness was not significantly associated with



victimisation, however the body image of being skinny or very skinny was significantly ( $p=0.015$ ) associated with victimisation.

**Discussion:** Interestingly, overall body image (for both underweight and overweight children) was found to have a stronger association with victimisation and bullying than objective BMI derived weight classification. Further research investigating the mediating role of body image in the relationship between weight, victimisation and bullying is necessary to better understand this association.

## Developing an Index of Well-Being for Nine-Year-Old Irish Children

**Carly Cheevers, (University College Dublin)**  
**Mick O'Connell, (University College Dublin)**

### Session E, Grosvenor Suite 2

This paper outlines the development of an index of child well-being using data from the first wave of the Child Cohort in the *Growing up in Ireland* study. This national longitudinal study explores children's lives by collecting data from 8568 nine-year-old children, their caregivers and their teachers. Well-being indices are useful to describe children's circumstances, to monitor child outcomes, and to create and assess the efficacy of social policies involving children. Traditionally, macro-level data has been used in the construction of child well-being indices. However, micro-level data is used in this paper to provide a child-centered perspective on their well-being. This index is comprised of three domains; physical health, social & emotional functioning and cognitive ability. Sixteen measures were used in the creation of these domains utilising data from children, caregivers and teachers on the child's current development. The domain content, protocol followed and confirmatory process used in creating this index are discussed. Evidence is provided supporting the inclusion of the domains and the factorial structure of the index. A child well-being index of this sort is valuable as it manages to efficiently

summarize the richness of information provided by multiple informants on the multidimensional nature of child well-being into a single index. Consequently, it can be easily used and understood by the various stakeholders involved in services related to child welfare.

## Determinants of Periconceptional Folic Acid Supplementation in Ireland: Findings from the Infant Cohort of Growing Up in Ireland.

**Sinéad McNally, (Trinity College Dublin)**  
**Ashling Bourke, (Trinity College Dublin)**  
**Cathal McCrory, (ESRI)**

### Session F, Herbert Suite

Neural tube defects (NTDs) are a serious and common type of birth defect, encompassing a broad range of congenital spine and spinal cord defects (Kaufman, 2004). Up to 70% of NTDs can be prevented by taking folate in its synthetic form, folic acid, before conception and in the first 28 days of pregnancy (Watkins, 1998; Czeizel and Dudas, 1992). Ireland has one of the highest incidences of NTDs and has adopted a supplementation policy to increase folic acid intake among women of childbearing age.

Given the importance of folic acid supplementation for women in Ireland, this study presents findings on rates and predictors of folic acid supplementation in the peri-conceptional period using data from the infant cohort of *Growing Up in Ireland*. Sixty-four percent of mothers reported taking folic acid supplements before conception and 93% of mothers reported taking folic acid during the first trimester of pregnancy. Multinomial logistic regression analyses were performed to measure associations between maternal characteristics and adequate supplementation practice. Pregnancy intention, socio-economic factors, ethnicity, and maternal health behaviours predicted supplementation practices and these will be discussed with regard to potential processes underlying folic acid supplementation in Ireland.

## The impact of local food environment on the quality of children's diet

Richard Layte, (ESRI)

Seán Lyons, (ESRI)

John Cullinan, (NUI Galway)

### Session D, Grosvenor Suite 1

This paper investigates whether the density and types of shops in the local area in which a child lives has an impact on the quality of the diet that they consume using the cohort of nine year old children from the *Growing Up in Ireland* Study. There is now good evidence across a number of countries that socio-economic status is inversely related to the quality of an individual's diet and nutrition. Poorer individuals and families and those in lower social classes consume a diet that is higher in saturated fats, sugars and salts and lower in fruit and vegetables (Harrington et al 2008). There is far less consistency in the findings of research on the impact of variations in the availability of food across communities differentiated by socio-economic status and the role this may play in inequalities in diet and nutrition. Studies from the US and Canada have consistently shown that poorer communities have fewer larger supermarkets and more convenience stores and take away food outlets and that this has an impact on individual diet and nutrition. Proximity to a supermarket and indeed, number of local supermarkets, is positively associated with higher fruit and vegetable intake and better dietary quality among low income households (Rose and Richards 2004). This pattern has not been found in any country outside of the US and Canada except Ireland (Layte et al 2011).

