

Growing Up in Ireland

National Longitudinal Study of Children

CHILD COHORT

**Design, Instrumentation and Procedures for
the Child Cohort at Wave Two (13 Years)**

Growing Up in Ireland

National Longitudinal Study of Children

Design, Instrumentation and Procedures for the Child Cohort at Wave Two (13 Years)

**Maeve Thornton, James Williams, Cathal McCrory,
Aisling Murray and Amanda Quail**

Name	Title	Institution
Maeve Thornton	Research Fellow	ESRI
James Williams	Research Professor and Principal Investigator, Growing Up in Ireland	ESRI
Cathal McCrory	Research Associate	TCD/ESRI
Aisling Murray	Research Fellow	ESRI
Amanda Quail	Research Fellow	ESRI

The views expressed in this report are those of the authors and do not necessarily reflect the views of the funders or of either of the two institutions involved in preparing the report.



Copyright © Minister for Children and Youth Affairs, 2016

Department of Children and Youth Affairs
43-49 Mespil Road
Dublin 4
Tel: +353 (0)1 647 3000
Fax: +353 (0)1 674 3101
E-mail: contact@dcya.ie
Web: www.dcya.gov.ie

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission in writing of the copyright holder.

For rights of translation or reproduction, applications should be made to the Head of Communications, Department of Children and Youth Affairs, 43-49 Mespil Road, Dublin 4, Ireland.



Table of Contents

CHAPTER 1: INTRODUCTION	8
1.1 Introduction	8
1.2 Background and objectives	8
1.3 Conceptual framework	9
1.3.1 Summary of conceptual framework	9
1.3.2 From conceptual framework to instrumentation for the 13-year-old	10
1.4 Structure of report	11
CHAPTER 2: SAMPLING	13
2.1 Introduction	13
2.2 Composition of the longitudinal sample	13
2.3 Tracking strategies and differential attrition	13
2.4 Response rates in Wave 2	14
2.5 Interwave attrition	15
2.6 Reweighting the data	18
CHAPTER 3: INPUT TO INSTRUMENTS	21
3.1 Introduction	21
3.2 Scientific and Policy Advisory Committee	21
3.3 Expert panels	21
3.4 Stakeholder groups	22
3.5 Other longitudinal studies	23
3.5.1 Millennium Cohort Study (MCS)	23
3.5.2 Growing Up in Australia (LSAC)	23
3.5.3 National Longitudinal Survey of Children and Youth (NLSCY)	23
3.5.4 Early Childhood Longitudinal Study (ECLS)	24
3.5.5 Avon Longitudinal Study of Parents and Children (ALSPAC)	24
3.5.6 Growing Up in Scotland (GUS)	24
3.5.7 Health Behaviour in School-aged Children (HBSC)	24
3.5.8 Living In Ireland survey	24
3.5.9 EU-Survey on Income and Living Conditions (EU-SILC)	24



CHAPTER 4: ETHICAL CONSIDERATIONS	26
4.1 Introduction	26
4.2 Relevant Acts	26
4.2.1 Data Protection Acts 1988, 2003	26
4.2.2 Statistics Act (1993)	27
4.3 Practical application of ethical considerations	27
4.3.1 Informed consent	27
4.3.2 Reporting concerns	27
4.3.3 Interviewers being alone with children	27
4.3.4 Confidentiality	28
4.3.5 Avoidance of embarrassment or distress	28
4.4 Ethics Committee	29
CHAPTER 5: OVERVIEW OF INSTRUMENTS AND PROCEDURES	31
5.1 Introduction	31
5.2 Household-based fieldwork and family participation	31
5.3 CAPI procedure	33
5.4 CASI procedure	33
5.5 Cognitive tests	34
5.6 Special procedures	34
5.6.1 Disability	34
5.6.2 Literacy	34
5.6.3 Other languages	35
5.6.4 Twins and triplets	35
5.7 Gifts to respondents	35
CHAPTER 6: PRIMARY AND SECONDARY CAREGIVER INSTRUMENTS	37
6.1 Introduction	37
6.1.1 Section A – Household Composition	37
6.1.2 Section B – Child’s health	38
6.1.3 Section C – Respondent’s Health	42
6.1.4 Section D – Child’s Emotional Health and Wellbeing	43
6.1.5 Section E – Child’s Education – Past and Current	44
6.1.6 Section F – Family Context	47
6.1.7 Section G – Sociodemographics	50
6.1.8 Section H – About You	52
6.1.9 Section J – Neighbourhood/ Community	54
6.2 Secondary Caregiver Questionnaire	54
6.2.1 Section A – Introduction	54
6.2.2 Section B – Parental health	54



6.2.3	Section C – Parenting and family context	55
6.2.4	Section D – Sociodemographics	55
6.3	Primary/Secondary Caregiver Sensitive Questionnaire	56
CHAPTER 7: CHILD INSTRUMENTS		62
7.1	Introduction	62
7.2	Child Main Questionnaire	62
7.3	Child Sensitive Questionnaire	69
7.4	Parenting Style Questionnaires	72
7.5	Self-completion time-use diary	74
CHAPTER 8: COGNITIVE TESTS		77
8.1	Measuring cognitive ability	77
8.2	Matrices sub-test	77
8.3	The Drumcondra Reasoning Test (DRT)	78
CHAPTER 9: OTHER INSTRUMENTS AND MEASURES		81
9.1	Introduction	81
9.2	Non-resident Parent Questionnaire	81
9.2.1	Introduction	81
9.3	The Principal’s Questionnaire	84
CHAPTER 10: SUMMARY		89
10.1	Summary	89
10.2	Summary of cross-wave measures	89
REFERENCES		96



APPENDICES FOR 13-YEAR INSTRUMENTATION REPORT

APPENDIX A: PARENT INFORMATION SHEET

APPENDIX B: YOUNG PERSON'S INFORMATION SHEET

APPENDIX C: PARENT'S CONSENT FORM

APPENDIX D: PARENT CONSENT FORM FOR YP SENSITIVE QUESTIONNAIRE

APPENDIX E: CHILD'S ASSENT FORM

APPENDIX F: YOUNG PERSON'S MAIN QUESTIONNAIRE

APPENDIX G: YOUNG PERSON'S SENSITIVE QUESTIONNAIRE (MALE)

APPENDIX H: YOUNG PERSON'S SENSITIVE QUESTIONNAIRE (FEMALE)

APPENDIX I: YOUNG PERSON ON MOTHER QUESTIONNAIRE

APPENDIX J: YOUNG PERSON ON FATHER QUESTIONNAIRE

APPENDIX K: YOUNG PERSON ON STEP-DAD/-MOTHER'S PARTNER QUESTIONNAIRE

APPENDIX L: DRUMCONDRA REASONING TEST (DRT)

APPENDIX M: TIME USE DIARY

APPENDIX N: PRIMARY CAREGIVER QUESTIONNAIRE

APPENDIX O: PRIMARY CAREGIVER SENSITIVE QUESTIONNAIRE

APPENDIX P: PRIMARY CAREGIVER TWIN QUESTIONNAIRE

APPENDIX Q: SECONDARY CAREGIVER QUESTIONNAIRE

APPENDIX R: SECONDARY CAREGIVER SENSITIVE QUESTIONNAIRE

APPENDIX S: SECONDARY CAREGIVER TWIN QUESTIONNAIRE

APPENDIX T: PRINCIPAL'S QUESTIONNAIRE

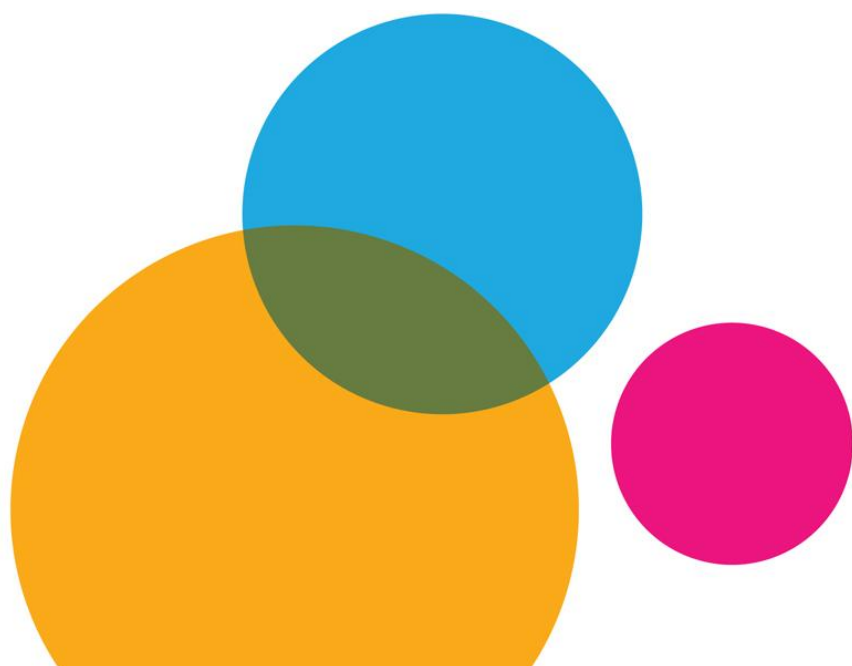
APPENDIX U: NON-RESIDENT PARENT INFORMATION LEAFLET

APPENDIX V: NON-RESIDENT PARENT QUESTIONNAIRE



Chapter 1

INTRODUCTION





CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Growing Up in Ireland – the *National Longitudinal Study of Children* is a study of the factors that contribute to or undermine the wellbeing of children in 21st century Ireland. The project involves studying two main cohorts of children with a view to improving understanding of child development across a range of domains over time.

The first cohort is based on a sample of 8,568 nine-year-olds, the second on a nationally representative sample of 11,134 nine-month-old infants and their families. The survey is longitudinal in nature; interviews for the older cohort and their parents/guardians were completed when the children were nine and 13 years of age. The first phase of interviews for this group took place between September 2007 and April 2008, while the second ran from August 2011 to March 2012. The parents of the Infant Cohort were interviewed when the child was nine months old, and subsequently when the children were three and five years old. The first phase of data collection for this cohort ran from September 2008 to April 2009, the second from January to August 2011, and the third from January to September 2013. This report focuses specifically on the Child Cohort at phase two (13-year-olds).

The report begins with a description of the background and objectives of the study, interpretation of its requirements and how these have been met by the Study Team. A brief summary of the conceptual framework underlying ***Growing Up in Ireland*** is then given and the way in which this is reflected in the instrumentation.

1.2 BACKGROUND AND OBJECTIVES

Growing Up in Ireland provides a very important input to the implementation of The National Children's Strategy, a major national plan for children, published in 2000 by the Department of Health and Children. The principal objective of the study is to provide evidence-based research addressing the development of children and their wellbeing as they grow and the determinants that positively and negatively affect different developmental trajectories. This information will be used for policy formation and the design and delivery of services for children and their families.

Growing Up in Ireland is a key element in the National Children's Strategy, especially with regard to its second goal, which notes: "Children will be better understood; their lives will benefit from evaluation, research and information on their needs, rights and the effectiveness of services."

Growing Up in Ireland has been commissioned by the Irish Government. It is funded by the Department of Children and Youth Affairs through the Office of the Minister for Children (OMC), in association with the Department of Social Protection and the Central Statistics Office. Work on the project began in April 2006 by a research consortium led by the Economic and Social Research Institute (ESRI) and Trinity College, Dublin (TCD).

Growing Up in Ireland is designed to describe and analyse what it means to be a child in Ireland today and to understand the factors associated with children's wellbeing, including those affecting three major developmental outcomes: their physical health and development, their social, emotional and behavioural wellbeing, and their educational achievements and cognitive development. While children's current wellbeing is of immense importance, researchers are also cognisant of the future outcomes for the child as they develop into young adults. The longitudinal nature of the project facilitates the recording of current data with a view to using them to assist in understanding future outcomes. By gathering comprehensive data on childhood development, the survey will provide comprehensive data for applied research, which will in turn provide

evidentiary basis for policy formation across all aspects of children’s development – currently and into the future.

The study has nine over-arching objectives.¹ These are:

1. Describe the lives of Irish children; establish what is typical and normal as well as what is atypical and problematic
2. Chart the development of Irish children over time; examine the progress and wellbeing of children at critical periods from birth to adulthood
3. Identify the key factors that, independently of others, most help or hinder children’s development
4. Establish the effects of early child experiences on later life
5. Map dimensions of variation in children’s lives
6. Identify the persistent adverse effects that lead to social disadvantage and exclusion, educational difficulties, ill health and deprivation
7. Obtain children’s views and opinions on their lives
8. Provide a bank of data on the whole child
9. Provide evidence for the creation of effective and responsive policies and services for children and families

The primary focus with regard to the Child Cohort is on retrospective data, principally recorded from the child’s parents/guardians.

1.3 CONCEPTUAL FRAMEWORK

1.3.1 SUMMARY OF CONCEPTUAL FRAMEWORK²

The project adopted a dynamic systems perspective founded on five insights from different disciplines: (i) ecology, (ii) dynamic connectedness, (iii) probabilism, (iv) period effects, and (v) the active role or agency of the child in the developmental process. The bioecological model of Urie Bronfenbrenner (Bronfenbrenner 1979; Bronfenbrenner & Morris, 2006) is a key tool in creating this perspective.

As *Growing Up in Ireland* is a child-focused study, the child is central to the model. The child’s relationships operate both within and outside the household – in the school, indirectly through parents interactions with the workplace, and in the wider community. As discussed in detail in *Growing Up in Ireland* Literature Review Series, Paper No. 1, Bronfenbrenner illustrates the intimate relationship between the *microsystem*, the face-to-face interactions which the child experiences, and the *mesosystem*, which encompasses the links between the different actors in the micro-system, i.e. the relationship between parents, between home and school, and between close family and extended kin.