The paper shows that more deprived geographic areas (DEDs) have less supermarkets and convenience stores than more affluent areas although the distribution of convenience stores appears more even than supermarkets. Using fixed-effect regression models and controlling for a large number of individual, household and environmental factors, the paper shows that the quality of children's diets is inversely related to

the distance from their home to both supermarkets and convenience stores. As distance increases children's diets worsen with and the size of the effect is larger than that found among adults in Ireland. However, the paper shows that the effect is significant only for girls.

Recent research for Ireland for the adult population using the Survey of Lifestyles, Attitudes and Nutrition has This interest meshes well with developments in epidemiology where researchers have examined the role of the local physical and built environment in shaping exposure to risk factors for disease and poor health.

## The well-being of migrant children in Ireland

Philip Curry, (Trinity College Dublin)

Robbie Gilligan, (Trinity College Dublin)

Mark Ward, (Trinity College Dublin)

### Session E, Grosvenor Suite 2

A long tradition of international research has shown that migration impacts on the well-being of children. Very often results have found that migrant children underperform in key areas. However this depends on national context, domains and migrant groups examined and a variety of demographic predictors such as gender and age of migration. The study of these issues in an Irish context is interesting because of the large number of different nationalities that have migrated to this country over a relatively short period of time. There are large gaps in our knowledge about migrant children living in Ireland but existing qualitative reports suggest that they are likely to differ from native Irish children in many important respects. This research uses the first wave of the nine-year-old cohort of the GUI study to produce the first nationally representative comparison of migrant and Irish children across of range of domains of child well-being. Areas of well-being examined include health / health practices, emotional and

behavioural problems, self-esteem, educational attitudes and experiences, peer relationships, bullying, after school care and leisure activities. To date policy in relation to migrant children in Ireland has focused on the issues of language provision and inter-cultural education. It is hoped that this research will help to broaden the debate about the well-being of migrant children to recognise the importance of issues to do with peer relationships, physical and mental health and out-of-school activities.

## **Is Friendship Associated with Happiness Amongst Children with Autism?**

**Laura Mangan, (Trinity College Dublin)**  
**Lorraine Swords, (Trinity College Dublin)**

### **Session F, Herbert Suite**

This study investigated the relationship between friendship and happiness amongst children with Autistic Spectrum Disorder (ASD). Scores from the *Growing Up in Ireland* 9-year-old cohort on the Happiness/Satisfaction and Popularity subscales of the Piers-Harris Children's Self Concept Scale were analysed. A significant positive correlation was noted between reported happiness and popularity in the ASD sample (n=39). Subsequently, semi-structured interviews were conducted with another sample of ASD children (n=10; all boys; age-range 7 to 13 years) recruited through mainstream schools and schools specifically for children with autism. The transcripts were subjected to Thematic Analysis which yielded four overarching themes; 'Friends as Positive People', 'Reciprocity', 'Friends as a Solution to Loneliness' and 'Friends Make me Happy'. Both sets of findings, based on children's self-reports, indicate that friendship is associated with happiness amongst ASD children.

## **Well-being and the Family System: A Structural Equation Model of Relational and Contextual Influences**

**Jonathan Pratschke,**  
(Department of Economics and Statistics)  
**Trutz Haase, (Social & Economic Consultant)**  
**Kieran McKeown,**  
(Social & Economic Research Consultant)

### **Session G, Grosvenor Suite 1**

In this paper, we will study the determinants of parental and child well-being within the context of the "family system". We will argue that well-being should be viewed as a complex higher-order concept that must be "positioned" along a spectrum that extends from the individual to the neighbourhood context (and beyond). We propose to use GUI data from nine-year-olds, their caregivers and teachers to construct a statistical model of the family system using Structural Equation Modelling (SEM) techniques. As well as developing a multi-dimensional measurement model of parental and child well-being, we will explore the influence of a range of risk and protective factors, including personality attributes, support networks, family structure, social class position, neighbourhood problems and local services. At the core of our model is the relationship between the well-being of parents and their children. The importance of this relationship derives from the ways in which parents mediate the effects of contextual influences on children's well-being. We will demonstrate the usefulness of SEM in controlling for measurement error and testing complex hypotheses. For example, by integrating multi-dimensional measures of parental and child well-being within a single model, together with a wide range of potential risk factors, we can obtain precise estimates of the distinct contribution of each of these factors to children's well-being, both directly and indirectly. The ultimate focus of the research is to facilitate improvements in family well-being via effective intervention strategies and to provide insights into the issues raised by such interventions.