Outside the mesosystem in Bronfenbrenner’s model sits the *exosystem*. This comprises the structures, institutions and settings that, whilst not in direct contact with the child, exert an important influence upon his/her quality of life and outcomes. Examples of determinants within the exosystem would be Departments of

¹ Request for Tenders (RFTs) for Proposals to Undertake a National Longitudinal Study of Children in the Republic of Ireland, issued by the National Children’s Office of the Department of Health and Children and the Department of Social and Family Affairs, December 2005, p.20.

² A detailed discussion of the conceptual framework used in the study is the subject of *the Growing Up in Ireland* Literature Review Series, Paper No.1.

State and the public policies that have an important impact on child wellbeing in areas such as education, health and welfare. The last ring of Bronfenbrenner’s schema is the *macrosystem*, which consists of the culture-specific ideologies, attitudes and beliefs that shape the society’s structures and practices. Together, these different levels provide a taxonomy of factors that may influence the experiences and wellbeing of a child as he/she develops from birth to adulthood.

Table 1.1: Examples of *Growing Up in Ireland* variables in each layer of the bioecological model

Layer	Example variables (and section numbers)
<i>Child</i>	Gender (6.1.1); Health (6.1.2); Personality (6.1.4); Emotional, social and behavioural developmental outcomes (6.1.4); Ethnicity (6.1.8)
<i>Microsystem</i>	Size of household (6.1.1); Family structure (6.1.1); Parental health (6.1.3); Parent-child relationship (6.1.6); Parental education (6.1.8); Parental lifestyle (6.3); Parental stress (6.3); Parent marital relationship (6.3)
<i>Mesosystem</i>	Time spent with relatives (6.1.6); Work-family balance (6.1.6); Parental occupation (6.1.7); Parental involvement with community (6.1.9); Home-school relationships (6.1.5).
<i>Exosystem</i>	Access to healthcare (6.1.2); School type, size, ethos (6.1.5); Social welfare support (6.1.7)
<i>Macrosystem</i>	Citizenship/nationality (6.1.8); Socio-historical setting of current policies, service system, place of migrants in society, etc

1.3.2 FROM CONCEPTUAL FRAMEWORK TO INSTRUMENTATION FOR THE 13-YEAR-OLD

The project has been designed to record details about the array of factors that have been previously identified or hypothesised as having an influence on the child’s developmental outcomes in all spheres of his/her life. This instrumentation report examines the factors that are important at age 13, and those that diminish in importance after the earlier years. As noted by Sanson et al (2005), “an outcome is an attribute of the child at a particular point in time” (p.5). Outcomes will generally be influenced by a range of inputs, a few of the more important of which include parenting, education and health services. The outcomes at age 13 are indicative of the transition from childhood to adolescence. Furthermore, children’s own attributes will also act as influences on later outcomes. The child with positive behaviours and temperament may elicit a very different parenting style than those with more negative ones. This, in turn, will affect subsequent outcomes. As outlined in *Growing Up in Ireland* Literature Review Series Paper No. 1 (Background and Conceptual Framework), the child outcomes focused on in *Growing Up in Ireland* are:

- Physical health and development
- Social/emotional/behavioural wellbeing
- Cognitive outcomes and school/academic achievement

The individual child is clearly the key participant in *Growing Up in Ireland*. While parents/guardians were interviewed about the child and family, the children were also interviewed when able to speak for themselves. As with previous waves, *Growing Up in Ireland* also gathered information directly from non-resident parents (where appropriate).

The broad range of information gathered in the study reflects the acknowledged importance of the proximal and distal contexts in the child’s life. Information has been gathered about the child’s health, development, activities, family relationships, temperament, access to service and opportunities, and the local area. Information was also gathered about parental health, education and ethnicity, thus facilitating consideration of the influence of parental characteristics and behaviour on the child’s development. Collecting data on significant events in the child’s life, and the longitudinal aspect of the study, will contribute to research on individual pathways and trajectories. The geocoding of children’s homes will allow researchers and others to look at the impact of various environmental conditions on child outcomes in the future.

1.4 STRUCTURE OF REPORT

The main objectives of this report are to:

- Outline the sample design and explain the procedures for respondent selection with reference to procedures at Wave 1
- Describe the broad outline of how the instruments were developed, drawing on the previous wave, and including a discussion of the main inputs to the 13-year instrumentation from the Scientific and Policy Advisory Committee, the Children’s Advisory Forum, and the Panels of Experts being coordinated by the Study Team
- Discuss the ethical review procedures for the study
- Describe fieldwork procedures
- Provide a detailed breakdown of the main instruments used at all levels of the study, including the broad domains of interest, specific variables of interest, and information on scales used in the study, along with a rationale for the use of each
- Present, in the appendices, the various instruments and related documents used in the study (appendices are bound separately in an accompanying document)
- Continue to provide information against which change and stability in subsequent rounds of the survey may be measured

To this end, the report has nine subsequent chapters:

- Chapter 2 summarises the sample design and sampling.
- Chapter 3 outlines the inputs to the instrumentation from various advisory groups and other stakeholders.
- Chapter 4 looks at ethical considerations, in particular the ethical review procedure.
- In Chapter 5 a broad overview of the various levels of instruments and questionnaires used in the survey aspect of Wave 2 of the Child Cohort (at 13 years) is presented.

Subsequent chapters are divided into the main areas and units of data capture:

- Chapter 6 details the instruments used in the household with the Primary and Secondary Caregivers.
- Chapter 7 summarises the child instruments.
- Chapter 8 describes the reasoning and cognitive tests administered to the child.
- Chapter 9 looks at the other instruments and measures used in the study, including the questionnaire sent to non-resident parents, the direct measurement of height and weight, and measurement of the GPS coordinates of respondents’ households.
- Finally, a summary chapter is presented in Chapter 10.



Chapter 2

SAMPLING





CHAPTER 2: SAMPLING

2.1 INTRODUCTION

This chapter outlines the methodology and sample design for Wave 2 of the Child Cohort. Consideration is given to the composition of the longitudinal sample, followed by discussion of the levels of inter-wave attrition and methods used to mitigate it. Procedures for reweighting the data are discussed in Section 2.6

2.2 COMPOSITION OF THE LONGITUDINAL SAMPLE

Growing Up in Ireland is a longitudinal study based on the same set of children and their families, who are being interviewed over time. Children (with their families) were selected when they were nine years old, through the national primary school system, for inclusion in the Wave 1 sample. The Wave 2 target sample included all 8,568 Study Children who had participated in the first round of interviewing. The Study Child is the longitudinal focus. The study is concerned with the tracking, interviewing, measuring and testing of the children in the original sample, regardless of changes in the child's family composition, structure, location, etc. In this respect, the study is based on a fixed panel of children who were nine years of age at the time of first interview. After the initial sample selection, no additions were made to the sample, with the only exits being through interwave non-response or attrition (including moving outside the jurisdiction) or death of the Study Child.

2.3 TRACKING STRATEGIES AND DIFFERENTIAL ATTRITION

Non-response in sample surveys is clearly undesirable. This is all the more so where it is non-random and is concentrated in sub-groups of the target sample. Sample attrition in longitudinal surveys clearly presents a major challenge for all panel designs. The problem may be mitigated to some extent by implementing rigorous tracking procedures aimed at tracing respondents who, for example, change address between data sweeps; however, there are multiple causes for non-response, only one of which is moving. Lynn (2009) notes the distinction between forward or proactive tracing methods, on the one hand, and retrospective tracing methods on the other (p.189). Proactive *forward tracing* refers to procedures put in place to update contact addresses or other information prior to the current round of fieldwork. *Retrospective tracking* methods are those put in place after fieldwork in the second or subsequent round of the survey, when it has been identified (usually by the interviewer) that the participant has changed address since the first wave.

Proactive tracing procedures

In *Growing Up in Ireland* a number of proactive procedures were used. These included recording contact information in respect of two of the respondent's close associates or family members (outside their own household) whom the Study Team could call on in Wave 2 if it was found that the respondent had moved between the first and second waves of data collection. Respondents in Wave 1 were encouraged to provide contact details of an employer (if relevant) and also a close family member (such as a grandparent of the Study Child). In addition, at their first interview, respondents were given a 'change of address' postcard and asked to fill in their new contact details and return them to the Study Team in the event of them changing address between the two rounds of interview. Finally, a number of newsletters were sent to participants between waves, updating them on progress in the study and, most importantly, enclosing a further 'change of address' postcard.

Retrospective tracing procedures

Retrospective procedures were also adopted. When field interviewers found that a family was no longer resident at the address known to the Study Team, they attempted to obtain a new address from the current occupant or neighbours at the respondent's former address. In doing this, the interviewer told the current occupier or neighbour that s/he wished to track the family who had previously participated in a survey, but did not divulge that it was the *Growing Up in Ireland* study or the nature or content of the project in question. New addresses located in this manner by field interviewers were passed back to Head Office for reallocation to field staff.

Where a new address could not be found by the field interviewer, field support staff in Head Office accessed the alternative contact details provided for tracing purposes by the family at Wave 1. These alternatives were contacted with a view to securing a current address for the respondent Study Child, which was then allocated to a field interviewer. In situations in which the alternative contact details from Wave 1 included both a private and a business (employer) address, the private address was used first, in preference to the employer’s address.

A final source of potential tracking in Wave 2 was the Child Benefit Register maintained by the Department of Social Protection. In the course of the Wave 1 interview, respondents were asked to sign a consent form giving permission to track them, using their Personal Public Service Number (PPSN) through the Child Benefit Register, at Wave 2, in the event of their family having moved between first and second interview. This was implemented through the Department of Social Protection. To minimise the burden on the Department, this approach was used, as a final stage in tracing, only after field and other approaches (such as alternative contact details recorded at Wave 1) had been exhausted. Given the high quality of the contact information contained on the Child Benefit Register, the success rate in securing alternative contact addresses was very high.

2.4 RESPONSE RATES IN WAVE 2

As noted in Section 2.2 above, the initial Wave 2 target sample was made up of the 8,568 young people and their families who had participated in the project in Wave 1, when the children were nine years of age. Table 2.1 summarises Wave 2 response outcomes. From this one can see that 103 children (with their families) were identified as having moved outside the country between Waves 1 and 2.³ These children were no longer within scope and so were excluded from the target sample (and corresponding population) for the second wave of the project. This left a valid target sample of 8,465 children at the second round of interviewing. The 7,423 participating families at Wave 2 represent a response rate of 87.7 per cent (column B of Table 2.1). When based on valid addresses contacted, this rises to 90 per cent (column C of the table).

Table 2.1: Summary response rates in Wave 2 of the Child Cohort (at 13 years)

	A No. of cases	B Valid address response	C Valid contact response
Initial target sample Wave 2	8,568		
<i>of which:</i>			
Moved abroad / child deceased	103	—	—
Valid target sample Wave 2	8,465	—	—
Outcome	N	%	%
Completed	7,423	87.7	90.0
Refused	668	7.9	8.1
Cannot contact	218	2.6	—
Other	156	1.8	1.9
<i>Total</i>	<i>8,465</i>	<i>100.0</i>	<i>100.0</i>

The above figures compare to a Wave 2 response rate of 90.2 per cent and 89.6 per cent for the B and K cohorts (respectively) of the Longitudinal Study of Australian Children (LSAC). It should be noted, however, that Wave 1 of the Irish sample was recruited through the school system, while Wave 2 was recruited via the home.

Included with the 668 refusals in Table 2.1 are families who failed to participate because they were too busy or who consistently broke appointments or put the interviewer off, saying they would participate but never actually did so. These were considered as ‘soft refusals’ and were included in the *Refused* category in the table.

³ A very small number of children in this group were found to have deceased between the two waves of the study.

The 218 families in the *Cannot contact* group included 72 families who were identified by the interviewer as having moved address but for whom a new address could not be found. Many of these families are believed to have moved outside the country and so, strictly speaking, should be excluded from the valid target sample when calculating response rates. As they could not be definitively confirmed as having left the country, however, they were included in Table 2.1. The remaining 146 families in this group were made up of those whom the interviewer could not contact, despite a minimum of four call-backs to the most recent address available to the Study Team.

The final group of 156 families in Table 2.1 were classified as *Other*. These were made up of families who could not be interviewed due to family-specific reasons, such as a new birth in the family, a recent bereavement, etc.

2.5 INTERWAVE ATTRITION

Attrition is seldom a random process and is usually systematically related to the characteristics of target respondents, as well as to a number of characteristics related to the conduct of the earlier waves of the study, such as the respondent’s satisfaction with the length and administration of the questionnaire. (For a general discussion of the factors associated with interwave attrition see, for example, Watson & Wooden, 2009.)

To assess the extent and correlates of Wave 2 attrition, Table 2.2 summarises response rates in that round of the survey, classified by four sociodemographic characteristics that were recorded at Wave 1: Primary Caregiver’s education, family structure, social class and equivalised income quintile. The table indicates strong social gradients in participation at Wave 2. One can see that it is strongly related to the Primary Caregiver’s educational attainment, family social class and family income. For example, 81 per cent of families in which the Primary Caregiver had left school with a Junior Certificate or less participated in the survey at Wave 2 compared with 92 per cent of families in which the Primary Caregiver had a degree. Similar trends are apparent in respect of other measures of social advantage or disadvantage, as outlined in the table. The relationship between participation and background sociodemographic characteristics is further reflected in response levels by family structure, being lower for one-parent than for two-parent families. One can see from the figures that non-contact rates (as well as explicit refusals) are higher among more socially disadvantaged families.

Table 2.2: Response rates in Wave 2 of the Child Cohort (at 13 years) classified by Primary Caregiver’s educational attainment, family type, family social class and family income

Family characteristics at Wave 1 (9 years)	Outcome at Wave 2 (13 years)				
	Completed	Refused	No contact	Other	Total
Primary Caregiver’s Education	Per cent				
Junior Certificate or less	81.4	13.0	3.1	2.5	100.0
Leaving Certificate	87.7	8.2	1.8	2.4	100.0
Certificate/Diploma	87.8	7.8	1.6	2.9	100.0
Degree	92.2	4.2	1.1	2.5	100.0
Family Type					
One-parent, one child	82.3	10.9	3.6	3.1	100.0
One-parent, two or more children	82.6	9.0	4.2	4.2	100.0
Two-parent, one child	87.9	8.8	1.7	1.6	100.0
Two-parent, two or more children	88.9	6.6	1.4	3.1	100.0
Family Social Class					
Professional/managerial	90.7	5.8	1.2	2.3	100.0
Other non-manual/skilled manual	85.4	9.7	2.1	2.8	100.0
Semi-skilled/unskilled manual	84.2	10.5	3.1	2.2	100.0
Never worked – no class assigned	80.2	12.8	4.0	3.0	100.0
Equivalised income quintile					
Quintile 1 (low)	81.6	11.7	3.5	3.3	100.0

Quintile 2	86.6	8.2	2.1	3.2	100.0
Quintile 3	87.8	7.9	1.6	2.7	100.0
Quintile 4	90.6	6.5	1.3	1.6	100.0
Quintile 5 (high)	90.6	6.1	1.4	1.9	100.0
Total	87.7	7.9	1.8	2.6	100.0

Table 2.3 summarises details on the percentage of families participating at Wave 2 as well as the odds ratios of doing so, according to a broader range of Wave 1 background characteristics than are presented in Table 2.2:

- Column A presents the percentage of families completing in each group.
- Column B presents the unadjusted or bivariate odds ratio of participation in Wave 2.
- Column C presents the adjusted odds ratios, simultaneously controlling for all variables in the table.

From Column B one can see that, on a bivariate basis, almost all the indicators of social advantage or disadvantage are significantly associated with participation in the study at Wave 2. Slightly older families in which the Primary Caregiver was better educated and in higher social class and income categories were more likely to participate in Wave 2. For example, families in which the Primary Caregiver was 45 years or older were 2.25 times more likely to participate in Wave 2 than their younger counterparts, where the Study Child’s main carer was less than 30 years of age. Families with a degree-educated Primary Caregiver were 2.71 times more likely to participate than those in which s/he had left school with a Junior Certificate or less. The location of the household (i.e. urban or rural) was also a factor; those living in rural areas were 1.22 times more likely to participate than those living in large (10,000+) areas. There was no significant difference between those living in smaller urban areas (<10,000) and those in larger urban areas.

The relationship between participation in Wave 2 and some of the respondent’s characteristics deserves special mention. The figures show, for example, that families in which the Primary Caregiver was a non-smoker were 1.55 times more likely to participate in Wave 2 than smokers. Similarly, participation at Wave 2 was related to the Primary Caregiver’s frequency (not volume) of alcohol consumption: ‘regular’ drinkers were 2.3 times more likely to participate than non-drinkers or those who drank less than once a month. The relationships here are confounded with underlying measures of social advantage. In general, frequency of drinking alcohol is positively related to social advantage while smoking is negatively related to the same measures, including educational attainment. The underlying trends between smoking, drinking and participation at Wave 2 are related to social advantage, rather than to drinking or smoking *per se*.

A characteristic of note is whether or not the Primary Caregiver had completed the Sensitive Questionnaire at Wave 1. This can be taken as a crude measure of the family’s engagement with the project. Families in which the Primary Caregiver had completed the Wave 1 Sensitive Questionnaire were over three times more likely than others to participate in Wave 2.

Column C of Table 2.3 presents comparable odds ratios, adjusted for all variables in the table. The most significant point to note is that only the Primary Caregiver’s educational attainment and age retain a significant systematic relationship with participation in Wave 2. Other measures of social advantage or disadvantage cease to be significant. Completion of the Primary Caregiver’s Sensitive Questionnaire at Wave 1 also continued to be significantly related to participation at Wave 2 (odds ratio 1.68), albeit on a substantially attenuated basis relative to the bivariate relationship.

Table 2.3: Association between completing the survey at Wave 2 and background characteristics

Characteristic in Wave 1	Category	A Percentage participating in Wave 2	B Unadjusted odds ratio (bivariate)	C Adjusted odds ratio (multivariate)
Child's Gender	Boy	88.2	1.08	1.03
	Girl (ref)	87.4	1.00	1.00
Family Type	One-parent, 1-2 children	82.3	1.00	1.00
	One-parent, 3+ children	82.6	1.02	1.16
	Two-parent, 1-2 children	87.9	1.56**	1.11
	Two-parent, 3+ children	88.9	1.72**	1.21
Primary Caregiver's Age	<29 years (ref)	78.9	1.00	1.00
	30 – 34 years	84.5	1.46*	1.28
	35 – 39 years	87.4	1.86**	1.40*
	40 – 44 years	89.3	2.22**	1.43*
	45+	89.4	2.25**	1.55**
Primary Caregiver Working Outside Home	Working	85.9	1.34**	1.07
	Not working (ref)	89.1	1.00	1.00
Primary Caregiver's Educational Attainment	Junior Certificate or less (ref)	81.4	1.00	1.00
	Leaving Certificate	87.7	1.63**	1.33**
	Certificate/Diploma	87.7	1.63**	1.25*
	Degree	92.2	2.71**	1.80**
Family Social Class	Professional/managerial	90.7	2.47**	1.14
	Other non-manual/skilled manual	85.4	1.49**	0.92
	Semi-skilled/unskilled manual	84.2	1.36*	1.04
	Never worked – no class assigned (ref)	80.2	1.00	1.00
Location	Open country	89.2	1.22*	1.09
	Urban <10,000	86.9	0.98	1.05
	Urban 10,000+ (ref)	87.1	1.00	1.00
Accommodation Tenure Status	Privately owned or purchasing	89.1	1.99**	1.09
	Local authority rented (ref)	80.5	1.00	1.00
	Private rental	80.1	0.98	0.71*
	Other	79.7	0.95	0.68
Primary Caregiver a Smoker	Smoker (Ref)	84.0	1.00	1.00
	Non-smoker	89.1	1.55**	1.14



Primary Caregiver's Frequency of Drinking Alcohol	None/less once/month (ref)	85.7	1.00	1.00
	Infrequent	88.2	1.25**	1.16
	Moderately frequent	88.7	1.31**	1.09
	Regular	93.2	2.30**	1.70
Primary Caregiver Experienced Depression	Yes (ref)	84.1	1.00	1.00
	No	89.0	1.54**	1.21
	Missing	77.9	0.67**	0.75
Equivalised Income Quintile	Quintile 1 (low) (ref)	81.6	1.00	1.00
	Quintile 2	86.6	1.45**	1.17
	Quintile 3	87.8	1.63**	1.16
	Quintile 4	90.6	2.18--	1.38*
	Quintile 5 (high)	90.6	2.17**	1.18
	Quintile missing	82.7	1.08	0.78
Primary Caregiver Completed Sensitive Module in Wave One	Yes	88.0	3.07**	1.68*
	No (ref)	70.5	1.00	1.00

**Significant at $p < 0.01$

* Significant at $p < 0.05$

2.6 REWEIGHTING THE DATA

To account for differential response or attrition at Wave 2, the data were statistically adjusted or 'reweighted' to ensure that they were fully representative of the population of children who were resident in Ireland at nine years of age and were still living there at 13 years. The weighting system used, called GROSS, is based on a standard iterative procedure for adjusting the completed sample to known population totals. This is based on a minimum information loss algorithm, which fits population marginals in a regression framework and adjusts the sample to ensure that it produces estimates that match known population parameters. It has been used extensively by the ESRI since 1996.⁴

The sample weights for Wave 2 of the Child Cohort were constructed by first excluding from the target sample the 103 families who were identified as being no longer resident in Ireland at the time of the second interview (see Table 2.1). This means that the valid target sample for Wave 2 was 8,465 respondents,⁵ of whom 7,423 were successfully interviewed. The first stage in reweighting the Wave 2 sample was to adjust the sociodemographic structure of these 7,423 responding families to the Wave 2 valid sample of 8,465 families.⁶ The final Wave 2

⁴ See, for example, Gomulka, J. (1992). *Grossing-Up Revisited*, in R. Hancock and H. Sutherland (Eds.), *Microsimulation Models for Public Policy Analysis: New Frontiers*, STICERD, Occasional Paper 17, LSE, and Gomulka, J. (1994). *Grossing Up: A Note on Calculating Household Weights from Family Composition Totals*. University of Cambridge, Department of Economics, Microsimulation Unit Research Note MU/RN/4, March 1994.

⁵ A total of 8,568 respondents from Wave 1 minus 103 who were identified as having permanently moved outside the State between Waves 1 and 2.

⁶ Excluding those who had moved outside the State between Waves 1 and 2.

weight for each case was the product of the attrition weight and the Wave 1 weight. This latter had been generated so as to adjust the distribution of the completed Wave 1 sample to known population figures on nine-year-olds who were then resident in the country.⁷ The first step in generating the Wave 2 weight takes account of differential attrition between Waves 1 and 2; the second step takes account of design and differential response in the original sample at Wave 1. The main variables/family characteristics used to adjust for differential interwave attrition included:

- Study Child's gender
- Family structure
- Primary Caregiver's age
- Mother's Principal Economic Status (if resident)
- Father's Principal Economic Status (if resident)
- Father's social class (if resident)
- Mother's social class (if resident)
- Family social class
- Ethnicity
- Accommodation tenure status

The above variables, *inter alia*, were also used to calculate the Wave 1 weights. In addition to these variables, some respondent characteristics that were recorded at Wave 1 were found to be associated with attrition at Wave 2 and so were also included in generating the first step of the Wave 2 weights (the attrition weight). These variables were:

- Regularity with which Primary Caregiver smoked cigarettes
- Regularity with which Primary Caregiver drank alcohol
- Size of location of the household
- Whether or not Primary Caregiver had ever experienced depression
- Equivalised family income quintile at Wave 1
- Whether or not the Primary Caregiver Sensitive Questionnaire (self-completion module) had been completed at Wave 1 – this was included as a measure of the respondent's commitment to or engagement with the study

The final longitudinal weight applied to the data on the 13-year-olds is the product of the Study Child's statistical weight at Wave 1 and his/her attrition weight by Wave 2.

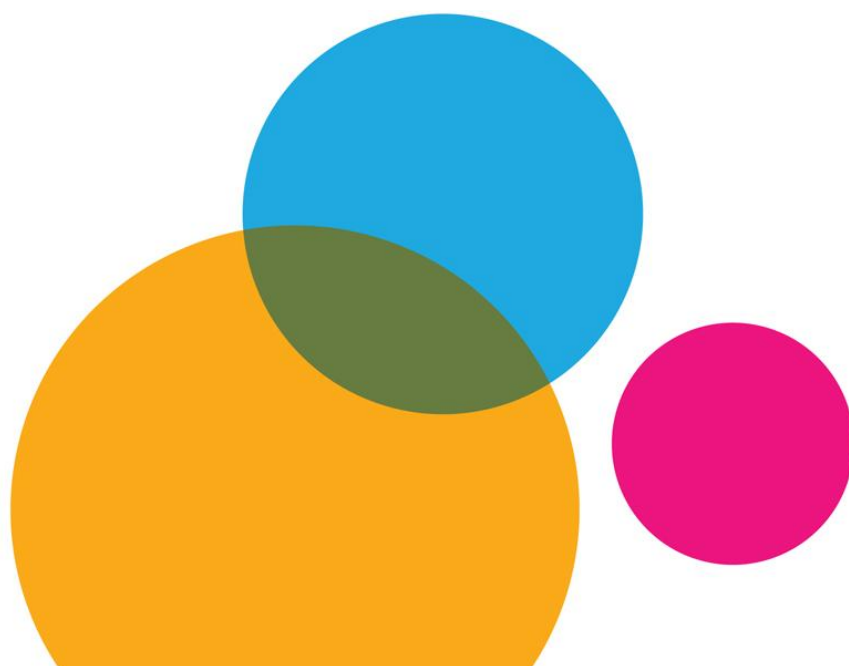
In summary, the completed sample at Wave 2 was adjusted so that its distribution according to the above variables was in line with that of the Wave 1 completed sample, having adjusted for the families who had left Ireland between waves. This adjusts to the longitudinal population of children who were living in Ireland at nine years of age and who continued to be resident within the State at 13 years.

⁷ For details on how the Wave 1 weight was generated, see: Guide to the Datasets Wave 1 of the Nine-Year Cohort of *Growing Up in Ireland* at <http://www.ucd.ie/issda/static/documentation/esri/GUI-Guide9YearCohort.pdf>.



Chapter 3

INPUT TO INSTRUMENTS





CHAPTER 3: INPUT TO INSTRUMENTS

3.1 INTRODUCTION

In this chapter the various groups of experts and others who had input into the development of the instruments and procedures used for the Child Cohort of *Growing Up in Ireland* are described, along with the processes through which that input was received. The groups involved included the Scientific and Policy Advisory Committee (SPAC), the Expert Panels and the Stakeholder Groups. Other longitudinal studies from which various items have been drawn will also be considered. This input, and particularly that obtained from the Scientific and Policy Advisory Committee, was important to ensure that relevant policy-oriented issues would be adequately covered in the instrumentation for the study.

3.2 SCIENTIFIC AND POLICY ADVISORY COMMITTEE

The Scientific and Policy Advisory Committee (SPAC) is a non-executive group that provided scientific and policy advice on the content and best practice of the design, implementation and roll-out of the study. Its ten members were selected from a broad range of backgrounds in areas related to children and large-scale longitudinal national surveys – both substantive and technical. Members were selected on the basis of their expertise in:

- Policy and policy formulation as it affects children and families in Ireland
- The substantive area of childhood and research into issues relating to childhood and children
- Technical and statistical areas of particular relevance to the operation of a complex longitudinal study comparable to *Growing Up in Ireland*

SPAC meets approximately three to four times a year and has the following terms of reference:

- Review and advise on protocols and procedures in the context of best international practice for large-scale longitudinal projects similar to *Growing Up in Ireland*
- Advise on relevant policy and research issues as they relate to children and their families in the changing Ireland of the 21st century
- Review and advise on draft questionnaires and other instruments to ensure that these reflect the policy and substantive issues identified as being of importance to the study
- Review summary results and their interpretation (in policy and substantive terms) as they emerge from the study

The committee is chaired by the Co-Directors of the Study Team, with other members of the Study Team Management Group in attendance. The composition of SPAC reflects its primary objective of providing independent policy, methodological and substantive input to the development and implementation of the project.