## Subjective child well-being in vulnerable families

Collette McAuley, (University College Dublin)  
Richard Layte, (ESRI)

### Session H, Grosvenor Suite 2

In Ireland, both the legislative framework for child protection services and social care services for families and children on the ground are relatively under-developed. In Northern Ireland and Great Britain the development of the 'Integrated Children's System' (Department of Health 2000) and the 'Framework for Assessment of Children in Need' (UK Government 2001) contribute to a proactive system of childcare with defined standards for child and family vulnerability and graduated care responses. In the Republic of Ireland on the other hand there is no established data on the number of 'vulnerable' families that would benefit from intervention to improve outcomes for children.

This paper investigates whether a group of vulnerable families can be identified among the children and families of the child cohort of the *Growing Up in Ireland* study (the cohort of 9 year old children), the characteristics of this vulnerable group and the extent to which family vulnerability is reflected in the subjective happiness of the child.

Although there is no internationally agreed definition of a 'vulnerable' family studies commonly identify maternal mental health and coping ability, poor child development and delinquency as core risk factors. To explore family vulnerability, five domains were identified as important risk factors: maternal depression, maternal parental self-efficacy, conflict between mother and child, family social isolation, child emotional and behavioural problems and family difficulty in making ends meet. Latent class analysis identified four clusters of families with different combinations of risk factors. One of

these clusters of families, around 18% of the sample, scored worst on five of the size dimensions of vulnerability. This 'vulnerable' group were socio-economically disadvantaged but were not the most disadvantaged of the clusters in terms of income, maternal education and social class position. However, this grouping had a higher proportion of single parents and the highest levels of lifestyle deprivation. Using the child's responses to the Piers Harris self-concept scale it was found that the children of the group identified as vulnerable had significantly lower mean scores on both the total score and happiness subscale. The vulnerable class were twice as likely than the average family to have seen a non-medical professional in the last year but only 15% had done so.

The paper shows that 18% of families within the *Growing Up in Ireland* sample can be defined as vulnerable in terms of their profile of family risk factors and levels of lifestyle deprivation. This vulnerability is associated with lower levels of subjective happiness among the children and yet only a minority of these families had been in contact with non-medical social care professionals.

## Asthma, Family Structure and Health Utilisation in Infants

Dervla Kelly, (Trinity College Dublin),  
Tom O’ Dowd, (Trinity College Dublin),  
Udo Reulbach, (Royal College of Surgeons)

### Session I, Herbert Suite

**Introduction:** Asthma and respiratory illness rates vary worldwide, predominantly due to gene-environment interaction. It is thought some aspects of the Western way of life, including declining family size may in part contribute to the increased prevalence of atopic diseases.

**Methods:** The study population of the *Growing Up in Ireland* was randomly selected from the Child Benefit Register in the Republic of Ireland. Data collection of the first wave of the infant cohort (11,100 nine-month-olds) consisted of interviewer administered questionnaires with parents in their home. Analysis was based on statistically reweighted data to ensure it was representative of all nine-month-olds in Ireland.

**Results:** Lone parenthood and increased sibling number were positively associated with visits to a health practitioner due to asthma or wheezing (one parent, one child (< 18 years): 10.9%; two and more children: 15.3%; two parents, one child: 5.8%; two children: 9.6%;  $p < 0.001$ ). In a multivariate logistic regression (adjusted for socioeconomic factors related to the primary caregiver and the household), infants in a lone parenthood had an odds ratio (OR) of 1.39 (95% CI: 1.12-1.72;  $p < 0.003$ ) of being seen due to asthma or wheezing when compared to infants with both parents. An OR of 1.27 (95% CI: 1.18-1.37;  $p < 0.001$ ) for asthma health utilisation was associated with each additional sibling.

**Discussion:** These findings do not support the ‘hygiene’ theory that increased exposure to allergens by for example having more siblings may reduce sensitivity to allergens. It indicates that reduced household resources due to increased family size may impact negatively on the respiratory health of infants.

## Household and individual characteristics predicting violent conflict within couples in Ireland

Ela Polek, (University College Dublin)

### Session G, Grosvenor Suite 1

In this study we explore correlates and predictors of violent conflict within couples. Previous research has demonstrated that violence within couples is related to deleterious outcomes among children and low psychological well-being of partners. This study uses the data from parents of 9-years old children (N=7576) surveyed in the study *Growing up in Ireland*. Partners’ violent conflict is measured with a subscale of the Dyadic Adjustment Scale including questions “How often do you: Throw something at each other; Push or slap each other”. We investigate correlations between this measure and other variables: couple status (married vs. cohabitating), partners’ education, household income, a woman occupational status, a father time spent with a study child, perceived fairness of distribution of household duties, work-home balance, housing conditions, number of children, behavioural problems with a study child, partners’ alcohol use and depression. Exploratory examination is followed by more focused analysis, in which we test statistical models of interactions between household characteristics (e.g. household income, housing conditions, number of children) and individual characteristics (e.g. educations of partners, partners’ perception of fairness of the distribution of household duties). Policy-informed conclusions will be drawn with a particular focus on risk and preventive factors of violent conflict within couples.

## Child Poverty and Its Correlates Among Children

Christopher T. Whelan,  
(University College Dublin)  
James Williams, (ESRI)

### Session H, Grosvenor Suite 2

The socio-economic circumstances of a family are a major determinant of a child's development – intellectual, health and socioemotional/behavioural. Accordingly, the importance of identifying the extent and correlates of deprivation and poverty among children cannot be over-emphasised.

This paper addresses two main questions: can we identify a set of socio-demo-graphic factors which significantly increase the risk of child living in poverty; and does being in a state of poverty have an impact on selected child outcomes.

*Growing Up in Ireland* is well placed to generate measures of financial stress and material deprivation as well as relative income and consistent poverty. These latter measures have recently been developed and applied extensively in Ireland using data from the EU-SILC survey<sup>1</sup>.

The first part of the paper examines the prevalence and demographic correlates of financial strain, poverty and deprivation among families participating in the Growing up in Ireland study. In the second part of the paper we provide a preliminary analysis of the impact of poverty on selected child outcomes, drawing on measures from the 9 year and 9 month cohorts.

By identifying socio-demographic characteristics associated with an increased risk of poverty and deprivation it is hoped that the results of the paper will help to inform intervention policies and the targeting of resources at the factors related to child poverty in Ireland.

## The Association between Breastfeeding and Respiratory Illness in Nine-Month-Olds

Emma Ladewig, (Trinity College Dublin),  
Tom O' Dowd, (Trinity College Dublin),  
Udo Reulbach, (Royal College of Surgeons)

### Session I, Herbert Suite

**Introduction:** Respiratory illness is a major health concern for children worldwide and is one of the leading causes of morbidity and mortality in children under five years old. Breastfeeding has been well established as the optimal form of nutrition for infants, with breastfed infants less prone to a variety of infections.

**Methods:** The study population of *Growing Up in Ireland* - the National Longitudinal Study of Children was randomly selected from a representative sample of 11,100 nine month old infants from the Child Benefit Register. Data collection consisted of questionnaires completed with parents in their home. Analysis was based on statistically reweighted data.

**Results:** Infants who had ever been breastfed were significantly less likely to have been diagnosed with a respiratory illness (3.2% vs. 5.2%;  $p < 0.001$ ), or taken to a health professional for asthma or wheezing (7.1% vs. 11.2%;  $p < 0.001$ ), or due to a chest infection (28.9% vs. 36.2%;  $p < 0.001$ ) than those never breastfed. This association remained significant for children who had never been breastfed in logistic regression models which were adjusted for social inequalities and maternal risk factors: The odds ratio (ORs) for being diagnosed with a respiratory illness was 1.36 (95% CI: 1.08 – 1.70;  $p = 0.008$ ), for being seen due to asthma or wheezing it was 1.23 (95% CI: 1.06 – 1.42;  $p = 0.007$ ) and for chest infection 1.15 (95% CI: 1.05 – 1.27;  $p = 0.003$ ).