SPAC gave extensive feedback on the instrumentation for the Child cohort, the experience of the pilot for that cohort, and the qualitative work to be carried out with the children and their families.

3.3 EXPERT PANELS

Four expert panels assembled by the Study Team contributed to the design and instrumentation used in *Growing Up in Ireland*. The four panels are each headed by a member of the Study Management Team in the position of Theme Director(s), as follows:



- Health & Health Policy – Prof. Tom O’Dowd (TCD) and Prof. Richard Layte (ESRI)
- Child Development and Education – Prof. Emer Smyth (ESRI)
- Social Context & Social Institutions – Prof. Dorothy Watson (ESRI)
- Methodology & Design – Prof. James Williams (ESRI)

The panels of experts were made up of specialists drawn from a wide range of backgrounds, including:

Public health and primary care	Social economics
Psychology – all aspects	Epidemiology – health behaviours
Poverty, social exclusion and health economics	Smoking and alcohol consumption
Sampling and survey methodology	Diet and nutrition
Tax, benefits, poverty and deprivation	Oral health
Youth research and policy	Paediatrics
Social development and social policy	Child psychiatry
Family, gender & the labour market	Exercise and health
Social policy	Health psychology
Early childhood development	Diet and nutrition
Educational development	Genetic psychiatry
Family and gender	Family, gender and demography
Social mobility and the labour market	Criminology and social psychology
Social mobility and educational disadvantage	Health statistics
Ethics in research – particularly with respect to research with children	

The expert panels were consulted throughout the development phase of the project and on an ongoing basis. They were initially requested to suggest domains, topics and questions of relevance to their area of expertise. They were also asked to provide references to other studies that had explored these areas or for justification for the inclusion of innovative questions or topics. Draft versions of the questionnaires were sent to the panel members for comment. Based on the experience and results of the pilot exercise, the panels of experts were asked for feedback concerning streamlining the excessively long draft instruments used in the pilot phase.

3.4 STAKEHOLDER GROUPS

Members of the Study Team also met with stakeholder groups; feedback from these meetings was incorporated into the development of the instrumentation and the design of the project in general. The Study Team worked closely with the funding bodies and associated Government departments, including:

- Department of Children and Youth Affairs

- Central Statistics Office
- Department of Education and Science
- Department of Social Protection

Representatives from these Government departments and agencies sit on the Project Team that oversees ***Growing Up in Ireland***. An important component of that group is two international advisors who had been instrumental in the design, development and implementation of the Longitudinal Study of Australian Children (LSAC) and the National Longitudinal Study of Children and Youth (NLSCY) in Canada. The interdepartmental Project Team is chaired by the Office of the Minister for Children and Youth Affairs. The Co-Directors of the Study meet on a monthly basis with the full Project Team.

The overall Steering Group for the project involves a further interdepartmental group of senior officials from the Departments of Children and Youth Affairs, Social Protection and Education & Skills, and the Central Statistics Office. The Co-Directors of the project meet with the Steering Group approximately each quarter, principally for sign-off on significant milestones such as instrument development, pilot and/or dress-rehearsal stages, and so on. The Steering Group is chaired by the Director of the Office of the Minister for Children and Youth Affairs.

3.5 OTHER LONGITUDINAL STUDIES

In developing the instrumentation, the Study Team tried to synchronise with contemporary longitudinal child cohort studies, both to draw on the benefits of including items previously used in other studies and to enable later comparison. Where items for ***Growing Up in Ireland*** were based on questions used in other studies, the sources have been indicated in the text.⁸

It should also be noted that many of the questions, being longitudinal in nature, were drawn from these studies at the first wave of data collection. Some of the more significant of these studies are briefly outlined below.

3.5.1 MILLENNIUM COHORT STUDY (MCS)

The Millennium Cohort Study is a longitudinal study of 18,819 children born in the UK over 12 months from 1 September 2000 in England and Wales and 1 December 2000 in Scotland and Northern Ireland. Much of the questionnaire material in ***Growing Up in Ireland*** was modelled on the MCS to allow all-island comparisons (i.e. between Northern Ireland and the Republic of Ireland), hence the importance of harmonising around these concepts and questions. The main MCS site is at <http://www.cls.ioe.ac.uk>.

3.5.2 GROWING UP IN AUSTRALIA (LSAC)

Growing Up in Australia (Longitudinal Study of Australian Children) is a longitudinal study of children, with two nationally representative cohorts of 5,000 children each. Growing Up in Australia is co-ordinated by the Australian Institute of Family Studies in Melbourne. Their website is at <http://www.aifs.gov.au/growingup/home.html>.

3.5.3 NATIONAL LONGITUDINAL SURVEY OF CHILDREN AND YOUTH (NLSCY)

The National Longitudinal Survey of Children and Youth (NLSCY) is a longitudinal study of Canadian children from birth to early adulthood. The study's brief is to collect information on factors affecting a child's social, emotional and behavioural development and to monitor the impact of these factors over time. The study is run by Statistics Canada. The website is at <http://www23.statcan.gc.ca/imdb/>.

⁸ Many items and questions have been adapted by numerous child cohort studies. Throughout Chapters 6 and 7, the main source of each item is generally cited. The Study Team is aware that in many instances the cohort study quoted may not have been the original developer of the item. Contact was established with all of the main sources to discuss our use of items from the relevant questionnaires.

3.5.4 EARLY CHILDHOOD LONGITUDINAL STUDY (ECLS)

The Early Childhood Longitudinal Study is an American study of the early years of child development. It focuses on early school experiences and interaction with individual, family, school and community influences. The Early Childhood Longitudinal Study is run by the National Centre of Education Statistics, Institute of Education Sciences at the US Department of Education. The website for the ECLS is at <http://nces.ed.gov/ecls/index.asp>.

3.5.5 AVON LONGITUDINAL STUDY OF PARENTS AND CHILDREN (ALSPAC)

The Avon Longitudinal Study of Parents and Children focuses primarily on health and development. Data collection from questionnaires is supplemented with biological samples (hair, etc), DNA samples, access to medical records and direct assessments. With an initial sample of 14,541 pregnancies, 13,971 infants at age 12 months were involved in the study. All pregnant mothers were resident in the Avon area of south-west England, with an expected delivery date between 1 April 1991 and 31 December 1992. ALSPAC is run by a dedicated team based at the University of Bristol. The ALSPAC website is at <http://www.bristol.ac.uk/alspac/>.

3.5.6 GROWING UP IN SCOTLAND (GUS)

Growing Up in Scotland (GUS) is a longitudinal study of children in Scotland that grew out of a longitudinal scoping study commissioned by the then Scottish Executive Education Department in 2000. A total of 8,000 children were enrolled into the study in 2005-06 (5,000 babies ~10 months and 3,000 toddlers ~34 months). The focus of interest in the study lies in the characteristics, circumstances and experiences of Scotland's children in their early years and through to adolescence. The main areas being monitored and evaluated are: childcare, education, social work, health, and social inclusion. The main GUS website is at <http://growingupinScotland.org.uk/>.

3.5.7 HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC)

The HBSC is a cross-national research study conducted in collaboration with the World Health Organisation (WHO) Regional Office for Europe. The study aims to gain new insight into, and increased understanding of young people's health and wellbeing, health behaviours and their social context, with a target age group of 9-18 years. HBSC in Ireland is a school-based survey; 16,074 children completed the questionnaire in 2010. Worldwide, HBSC 2010 involved more than 200,000 children from 43 countries. The main HBSC Ireland website is at <http://www.nuigalway.ie/hbsc/>.

3.5.8 LIVING IN IRELAND SURVEY

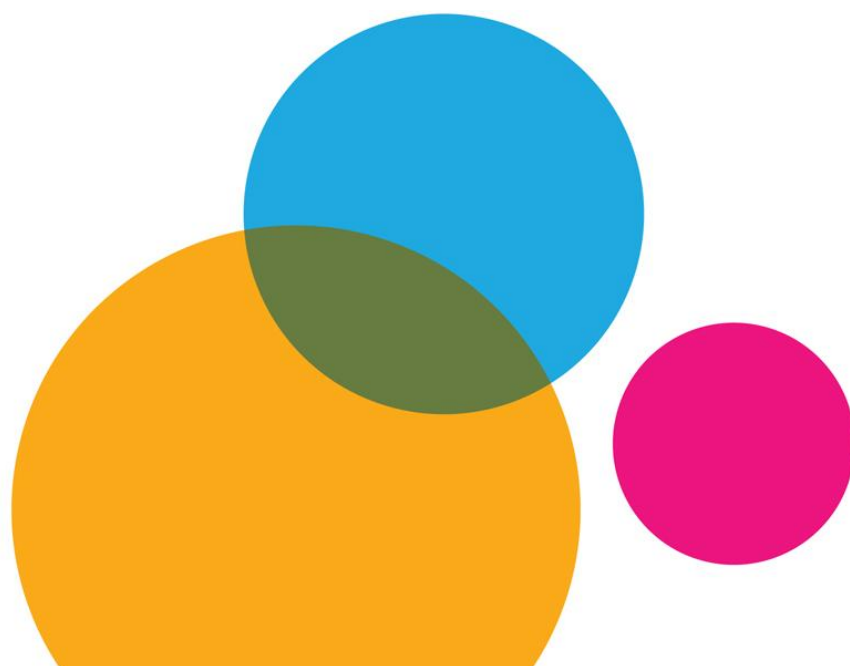
The Living in Ireland survey forms the Irish component of the European Community Household Panel (ECHP), an EU-wide project, co-ordinated by Eurostat, to conduct harmonised longitudinal surveys on the social situation, financial circumstances and living standards of European individuals and households. Living in Ireland data was collected by the ESRI and ran for eight waves, until 2001.

3.5.9 EU-SURVEY ON INCOME AND LIVING CONDITIONS (EU-SILC)

The EU-SILC is an annual, EU-wide survey, conducted in Ireland by the Central Statistics Office, as part of a programme to obtain information on the income and living conditions of different types of households. Commencing in 2003, it is the successor to the Living In Ireland Survey.

Chapter 4

ETHICAL CONSIDERATIONS





CHAPTER 4: ETHICAL CONSIDERATIONS

4.1 INTRODUCTION

The importance of ethics in research is receiving wider acknowledgement than ever before. In a study of children and families, it is even more of a priority. The Study Team identified a number of ethical issues and implemented procedures to deal with them, while remaining mindful of its obligations under the relevant Acts in Irish legislation. This chapter summarises the pertinent parts of legislation and describes the way in which ethical guidelines were put into practice. A short description of the role of the Research Ethics Committee is also given. The primary concern at all times was the protection of child participants in the Study. Procedures relating to child protection were informed by the *Children First Guidelines* (Department of Health and Children, 1999). All interviewers, as well as other staff working on *Growing Up in Ireland*, were security-vetted by An Garda Síochána (the Irish Police Service). A full module on ethics was included in the interviewers' training course.

4.2 RELEVANT ACTS

Three Acts are of particular relevance for this study: the Data Protection Acts of 1988 and 2003 and the Statistics Act of 1993.

4.2.1 DATA PROTECTION ACTS 1988, 2003

Data protection concerns the integrity, protection, storage and use of information collected from and about individuals. Under the Data Protection Acts 1988, 2003, the Study Team undertook the following obligations:

1. *Fair obtaining and processing*: Respondents must be fully aware of the identity of the persons who are collecting the information, the use to which it will be put and the purpose or bodies to whom it will be disclosed. (For further discussion, see Section 4.3.1 on informed consent.)
2. *Specifying the purpose*: One may not keep information about people unless it is held for a specific, lawful and clearly stated purpose.
3. *Further processing of personal information*: If one obtains personal information for a particular purpose, one may not use the data for any other purpose and one may not divulge the data to a third party, except in ways that are compatible with the specified purpose.
4. *Security of personal data*: Stringent procedures are implemented in both the ESRI and TCD to ensure that security of data is preserved at all times.
5. *Accurate and up-to-date*: One must ensure that the personal information that one keeps is accurate and up to date.
6. *Adequate, relevant and not excessive*: The data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they were collected or are processed.
7. *Protection of personal data*: The data shall not be kept for longer than is necessary for that purpose or purposes. (For further discussion, see Section 4.3.4 on confidentiality.)
8. *Right of access to personal data*: Any individual about whom one keeps information has a right to see a copy of the data, a description of the purposes for which the data are being held and a description of those to whom the data may be disclosed. (For further information, see Section 4.3.4 on confidentiality.)



4.2.2 STATISTICS ACT (1993)

Growing Up in Ireland is being conducted within the framework of the Statistics Act 1993. This is the legislation underpinning the work of the Central Statistics Office (CSO). The study has been brought under the scope of the Act in accordance with Section 11, whereby the Office is permitted to make arrangements with other public authorities for the conduct of statistical inquiries. While the Act facilitates access to certain data sources for the purposes of the study, the most important implication is that it provides a strong legal basis for the protection against unlawful disclosure of *all* information collected. Under the Act, all information collected must be treated as strictly confidential and used for statistical purposes only. All persons working on the study are appointed Officers of Statistics. As such they are legally obliged not to disclose, except for the purposes of the study, any matter that comes to their knowledge relating to any person, family, household or undertaking in the course of their statistical work.

Results of the study will be published in aggregate form and all necessary steps will be taken to ensure that details relating to an identifiable person are not inadvertently divulged.

4.3 PRACTICAL APPLICATION OF ETHICAL CONSIDERATIONS

4.3.1 INFORMED CONSENT

Detailed information sheets were prepared for participants in the study, including parents and Study Children. These sheets described the type of information that would be gathered, what would be involved for participants and the longitudinal nature of the study, as well as details on the researchers and funding bodies. All participants were informed of the voluntary nature of the study and of their right to refuse to answer any questions that they did not wish to answer. Signed consent was obtained from a parent/guardian before any data were collected.

4.3.2 REPORTING CONCERNS

Interviewers were instructed to report all events or observations which caused them concern during the course of their work to the Study Team using an Incident Report Form, especially in regard to the protection of children or other vulnerable persons. All reported incidents were then considered, and acted upon as necessary by the Project Directors. Interviewers were provided with an out-of-hours emergency phone number to contact a Project Director if they had serious concerns.

The Study Team's Designated Liaison Person collated all incoming reports or incidents that could have a broadly defined child welfare or child protection dimension. These were considered by a standing committee made up of the Designated Liaison Person, the Operations Manager, the Principal Investigator and a Psychologist from the Study Team. This process was carried out within the *Children First* guidelines. A decision was made on the action necessary for each potential child welfare or protection issue arising in the course of the study. Where necessary, external consultation was made with appropriate advisors, including social workers. If appropriate, a referral was made to relevant welfare services.

4.3.3 INTERVIEWERS BEING ALONE WITH CHILDREN

It was stressed to interviewers during training that they must not be left alone with the Study Child or any other child while conducting the fieldwork, even for a few minutes. This guideline was also clearly stated in the information sheet provided to parents in advance of their consent into the study. Interviewers were encouraged to suspend an interview and return at a later date or time if a parent/guardian or other adult found it necessary to leave an interviewer with a child – even for a short period.



4.3.4 CONFIDENTIALITY

All interviewers and other staff working on the project were appointed Officers of Statistics by the Central Statistics Office. This imposed a legal obligation to maintain the confidentiality of all information they received in the course of the study. Under the Statistics Act (1993) (see Section 4.2.2 above), a breach of confidentiality is a criminal offence. At interviewer training it was emphasised that not all breaches of confidentiality may be malicious in nature. Many can arise through thoughtless or careless comments made to third parties after an interview has been completed.

Access to the non-anonymised datasets is severely restricted and great care was taken to remove any identifying information from the anonymised dataset. No Government department or agency, apart from the Central Statistics Office (CSO), has access to identifiable information, and along with the ESRI the CSO is the only agency to hold a copy of the non-anonymised dataset. In addition, the following steps have been taken to ensure the confidentiality of information given as part of ***Growing Up in Ireland***:

- Use of numerical codes on all electronic and paper questionnaires
- Use of passwords and usernames on laptops
- ‘Strip-down’ of laptops to prevent inadvertent connection to a wireless network, and hard-disk encryption of the laptops
- Encryption of all electronic information transferred by interviewers to a dedicated secure server in the ESRI⁹
- Separate mailings of paper questionnaires and Work Assignment Sheets – the latter containing contact information
- The Statistics Act (1993) ensures that the information obtained can only be used for purposes of statistical compilation and analysis.
- Respondents are only able to access the information that they themselves have provided. No individual is able to see another person’s answers, even if that person has recorded details in respect of the individual in question; for example, one parent is not able to access what the other parent has recorded in their interview, nor can they access what a child says in their interview. This particularly important point was explicitly included in the consent form signed by all families prior to their participation in the study.

4.3.5 AVOIDANCE OF EMBARRASSMENT OR DISTRESS

Proactively avoiding the possibility of causing embarrassment or distress is intrinsically linked to the maintenance of confidentiality both within and outside the home. Within the home, sensitive questions concerning the marital/parental relationship, etc were self-completed by the respondents on computer rather than being asked aloud by an interviewer (unless requested). Prompt cards were also widely used in the course of the interview, especially when questions were of a sensitive nature.

⁹ In November 2010 the data capture and transfer infrastructure was subjected to a security audit by independent IT security consultants. The consultants reported that the system was secure and no remediation of infrastructure or procedures was required.



Furthermore, it was made clear to respondents at the outset that they could refuse to answer any particular questions or indeed withdraw from the interview altogether if they so wished. Interviewers were prohibited from getting involved in any family issues or giving advice, regardless of any qualifications or experience they had in such matters. Interviewers were, however, provided with a list of helpline numbers for a variety of agencies, which they could pass on to respondents if asked.

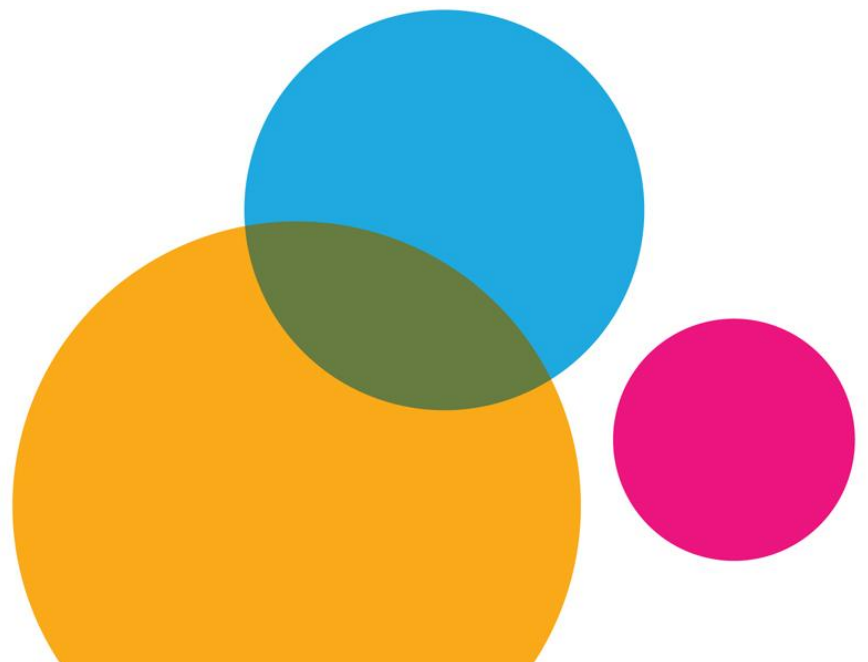
4.4 ETHICS COMMITTEE

The quantitative phase of the Child Cohort at 13 years was carried out under ethical approval granted by a dedicated Research Ethics Committee set up by the Department of Children and Youth Affairs. The pilot and main studies underwent separate review procedures. Reports on the pilot study were submitted to the Ethics Committee. The committee was very active in its consideration of all of the materials and procedures used in *Growing Up in Ireland*. For example, they made substantial contributions to the content and layout of information sheets, as well as making recommendations for the instruments themselves. The Study Team met with the Ethics Committee to discuss the project on several occasions, and all recommendations were acted upon before a final version of all materials and procedures was agreed and implemented.



Chapter 5

OVERVIEW OF INSTRUMENTS AND PROCEDURES





CHAPTER 5: OVERVIEW OF INSTRUMENTS AND PROCEDURES

5.1 INTRODUCTION

There was a major change in the design of the data collection model between Wave 1 and Wave 2 of this cohort. As discussed in *Growing Up in Ireland* Research Report No.1, in Wave 1 (when the children were nine years of age) the sample was recruited in two phases, with initial fieldwork taking place in the school, followed by more detailed interviewing in the home. The school-based fieldwork included questionnaires completed by the Study Child, school principal and teacher, as well as tests of cognitive ability completed by the Study Child. With the transition of almost all participants to second level by Wave 2, it was not possible to have the detailed questionnaire completed by a class teacher (see *Growing Up in Ireland* Technical Report No.4 for a discussion of piloting for this round of the project). To this end, there was a shift from a data-collection model based on the Study Child's school and home to one where almost all individual-level data were recorded in the home. A parallel survey of schools was undertaken in the autumn/winter of 2011 to include details of the characteristics of the school, its resources management, and policies, etc. These data were collected with a view to linking them to individual-level information, to allow analysis of school effects on child outcomes.

This chapter details the general procedures and instruments used with the Child Cohort. Fieldwork in the home is summarised in Section 5.2; procedures for laptop administration are discussed in Sections 5.3 and 5.4, and special procedures are described in Section 5.6. Minimal details on instruments are provided in this chapter as its purpose is to provide a broad overview of the various levels of instrumentation and their administration before details of substantive content are provided in subsequent chapters.

5.2 HOUSEHOLD-BASED FIELDWORK AND FAMILY PARTICIPATION

A letter of introduction was sent to the family by the interviewer a few days in advance of their first contact with the family. Telephone numbers were not provided to interviewers who were instructed to make initial visits to households in person.

The informants in the home were in all cases the Primary Caregiver (usually the mother), the Study Child and, where relevant, the resident spouse/partner of the Primary Caregiver; that person was most often, but not necessarily, the father of the Study Child. The Primary Caregiver was self-defined by the family as the person who provided most care to the child and was most knowledgeable about his/her development. The Secondary Caregiver was defined as the resident spouse/partner of the Primary Caregiver. Transitions between the Primary Caregiver and Secondary Caregiver from Wave 1 to Wave 2 were anticipated and this had implications for the use of forward feed data. The detailed CAPI protocol for dealing with these issues is discussed in Section 6.1.1.

A major change from Wave 1 was that the interviewer used two laptops at Wave 2. The main interviews with the Primary and Secondary Caregivers were administered by a Computer-Assisted Personal Interview (CAPI), while more sensitive questions were administered to respondents on a Computer-Assisted Self Interview (CASI) basis. In the case of the child interview, all questions were administered on a CASI basis.

The interviewer training emphasised the need to establish good rapport with the respondents. Interviewers were instructed to try to gain the confidence of the Study Child's main caregiver, as well as that of the Study Child him or herself in the first instance, and develop a rapport with them before commencing the formal interview process.

The following is a list of all instruments administered in the home and the main domains therein:

- 1* **Primary Caregiver Main Questionnaire** – Household composition, Child's health, Parental health, Child's emotional health and wellbeing, Child's education, Family context, Sociodemographics, About you (education; literacy and numeracy; religion; citizenship)

- 2*** **Primary Caregiver Sensitive Questionnaire** – Reasons for changes in the household grid, Nature of relationship to child, Marital status, Nature of marital/couple relationship, Parental stress, Currently pregnant (female only), Alcohol consumption, Smoking, Drug-taking, Depression, Contact with the criminal justice system, Information on non-resident parent (if relevant)
- 3** **Secondary Caregiver Main Questionnaire** – Relationship to child, Parental health, Family context, Sociodemographics, About you (education; literacy and numeracy; religion; citizenship)
- 4*** **Secondary Caregiver Sensitive Questionnaire** – Domains as per Primary Caregiver Sensitive Questionnaire (item 2)
- 5*** **Child Main Questionnaire** – Time spent watching TV, videos, DVDs etc; Access to and use of Internet, including incidents; Pocket money; Exercise and sporting activities, frequency and whether or not paid for; Pastimes and frequency, who with; Parental monitoring and supervision – control sub-scale; Foods eaten in last 24 hours and frequency; Chores; Peer relationships; Depression; Relationship with brothers and sisters; Bullying behaviour (bullied and bullying others); Weight loss behaviours; Parental discipline strategies; Self-concept
- 6×** **Child Sensitive Questionnaire** – Relationships and sexuality education; Pubertal development; Delinquent behaviour; Smoking and alcohol use; Other drug use
- 7*** **Parenting Style Inventory** – Child’s report on parenting style; questions about parent/guardian attitudes towards the child from the child’s perspective – available to complete for the following: Mum, Dad, Mum’s Partner, Dad’s partner
- 8*** **Child cognitive/reasoning tests** – Drumcondra Reasoning Test (DRT) and the British Ability Scales (BAS) Matrices sub-test
- 9*** **One-day time-use diary** – Time-use information on what the 13-year-old child did in the course of a nominated day
- 10** **Questionnaire modules for twins and triplets** – sub-set of questions used where a twin or triplets were present
- 11*** **Follow-up information** – Tracing information should the respondent move home between waves
- 12*** **Height and weight of Study Child**
- 13*** **The Work Assignment Sheet**
- 14^** **Non-resident Parent Questionnaire** – Details on time spent with child; Involvement in caring tasks; Views on being a parent; Past and current relationship with mother/father; Sociodemographic characteristics

* *These core items were completed for all households.*

× *Item 4 was subject to separate parental consent.*

^ *Item 14 was issued by the Study Team on a postal basis and self-completed by non-resident parent where relevant.*

Detailed descriptions of all instruments are provided in the following chapters:

- **Chapter 6** – Parent/guardian questionnaires

- **Chapter 7** – Child questionnaires
- **Chapter 8** – Cognitive tests
- **Chapter 9** – Other instruments and measures

5.3 CAPI PROCEDURE

At this wave two types of laptop were used: the IBM Thinkpad Lenovo X60 and the Dell Latitude 13. While one of the laptops was used for the entire child interview, the other was used for both interviewer-administered and self-report adult questionnaires (self-report CASI interviews are discussed in section 5.4 below). Interviewers administered the main questionnaires to the Primary and Secondary Caregivers of the Study Child. Each question appeared on the computer screen for the interviewer to read out, with space for an answer option to be recorded. Answers were principally recorded by entering the number associated with the selected answer option, using the keyboard. Questionnaires were programmed using Blaise software. This program facilitated the routing of questions (skipping non-applicable questions, etc) and the inclusion of hard and soft cross-variable and range checks to alert interviewers to improbable or impossible answers.

Respondents were shown an extensive range of prompt cards with the available answer options. These were particularly important for longer lists of options or items in a scale or when questions were of a sensitive nature. Interviews could be suspended and returned to at a later time according to the requirements of the respondent; for example, if an unexpected visitor called to the house during an interview. Completed interviews were outputted as ASCII files from Blaise, and were encrypted and uploaded to a dedicated server in the ESRI by the interviewers across the phone line. They were then decrypted and rebuilt to produce an SPSS file for preliminary analysis of the data. As well as encryption of the data in transfer, all the laptops were protected with 256-bit encryption.