**Discussion:** These findings indicate that breastfeeding is an important protective factor against respiratory illness in Irish infants. More research is needed to determine if initiation of breastfeeding may be sufficient to provide such a protective effect.

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<sup>1</sup> For a discussion of the development of the measures in question see, for example, Maitre B, B. Nolan and C. Whelan, 2006.

## Family settings and children's adjustment: Differential adjustment across families of nine-year-olds in Ireland

Maeve Thornton, (ESRI)

Elizabeth Nixon, (Trinity College Dublin)

### Session G, Grosvenor Suite 1

To examine the sources of variation in children's behavioural and emotional problems across diverse family settings, exploring how different family processes and structures impact on outcomes for the child.

**Background:** The family environment represents a highly significant context for children's development and well-being. A range of factors such as the quality of family relationships, parental depression and parenting style all play an important role in children's development. These factors are no longer seen as discrete entities but rather as being affected by and affecting each other. The structure of the family has also changed dramatically in recent years and research on family structure effects has pointed to the complex interplay between family structure and family processes and their contribution to children's development. It is important therefore to explore the complex mechanisms involved in children's adjustment and coping in the context of various family settings, including those that are associated with risk.

**Method:** Data from the first wave of the 9-year cohort of the *Growing Up in Ireland* will be used to examine the link between different family processes and structures and emotional and behavioural outcomes in children using the Strengths and Difficulties Questionnaire. A series of Regression models will be presented in an attempt to unpack the influences of family structure, family processes and socioeconomic factors on children's social and emotional outcomes.

## Contrasting approaches to the measurement of children's deprivation

Sheila Greene, (Trinity College Dublin)

Lorraine Swords, (Trinity College Dublin)

Dorothy Watson, (ESRI)

### Session H, Grosvenor Suite 2

The measurement of childhood deprivation is conditioned by the context in which it is located (poverty research; research on children's lives; research on social class inequalities, and so on.). What is considered a 'good measure' will depend on the priorities of the research programme in question (e.g. prevalence deprivation among children, elaborating the nature of their experience, pointing towards policy solutions). The approaches may also differ in their emphasis on how data should be collected.

In this paper, we will discuss three different pieces of research which address the issue of deprivation in middle childhood: the EU Survey of Income and Living Conditions (EU-SILC, 2007, 2009 and 2009), the Growing up in Ireland Survey (2007-2008) and the TCD Children's Research Centre study of children's experiences of deprivation (2010). The key results of the three surveys are outlined and compared. Although each of the surveys adopted a different approach, examination of their findings raises a range of questions about childhood deprivation, its measurement and the complex processes and dynamics that may lie under the statistics. We conclude by asking what each research area can learn from the others.

# Prenatal Smoking and Childhood Behavioural Problems: A Quasi-Experimental Approach

Cathal Mc Crory, (ESRI)

Richard Layte, (ESRI)

## Session I, Herbert Suite

This retrospective cross-sectional paper examines the relationship between maternal prenatal smoking and children's behavioural problems at nine years of age independent of a wide range of possible confounders. Methods: The final sample comprised 7,502 nine-year-old school children participating in the first wave of the *Growing Up in Ireland* study. The children were selected through the Irish national school system using a 2-stage sampling method and were representative of the nine-year population. Information on maternal smoking in pregnancy was obtained retrospectively at nine years of age via parental recall and children's behavioural problems were assessed using the Strengths and Difficulties Questionnaire (SDQ). A quasi-experimental approach using propensity score matching was used to create treatment (smoking) and control (non-smoking) groups which did not differ significantly in their propensity to smoke in terms of sixteen observed characteristics. In unmatched analyses children whose mothers smoked during pregnancy were 2.04 times more likely to score above the 90th percentile on the SDQ total difficulties index compared with those who did not smoke (15.3% v 7.5%,  $P < 0.001$ ). After matching on the propensity score, the treatment group were 1.3 times as likely (15.1% v 11.6%) but the difference remains highly significant ( $P < 0.01$ ). Analysis of the dose-response relationship showed that the differential between matched treatment and control groups increased with level of maternal smoking.





If you would like further information about *Growing Up in Ireland*

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