5.4 CASI PROCEDURE

As previously mentioned, there were a couple of major changes between Wave 1 and Wave 2. One of those was the move to a CASI format for the completion of the adult sensitive supplements; that is, where respondents self-completed using the laptop rather than a paper questionnaire.^{10 11}

The other change was that all child interviews at Wave 1 were carried out using CAPI for the main interview and paper and pencil for the sensitive questionnaires, whereas at Wave 2 the child interviews were all self-completed on CASI (with the exception of the cognitive tests – see Section 5.5 below). Self-administered questionnaires (or components of questionnaires) can be particularly helpful in collecting data about sensitive subjects, and CASI interview techniques afford a number of potential benefits over traditional paper-and-pencil ones. For complex surveys, computerised assessment can reduce respondent burden through the use of automatic branching, range rules and consistency checks (Schroder, Carey & Vanable, 2003). Relative to pencil and paper, the use of CASI questionnaires can enhance the perception that information remains confidential, because individual responses are not easily viewed by interviewers. As a result, CASI may also reduce participants' embarrassment and increase their willingness to disclose sensitive information (Kurth et al, 2001). CASI can also decrease the time needed for data entry and verification.

¹⁰ A detailed discussion of the pilot work involved in developing the sensitive questionnaires on a CASI basis is the subject of GUI Research Paper No.4.

¹¹ In Wave 1 the self-completion instruments were filled out on a paper and pencil basis.



During the Primary and Secondary Caregiver interviews, the interviewer handed the computer to the respondent for the specific section in question and assisted them in completing a number of example questions. Respondents then took control of the laptop, read the questions on screen, and input the answers, thus maintaining the confidentiality of their data. Once the self-completion questionnaire was finished, it was 'locked down' so that it could not be accessed by anyone other than the Study Team in Head Office. The interviewer did not have access to the completed sensitive sections of the questionnaire. The interviewer remained available at all times throughout the survey to give instructions and assistance.

The interviewer set up the second laptop for the Study Child and explained to him/her how to use it (going through a similar set of practice questions as above). This parallel use of laptops maximised the efficiency of the interview time in the household. The Study Child could complete their questionnaires in CASI in a separate room (with parental consent) to allow for maximum privacy for the parent(s)/guardian(s) when they were being interviewed. There were two crucial aspects to the interviewer's preparation of the laptop for the Study Child. The first was to set it up to allow administration of the Child Sensitive Questionnaire only to those children whose parent/guardian had given specific consent for them to complete it. The second was to ensure that the Parenting Style Inventory (item 7 in Section 5.2) was administered only in respect of those parent figures relevant to the child (as agreed in advance with the Primary Caregiver) (see Section 7.3). Once it had been completed, interviewers were instructed to close this section of the program so that it effectively 'shut down' and the child could not, for example, access the Child Sensitive Questionnaire when they had no parental permission to do so.

5.5 COGNITIVE TESTS

Two types of test were administered to the child in the household. The first was the Drumcondra Reasoning Test (DRT), which was self-completed on paper by the Study Child. The second was the British Ability Scales (BAS) Matrices sub-scale, which was administered by the interviewer by laptop. These tests are discussed in more depth in Chapter 8.

5.6 SPECIAL PROCEDURES

Growing Up in Ireland always aims to be as inclusive as possible. Putting special procedures in place to achieve a high level of inclusion is important to achieve the study objectives relating to the description of the lives of Irish children (#1), mapping variation in children's lives (#5) and providing an evidence base for the creation of policies and services (#9).

5.6.1 DISABILITY

During interviewing for this wave of the study, the very small number of adults with vision problems were interviewed using CAPI for the main interview and for the sensitive supplement, subject to their agreement. In such circumstances, the sensitive nature of some of the questions was explained to the respondent in advance.

Children with vision problems (for whom self-completion of the sensitive questionnaire was problematic) completed the main and sensitive questionnaires through CAPI interview, subject to their agreement.

Every effort was made to maximise the participation in the study of children with learning disabilities or other special needs to the best of their individual abilities. The ultimate decision on the Study Child's inclusion and the extent of that inclusion ultimately rested with the parent(s)/guardian(s).

5.6.2 LITERACY

Adults with literacy problems were given the option to have the self-complete questionnaire administered by the interviewer. There were two questions on literacy in the main interview for both



the Primary and Secondary Caregiver; these also served as an indicator to the interviewer that they might need to administer the sensitive questionnaire to that respondent.

Children with literacy problems were given an audio sound-track on CD to assist them in completing the sensitive supplements: children listened to the questions being read out on the CD and indicated their answers on the paper questionnaire. All children attempted the Drumcondra tests unless the parent/guardian or teacher had advised the interviewer that an attempt would cause distress to the Study Child.

5.6.3 OTHER LANGUAGES

Where the respondent could not communicate through English or Irish, information sheets and questionnaires were pre-translated into Romanian, Latvian, Lithuanian, Chinese, French and Polish. These were self-completed by respondents with pen on paper during a home visit.

5.6.4 TWINS AND TRIPLETS

In households where there were 13-year-old twins or triplets, the adult respondents completed one main Primary Caregiver and Secondary Caregiver interview on CAPI and answered child-related questions in respect of one of the twins. They then completed a Twin Module for the second child on a PAPI basis; in the case of triplets, questions relating to the third child were also completed on paper. The latter modules repeated only the child-related questions, this time to be answered in relation to the second twin or triplet. The modules also contained questions on parenting twins, such as identical/fraternal status and age at which differences were noticed.

The interviewer was instructed to administer the twin/triplet modules in all households with 13-year-old twins or triplets, even when their existence was unknown prior to the visit to the household, subject to agreement from the main caregiver. These questionnaires can be found in Appendix G.

5.7 GIFTS TO RESPONDENTS

Small gifts were given as tokens of appreciation for participation in *Growing Up in Ireland*. For the child, a USB pen and a notepad were provided as gifts. Interviewers were also provided with a supply of crayons and colouring pencils to give to any siblings who might be upset at being left out. Parents/guardians were asked for permission to offer the gifts before they were presented to children. Gifts were mentioned and offered only after the interviews had been completed.



Chapter 6

PRIMARY AND SECONDARY CAREGIVER INSTRUMENTS





CHAPTER 6: PRIMARY AND SECONDARY CAREGIVER INSTRUMENTS

6.1 INTRODUCTION

The home component of the study involved personally administered interviews with the parent(s)/guardian(s) of the Study Child, as well as with the Study Child him/herself. Further information was sought at this stage on contact details for a non-resident parent, if appropriate. In this chapter, the questionnaire used with the Primary Caregiver is discussed in detail; that used with the resident Secondary Caregiver is described in brief, as most of the questions are described in relation to the Primary Caregiver questionnaire. Where no question sources are specified, these questions were developed by *Growing Up in Ireland*, typically in conjunction with the expert panels (Section 3.3). As noted previously, the main questionnaire was completed using CAPI for both respondents, while the sensitive section was self-completed on a CASI basis.

The Primary Caregiver Questionnaire consisted of nine sections, each of which broadly equates to a domain of interest. Each section was further decomposed into general areas of interest based on groups of questions (described below). The questionnaire is provided in Appendix C.

The home component of the survey involved CAPI-administered interviews with the parent(s)/guardian(s) of the Study Child. The rationale for including each of the items comprising the various modules of the Primary Caregiver interview is discussed in detail below. Information on scales used in the instruments is also included here, along with relevant psychometric information (further information is provided in Technical Report No.4 which reports on the piloting for this wave of the study). A number of other measures or scales were considered for use in the study. The Study Team took account of many factors when deciding to include or exclude a measure. These included: its psychometric properties and age appropriateness; its usefulness in measuring change and stability in a longitudinal context; feedback/input from the various expert groups linked to the study, and outcomes from the rigorous piloting process carried out prior to the main fieldwork, including time and resource constraints.

As the Secondary Caregiver Questionnaire was a sub-set of the questions used with the Primary Caregiver, a simple referencing system, using the Primary Caregiver Questionnaire as the base, is provided.

6.1.1 SECTION A – HOUSEHOLD COMPOSITION

A1a – A2, A7a – A8c: Household Relationship Grid

This section captured demographic details such as the name, gender, date of birth, economic status and relationship to the Primary Caregiver and Study Child of each person resident in the household. These variables were essential for examining family structural and relationship issues that affect the child (e.g. lone versus dual parent status).

To save time, the information captured about the composition of the household at the first round of interview was fed forward into the questionnaires. To ensure the confidentiality of information collected at Wave 1, it was requested that this section be completed by the person who identified themselves as the Primary Caregiver at Wave 1. If this person was still resident in the household at Wave 2, they were asked to review the information collected relating to the composition of the household at Wave 1 and correct any factual inaccuracies. They were then asked if these persons were still resident in the household at Wave 2 and if any new members had joined the household since the first interview. If the Primary Caregiver from Wave 1 was not resident in the household at Wave 2, the person who identified themselves as the child's legal parent or guardian at that time was asked to complete a new household grid (A7a – A8c).

A3a – A3b: New entrants to the household



Any new entrants to the household (e.g. births), or any person inadvertently omitted from the household grid at Wave 1 could be added at A3b. Again, this section captured the name, gender, date of birth, economic status and relationship to the Primary Caregiver and the Study Child of each new entrant, and the date when they joined the household.

A4: Number of people living in the household at Wave 2

This was a derived variable which was simply the number of people resident in the household at Wave 1 (minus departures from the household) plus any new entrants to the household. Respondents were asked to verify that the number of persons now regarded as resident was correct.

A5 – A6b: Identity of the Primary Caregiver at Wave 2

Question A5 asked whether the person who identified themselves as the Primary Caregiver at Wave 1 was still the Primary Caregiver at Wave 2. The Primary Caregiver was self-defined by the family as the person who provided most care to the child and was most knowledgeable about his/her development. The Secondary Caregiver was defined as the resident spouse/partner of the Primary Caregiver.

If the Primary Caregiver at Wave 1 was no longer the Primary Caregiver at Wave 2, question A6a asked why they were no longer the Primary Caregiver, and question A6b established that their resident spouse/partner would complete the questionnaire as the Primary Caregiver on this occasion. This transition meant that the Primary Caregiver at Wave 1 would now complete the Secondary Caregiver at Wave 2. Other scenarios would include those cases where a new Secondary Caregiver had moved into the household, or where one or other caregiver had left the household.

A9a – A9c: Other biological children living outside the household

Question A9a sought to establish whether the Study Child had any other full, half or step brothers or sisters living outside the household. If so, the respondent was asked to provide the gender, age and relationship to the Study Child of these siblings. These questions were designed to establish the birth order of the child and to ascertain a more accurate picture of family size (including blended families) in Ireland.

6.1.2 SECTION B – CHILD'S HEALTH

B1: General health status

Many national health surveys use a general health-related quality-of-life measure because it is quick to administer and has been found to provide valid and reliable indicators of other objectively obtained measures of health status (Bowling, 2005).

Question B1, derived from the Living in Ireland survey, the Irish component of the European Community Household Panel (ECHP), serves as an outcome measure of general health status, with responses indicated on a four-point Likert scale, ranging from *very healthy* to *almost always unwell*. There is good evidence, summarised in Blaxter (1989), that such measures are close analogues of clinically assessed health status. Moreover, Haas (2007) has demonstrated the predictive validity of this type of question as an indicator of adult health outcomes. Compared with 'excellent', 'very good', or 'good' childhood health, 'poor' childhood health was associated with a threefold increase in risk of poor adult self-rated health and a twofold increase in risk of a work-limiting disability or chronic health condition, independent of childhood and current socio-economic status and health-related risk behaviours.

B2 – B6: Chronic physical or mental health problems, illness or disability



The presence of childhood illness or disability can have a huge impact on a child's quality of life and that of the family (Eiser, 1997). Chronic illnesses or disabilities affect the lives of children through the limitations they impose on daily life, such as interruptions to regular schooling and restricted opportunities for participation, which can in turn lead to adverse educational and psychosocial outcomes (Newacheck & Halfon, 1998). There is also evidence that these detrimental impacts can project into adulthood. Previous work in Ireland (e.g. the Living in Ireland Survey) found that people with illness or disabilities fare much worse across a number of outcomes relative to others in their age group, including lower levels of educational attainment and labour market participation, increased risk of poverty, fewer social supports and lower rates of social participation (Gannon & Nolan, 2005).

Questions B2-B6 were derived from the European Community Household Panel survey/Living in Ireland survey (1994-2001) to explore the nature, duration and constraints of the illness or disability, as well as the history of any past problems of the child.

B7 – B9: Wheezing with whistling on the chest

Wheezing on the chest is very often associated with asthma, the prevalence of which is very high in Ireland (number four in the world asthma league after Australia, New Zealand and the United Kingdom). Estimates vary, but as many as 470,000 individuals in Ireland have the condition (one in eight of the population). Evidence from primary care data indicates that its prevalence in schoolchildren aged 13 to 14 increased by 40 per cent between 1995 and 2003 (15.2 per cent to 21.6 per cent) (Asthma Society of Ireland, 2010). There has been a considerable increase in asthma prevalence in developed countries over the last two decades. While asthma tends to run in families, the reason for its increase is more likely to be related to environment than genetic factors. Asthma is the commonest chronic disease in childhood and the most common respiratory condition in Ireland; it is therefore important for *Growing Up in Ireland* to attempt to shed further light on this issue.

Question B7 asked about periods over the last year when the Study Child had experienced wheezing or whistling on his/her chest. Where the child had experienced wheezing or whistling, questions 8 and 9 asked about frequency of such episodes over the past 12 months, as well as prescribed medication for the condition (including inhaler, antibiotics, nebuliser).

B10: Child's exposure to antibiotics in the last year

Information from the Royal College of Physicians in Ireland indicates that many bacteria have become resistant to antibiotics because of their ability to change and adapt to different environments, including exposure to antibiotics. "Unlike other medications, excessive antibiotic use has implications not only for the individual patient but also for the wider community, as excessive use leads to antibiotic-resistant bacteria that affect us all. As a precious health resource, antibiotics should be used prudently. If not, there are implications for all infections including Healthcare-Associated Infections (HCAIs) such as Methicillin-resistant Staphylococcus aureus (MRSA). Ireland is one of only three countries in Europe where outpatient antibiotic prescribing is increasing (3 per cent since 2000)" (p.2, RCPI, 2012).

Question C10a asked whether the Study Child had received a course of antibiotics in the past 12 months, while question C10b asked how many courses of antibiotics in total the child had received in the past 12 months.

B11 – B13: Accidents, fractures and hospital admission

Injuries in childhood represent a major public health concern. Epidemiological studies of childhood injuries typically show that children from lower socio-economic backgrounds are at increased risk of death or injury (e.g. Roberts & Power, 1996; Silversides, Gibson, Glasgow et al, 2005), and that they present at emergency rooms with a greater severity of injuries (Hippisley-Cox, Groom, Kendrick et al, 2002). A number of social correlates of income poverty are associated with increased risk for injury.



Children of lone mothers seem particularly at risk as they have the highest death rate of all social groups (Judge & Benzeval, 1993) and accident rates twice those of children in two-parent families (13 per cent vs. 6.7 per cent) (Roberts & Pless, 1995). Yet other research has shown a putative link between calcium deficiencies and increased risk of fractures in childhood (Greer & Krebs, 2006). However, whether the variations in accident rates found between different social groups are an individual-level effect owing to familial circumstances, or an area-level effect, owing to social and environmental factors such as the quality of housing or traffic volume, has yet to be satisfactorily delineated (see, for example, Haynes, Reading & Gale, 2003; Reading, Jones, Haynes et al, 2008; Reading, Langford, Haynes, et al, 1999).

Questions B11, 12 and 13, derived from the Millennium Cohort Study, recorded whether the Study Child had ever had an accident that required hospital treatment or admission, and the total number of accidents where hospital treatment or admission was required. B12 asked about the number of these accidents that involved bone fractures or breaks.

B14: Number of nights in hospital

Higher use of secondary healthcare, particularly the number of nights spent in hospital, is a marker for ill-health.

B14 recorded the number of nights the Study Child had spent in hospital since the time of the last interview. The number of nights spent in hospital serves as an objective indicator of children's health as opposed to question B2 which is a more subjective parent-report measure. This will also add to the information on nights spent in hospital that was collected in Wave 1, in order to give a longitudinal perspective on the health of the child, and whether more time in hospital is linked to poorer health and other outcomes for the child (for example, educational outcomes).

B15: Number of visits to Accident & Emergency (A&E)

Question B15 recorded the number of visits to A&E over the last 12 months, and will add to the information already collected at nine years about lifetime visits to A&E.

B16: Frequency of contact with healthcare professionals

The importance of private care and the extent of fee-paying in Irish healthcare has led many to argue that the system is not available to all on the basis of need alone, but rather that personal circumstances determine the availability, extent of and speed of treatment. This and related questions will allow for an examination of the equity of healthcare use (for a given level of need and condition) among children across different social groups (see e.g. Layte & Nolan, 2004).

Question B16 was originally adapted from the National Longitudinal Survey of Children and Youth, and dealt with use of healthcare services initiated by the mother on behalf of the Study Child, including GP and other professional specialists (e.g. psychologist).

B17 – B18; B21 – B22: Healthcare/dental access

As at age nine, these questions, adapted from the National Survey of Children's Health (2003), asked whether the Study Child had required medical or dental treatment in the preceding 12 months, along with questions about perceived barriers to access. The latter is important from a public policy and planning perspective, particularly where socio-economic or geographic factors limit access, as a delay in seeking or receiving healthcare is associated with more complications from and sequelae to illness (Starfield & Budetti, 1985).

B19 – B20: Dental health



Despite a reduction in the prevalence of dental caries in Ireland, a large number of Irish children still have poor oral healthcare (Friel, Hope, Kelleher, Comer & Sadlier, 2002), and Ireland continues to rank below the average for frequency of brushing according to a Health Behaviour in School-aged Children report (HBSC, 2006). The all-Ireland survey of children's oral health (Dept. of Health & Children, 2006) points to social-class differences in oral health, with children from deprived backgrounds (indexed using medical-card status in the Republic of Ireland and social-welfare receipt in Northern Ireland) experiencing more decay than children from more affluent backgrounds (in Nunn, 2006).

Parents were asked how regularly the child visited the dentist; response categories ranged from *At least once a year* to *Never/almost never*. This was supplemented by a further question which asked whether the child had ever had any teeth filled or pulled.

A question on frequency of brushing teeth was asked in the Child Main Questionnaire (discussed in Section 7.2).

B23: Eating breakfast before going to school

Breakfast as part of a healthy diet and lifestyle can positively affect children's health and wellbeing. For example, Nicklas, Bao, Webber and Berenson (1993) looked at breakfast consumption patterns for 467 10-year-old children; eating breakfast made a significant contribution to the child's mean daily nutrient intake, in that a higher percentage of children who did not eat breakfast, compared with those who did, did not meet two-thirds of the Recommended Dietary Allowance for vitamins and minerals. Additionally, Rampersaud, Pereira, Girard, Adams and Metz (2005) reviewed the results of 47 studies that examined the association between breakfast consumption and nutritional adequacy, body weight and academic performance in children and adolescents. Children who reported consistently eating breakfast had superior nutritional profiles to those of peers who consistently skipped breakfast. Although children who ate breakfast tended to consume more daily calories, they were less likely to be overweight. The authors also reported that eating breakfast may improve cognitive function related to memory and test grades, as well as school attendance.

B23 simply asks whether the child usually has a breakfast before going to school. It provides a description of the number of children eating a breakfast and the relationship, if any, to school performance and current/future health status.

B24: Parental perception of Study Child's weight status

It has been argued that one of the reasons for the increase in rates of overweight is because parents fail to recognise that their child's weight status is problematic (e.g. Huang et al, 2007). Previous research provides support for this position; studies typically indicate poor correspondence between measured weight and parental perceptions of child weight status for those at the higher end of the Body Mass Index (BMI) distribution (e.g. Maynard, Maluska, Blanck et al, 2003). Etelson and colleagues (2003) noted that parents surveyed who had overweight children did not differ from other parents in their level of concern about excess weight as a health risk and tended to underestimate their children's weight.

A single question asked the respondent how they would describe the Study Child's weight, on a seven-point rating scale ranging from *very underweight* to *very overweight*. Investigators such as Huang et al (2008) and Maynard et al (2008) have demonstrated the utility of this type of question for indexing the extent of agreement between parental perception of child weight status and objectively measured child BMI status.

B25 – B26: Distance to school and means of transport

At both Waves 1 and 2, information was collected on travel to school as this is seen as having implications for the opportunity for exercise and its relationship to current and future health, as well



as developing the child's sense of autonomy and independence. It is estimated that 73 per cent of Irish primary-school children use motorised transport to get to and from school (Fahey, Delaney & Gannon, 2005).

6.1.3 SECTION C – RESPONDENT'S HEALTH

C1: General health status of parent or guardian

This item was derived from the Short Form Health Survey (SF-12, a 12-item survey that measures perceived general physical and mental health status. The item used in *Growing Up in Ireland* serves as an outcome measure of general health status, with responses indicated on a five-point Likert scale ranging from *excellent* to *poor*. This question was also used at Wave 1. The data will allow researchers to explore the links between both good and poor health status in parents, the stability of these, and outcomes for the child, including those pertaining to health, education and socio-emotional development.

C2 – C6: Chronic physical or mental health problems, illness or disability

Armistead et al (1995) have proposed a number of pathways by which the experience of parental chronic illness can affect child functioning. Thus parental illness may disrupt aspects of parenting (e.g. support, reinforcement, discipline) by reducing the capacity to provide care, or indirectly through the emotional distress of parents (e.g. depression). However, the extent to which the experience of parental illness affects child outcomes remains an under-researched phenomenon relative to the extensive literature that addresses families' adjustment to child illness (Pedersen & Revenson, 2005).

Questions C2 – C5, derived from the European Community Household Panel (ECHP / Living in Ireland survey (1994-2001), explored the nature, duration and impact of the illness/disability on the parent.

C7: Parental physical activity

C7 asks about the parent's perception of whether they are *very, fairly, not very, or not at all* physically active.

C8 – C9: Perception of own weight and dieting behaviour

Investigators have demonstrated the utility of this type of question for indexing the extent of agreement between perception of weight status and objectively measured BMI status.

As at Wave 1, the respondent was asked how they would describe their own weight on a seven-point scale, ranging from *very underweight* to *very overweight*, and also about frequency of trying to lose weight. Question C9 was designed to obtain a frequency measure of dieting behaviour. This is important from a longitudinal perspective in attempting to understand the precursors of eating disorders in children. For example, research suggests that parents' modelling of concerns about weight and shape may influence children's dietary behaviour (Smolak, Levine & Schermer, 1999).

C10 – C12: Healthcare insurance

Children are some of the heaviest users of both primary and hospital healthcare services. UK data have shown that more than 25 per cent of a GP's workload arises from consultations with children (Saxena, Majeed & Jones, 1999). A parsimonious explanation for variations in children's healthcare usage would be that a child's health status and level of need determines their use of medical care services (Janicke & Finney, 2000). However, the extent of fee-paying in the Irish system means that many children who require medical attention may not receive this, or may do so much later than they would have done had their parents not had to pay directly. Those on low incomes without medical-card cover may be particularly vulnerable as GP visits are likely to consume a large proportion of discretionary income. Determining variations in childhood access to medical care is clearly a major



policy issue, especially since there is reason to suspect that a delay in seeking medical care is associated with more complications from illness (Starfield & Budetti, 1985).

Questions C10 – C12 recorded information in respect of the family's medical insurance cover, including the provision of private healthcare insurance. Adapted from the Living in Ireland Survey, they will provide explanatory power in the analysis of variation in access to and use of health services, as well as variation in health status.

6.1.4 SECTION D – CHILD'S EMOTIONAL HEALTH AND WELLBEING

D1: Life events

As at age nine, a question was asked about potentially disturbing and/or traumatic events, from moving house to death of a parent. A list of such events was provided, but the respondent also had the opportunity to describe a disturbing event not covered in the list. The nature and number of such events experienced by the Study Child may have implications for current and future wellbeing. For example, experience of parental separation has been associated with increases in behavioural/emotional problems (e.g. Cheng, Dunn, O'Connor & Golding, 2006). Furthermore, beyond experiencing individual stressors, children may be subjected to additional vulnerability when exposed to the cumulative effects of multiple stressors, with more cumulative risk leading to more adjustment difficulties (Appleyard, Egeland, vanDulmen & Sroufe, 2005). This question was adapted from the National Longitudinal Survey of Children and Youth.

D2: Study Child's behaviour (Goodman, 1997)

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) is a brief (25-item) measure of the prosocial behaviour and psychopathology of children aged three to 16 years that can be completed by parents, teachers, or children/youths themselves. The instrument produces scores for each of five sub-scales; emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behaviour. Each sub-scale comprises five items. A Total Difficulties score is obtained by summing scores across the four deficit-focused scales (i.e. all except the prosocial behaviour scale). Respondents are required to indicate their level of agreement to each item on a three-point scale indicating whether the item is *not true*, *somewhat true* or *certainly true*. Sub-scale scores range from 0-10 and the total difficulties score ranges from 0-40. Higher scores on the problem-oriented scales are indicative of more problems.

This measure was also used at nine years so that, while strengths and difficulties can be explored cross-sectionally, they can also be mapped over time. This allows comparison of those with time-bound difficulties to those with persistent difficulties, and how these in turn might relate to other outcomes, such as antisocial behaviour or depression.

Psychometric information

A nationwide epidemiological sample of 10,438 British 5-15-year-olds found reliability to be generally satisfactory, with adequate internal consistency ($\alpha = 0.73$). The authors also found that SDQ scores above the 90th percentile predicted a substantially raised probability of independently diagnosed psychiatric disorders (mean odds ratio: 15.7 for parent scales, 15.2 for teacher scales, 6.2 for youth scales).

Findings from the first wave of *Growing Up in Ireland* produced similar reliability estimates, with internal consistency of 0.72 at age nine and 0.73 at age 13.

D3: Study Child's personality (Gosling, Rentfrow & Swann, 2003)

Personality, which is a major source of individual difference, is associated with social and psychological wellbeing and vulnerability to behavioural and psychosocial difficulties. Emotionality,



for example, has been identified as a risk factor for onset of major depression in adults (Kelvin et al, 1996). Delinquency or criminal offending has also been consistently related to high negative emotionality; those with high negative emotionality have often been found to have a low threshold for fear, anxiety and anger, especially under stress.

Measure

Personality was measured using the Ten Item Personality Inventory (TIPI). This was used to replace the measure of temperament used at nine years (EAS, Buss & Plomin, 1984). The scale measures the 'Big Five' dimensions: Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience.

Psychometric information

Although the psychometric properties of the scale are somewhat lower than desirable for standard multi-item instruments (alphas of .68, .40, .50, .73, .45 for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience), Gosling, Rentfrow and Swann (2003) notes that the scale is still useful where personality is not the primary topic of interest, as is the case in the *Growing Up in Ireland*. They stress that the TIPI was not designed with internal consistency in mind as it was developed to measure very broad domains, with only two items per domain. With such a small number of items in each dimension, other researchers have pointed out that the use of alphas is often misleading (e.g. Woods & Hampson, 2005). In the case of the TIPI, the goal instead was to create a short instrument that maximised validity. The authors report convergent correlations between the TIPI and the Big Five Inventory (BFI) (John & Srivastava, 1999) of .87, .70, .75, .81, .65 for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience.

Convergent validity of the personality measure used at 13 years was assessed in the pilot study by comparing some of the scale scores from the personality measure with scale scores on other measures. For example, the *total difficulties* score on the SDQ was found to be negatively associated with *agreeableness* ($r = -0.53$; $p < 0.01$) and *emotional stability* ($r = -0.56$; $p < 0.01$) on the TIPI. Higher scores on the SDQ *conduct* scale were negatively associated with *conscientiousness* on the TIPI ($r = -0.49$; $p < 0.01$), while *prosocial behaviour* was positively associated with *agreeableness* ($r = 0.56$; $p < 0.01$). *Emotionality* as measured by the SDQ was negatively correlated with *emotional stability* ($r = -0.63$; $p < 0.01$).

While the TIPI is normally used as a self-report measure (with older adolescents), it was decided that parent report on the child would be more appropriate in the current study, given some of the concepts presented. For example, each dimension on the TIPI consists of two descriptors, separated by a comma, using the common stem, 'I see my child as...', followed by two statements, e.g., 'Open to new experiences, complex; Conventional, uncreative'; 'Dependable, self-disciplined; Disorganised, careless'. Each of the 10 items was rated on a seven-point scale, with answer categories ranging from *disagree strongly* to *agree strongly*.

6.1.5 SECTION E – CHILD'S EDUCATION – PAST AND CURRENT

E1a-b: School information

Name and address information for the secondary school that the Study Child was attending, or would attend from September 2011. This was necessary to allow linkage of school-level data recorded as part of the survey (see Section 5.1) to the Study Child's individual data.

E2 – E4: Settling in to new school

The transition from primary to secondary school is often regarded as one of the most difficult in pupils' educational careers, and research has shown that bullying is often a major concern, as well as



increased workload and issues around peer relationships, among others (Zeedyk & Gallacher et al, 2003).

Questions E2 – E4 were dependent on what class the child was in at the time of interview, and asked whether the child had settled in to secondary school, was missing friends from primary school/anxious about making new friends, and was coping with the school work/levels of homework (1st and 2nd year). If still in 6th class (primary school) parents were asked if the child was looking forward to secondary school and whether they had attended an open day at their prospective new school.

E5: Parental contact with the school

Parental involvement in a child’s educational progress is commonly linked to academic achievement and attendance. Although no consensual definition exists for parental involvement, behaviours such as attending parent-teacher meetings and knowledge of homework and school attendance are all important aspects of the parent’s involvement in the child’s schooling, although this may also be a function of the particular school and its ethos.

This question asked about attendance at parent-teacher meetings, school concerts, plays, etc, meetings with the principal about the child’s behaviour, and speaking on the phone about the child’s behaviour to a teacher or principal.

Questions E6a-b and F2/F3 relate to further information on parental knowledge of absenteeism and homework completion.

E6a-b: School absenteeism

Absenteeism has been linked to other important factors such as the disadvantaged status of the school (O’Brian, 2006), as well as family, school and community factors that can affect levels of school disaffection at second level (e.g. Meece, Anderman & Anderman, 2006; Edward & Malcolm, 2002; Dalziel & Henthorne, 2005). Absenteeism is of particular concern since it is linked to lower grades and decreased gains in learning (Kearney, 2003; Lamdin, 1996; Truby, 2001) and is a strong predictor of early school-leaving (e.g. McCoy et al. 2007). Conversely, school attendance is correlated with increased academic success.

These questions, based on items in the National Longitudinal Survey of Children and Youth, collected information on absenteeism, including the number of days the Study Child was absent from school in the last 12 months and the main reasons for these absences (see Section 7.2).

E7 – E9 & E24: Parental involvement in Study Child’s education

Environmental supports for reading are considered a strong predictor of children’s educational outcomes, and the number of children’s books in the home is positively associated with children’s Reading and Maths scores, independent of other socio-economic variables (Fryer & Levitt, 2004; Smyth, Whelan, McCoy et al, 2010).

This series of questions included parental knowledge of and help with homework and expectations for the child’s future. Higher parental involvement in child education has been linked to significant effects on school achievement into adolescence (Feinstein, 1999).

Question E24 asked how many children’s books the child had access to in the home, with five response categories ranging from *none* to *more than 100*. This type of question has been found to vary by parental education level. Analysis of the *Growing Up in Ireland* Child Cohort revealed that 76 per cent of children whose mother had attained third-level education had access to 30+ books in the home compared to 41 per cent of children whose mother had a lower secondary education (Williams, Greene, Doyle et al, 2009).



E10: Number of close friends

As at Wave 1, this question asked the Primary Caregiver how many close friends the Study Child had. At Wave 2 this question was also asked of the child. The level of agreement between the parent and child reports may give some insight into the closeness of the parent-child relationship, and may also reflect the amount of parental monitoring and child disclosure within this dyad.

E11 – E14: Bullying

These questions looked at whether the Study Child had been bullied in the last three months, the form the bullying took (e.g. physical, verbal), and the reason for it (e.g. ethnicity, disability). This question was also asked at Wave 1, although the reference period was slightly different (last year for Wave 1). Bullying has been linked to many problems including diminished school performance, poor mental health, delinquent behaviour and future criminality (Parada et al, 2005). Results from the current study will increase understanding of what sorts of children are being bullied or being bullies, and how this may relate to past, current and future outcomes. They will also help to clarify whether victims of bullying, and indeed bully perpetrators, experience poorer outcomes than their peers.

As a measure of the impact of the bullying on the child, a final question asked whether it upset their child *a lot, a little, or not at all*. The Study Children themselves were also asked questions about their experience of bullying, both as victim and perpetrator (see Section 7.2). As mentioned above, comparisons between parent and child accounts of bullying may elicit important information on different aspects of the relationship between them, including parental monitoring and child disclosure.

E15 – E23: Physical and mental conditions or disabilities of the child

There are a number of correlates with child health that can be explored in the context of the current study. For example, maternal health is seen as an important determinant in child health outcomes, as it can be a risk factor in the development of chronic health conditions. Access to and use of child, adolescent and general health services also have a direct impact on health outcomes. Family knowledge about the range of services available, and the appropriateness of these services, may also influence their use by families.

A diagnostic study of youths aged 10-17 years with school attendance difficulties indicated that one-fifth reported that physical illness was associated with onset of school attendance difficulties (McShane, Walter & Rey, 2001). Since absenteeism is linked to lower grades and decreased gains in learning (see above), it is of particular concern for children with physical health issues.

Question E15 asked about specific conditions or disabilities, including physical conditions, learning disabilities (e.g. dyslexia, dyscalculia, dyspraxia), emotional and behavioural disorders (e.g. ADHD, ADD, etc), assessed syndromes (e.g. Down Syndrome) and speech or language difficulties, among others.

Questions E16 to E19 asked about diagnosis of the condition, age of child at first diagnosis and prescription of medication. Questions on specific conditions and diagnoses were also asked at age nine to indicate stability of the condition, and identify new cases, or perhaps those who had been cured.

Questions E21 to E23 asked about supports received by the child such as Special Needs Assistance, resource teaching, school psychologist (within school) and, for example, speech and language therapist, occupational therapist and psychiatrist (outside school). E23 asked about the perceived adequacy of these supports.

E25 – E26: Computer ownership and use



These questions asked about household ownership of a computer and access to the Internet, as well as adult supervision of the Internet (via a filter system such as Net Nanny). Question E26 also asked about the Study Child's normal weekday usage of the computer (not including computer usage during school time). Children from households that cannot afford a computer may be at a disadvantage compared to classmates who can practise their computer skills at home and use the Internet as a resource for school projects (Malcolm, 1988, cited by Santrock, 1998). These questions are also relevant to potential risk exposure via the Internet.

Using data from the ONS Family Spending Survey, the UK's e-Learning Foundation (2013) analysed data on computer ownership and Internet access for families with children aged under 18. Their findings showed that most children (89 per cent) could get on to the Internet via a computer at home. However, the data also showed that while 99 per cent of children in the richest 10 per cent of households could access the Internet via a computer, this dropped to 57 per cent in the poorest 10 per cent of households with children. This lack of access to a computer in the evening is manifested in increased disadvantage in the classroom, with 1.2 million teenagers logged on to revision pages every week,¹² and those using online resources on average likely to attain a grade higher in exams.

E27: Childcare arrangements

The after-school period is a time of concern for parents and policymakers as many adolescents are unsupervised during the several hours after school and before parents return from work. Evidence shows that delinquent activity is heightened during this time (Gottfredson et al, 2001; Sickmund et al, 1997; Snyder et al, 1996). While after-school care for younger children is often more structured, by the time children reach adolescence they are often left on their own after school.

Question E27 asked who, if anyone, minded the Study Child between finishing school and 6pm in the evening. Options included taking care of themselves, being minded by an older sibling, minded by a relative, hanging out with friends, etc.

6.1.6 SECTION F – FAMILY CONTEXT

F1: Parent-child relationship (Child-Parent Relationship Scale – Short Form, Pianta, 1992)

Positive and supportive interactions between parents and children have been shown to positively affect social behaviour, school grades and externalising behaviours (O'Connor, Hetherington & Clingempeel, 1997). The parent-child relationship may be affected by the quality of the marital relationship, and vice versa (Erel & Burman, 1995; McKeown et al, 2003). The parent-child relationship has been highlighted by researchers as one of the salient factors mediating the association between family structure and child outcomes. Positive and supportive interactions between parents and children encourage appropriate social behaviour, and have been shown to be associated with an increase in school grades and decrease externalising behaviours (O'Connor, Hetherington & Clingempeel, 1997; Mosely & Thompson, 1995).

Measure

These questions concern the parent/guardian's relationship with the Study Child, and tap into both positive and negative aspects of the relationship. F1 was a standardised measure called the Child-Parent Relationship Scale (Pianta, 1992). At 13 years, the short form (15-item) version of the Pianta was used; it has previously been used both by the MCS and *Growing Up in Ireland* (Wave 2, Infant

¹² See, for example, <http://www.theguardian.com/education/2011/may/21/children-internet-access-exam-advantage>



Cohort). The statements concerned parent's interactions with the Study Child, and were rated on a five-point scale, with answer options of *definitely does not apply*, *not really*, *neutral*, *not sure*, *applies somewhat*, and *definitely applies*. An answer option of *not applicable* was allowed for one of the statements relating to being at work for those who were not employed outside the home. The Conflicts and Positive Aspects sub-scales were derived from the items recorded. The Conflicts sub-scale included items on the parent's perception of difficulties in the relationship with the Study Child, while the Positive Aspects sub-scale included items relating to getting on with the Study Child and feelings of effectiveness as a parent.

Psychometric information

The psychometric information made available for the Pianta by the authors relates to the 30-item version. The reliabilities calculated for each scale are based on 714 subjects, ages 4.5-5.5 years old. The Conflicts sub-scale gave an alpha of 0.83 while the Positive Aspects sub-scale had an alpha of 0.72. The measure also generates a total scale score reflecting an overall positive relationship. The alpha co-efficient for the total score for the short form of the Pianta used in the MCS was 0.90.

Findings from *Growing Up in Ireland* at nine years of age indicate that the closeness sub-scale on the 30-item measure produced alphas of 0.58 and 0.63 (Primary and Secondary Caregiver respectively) and 0.85 and 0.82 (Primary and Secondary Caregiver respectively) on the Conflicts sub-scale.¹³

F2&F3: Parental monitoring and child disclosure (Stattin & Kerr, 2000)

Monitoring of children's behaviour is considered an essential parenting skill. Many studies show that well-monitored youths are less likely to engage in delinquency (Jacobson & Crockett, 2000; Pettit, Laird, Dodge, Bates & Criss 2001), and participate less in substance use (Dishion, Capaldi, Spracklen & Li, 1995). Poor monitoring is associated with increased problem behaviours, which are shown to be a predictor of police arrests and delinquent lifestyle. It has also been linked to academic achievement (Steinberg et al, 1992), depression (Gil-Rivas et al, 2003), as well as levels of parental involvement (Laird, Pettit, Dodge et al, 2003).

Parental monitoring referred to here is not so much about parents' activity as their knowledge of the child's behaviour, much of which comes from the child's spontaneous and willing disclosure of information, as well as parental solicitation (or surveillance) and control.

Some evidence suggests that adolescent disclosure may be a stronger predictor of both parental knowledge and adolescent adjustment than parents' active efforts in monitoring their children (such as control or surveillance) (Kerr & Stattin, 2000; Stattin & Kerr, 2000), although this may depend on factors such as the age and gender of the child. This precedence of adolescent disclosure over parenting practices holds for internalising problems such as low self-esteem and depressed mood, as well as externalising problems such as delinquency. For instance, in contrast to findings on children's externalising problems, most studies among adolescents do not find unique associations between parenting practices and adolescents' delinquency when controlling for adolescent disclosure, both concurrently and longitudinally.

¹³ Results from the *Growing Up in Ireland* 13-year sample show that the alpha coefficients for the short form of the Pianta were 0.83 and 0.75 for the Conflicts sub-scale for Primary and Secondary Caregivers, and 0.75 and 0.80 for the closeness sub-scale for Primary and Secondary Caregivers.



However, this relationship is not that straightforward, in that factors such as parenting style and parent-child relationship are directly related to adolescent self-disclosure; i.e., parental warmth is likely to be related to higher levels of closeness and communication in the relationship. This in turn is positively related to parental knowledge and negatively related to adolescents' antisocial behaviour. Therefore, all these factors need to be kept in mind when exploring this issue.

Measure

Stattin and Kerr (2000) devised four scales: Parental Monitoring, Parental Supervision, Parental Control, and Child Disclosure. Three of the four sub-scales were used in the current wave of the study. Since the authors had found that supervision/solicitation offered the least explanation for parental knowledge, especially when it was explored in the context of child disclosure and parental control, it was decided not to use that particular scale at this time. The Parental Monitoring and Child Disclosure sub-scales were used in both the Primary and Secondary Caregiver questionnaires, and the Control sub-scale was included in the Child Main Questionnaire (see Section 7.2). Ideally, all sub-scales would be given to all respondents but, due to time pressure as well as burden on respondents, this was not deemed possible in the current wave. Items were rated on a five-point Likert-type scale, ranging from *almost never or never* to *almost always or always*. Higher scores on the sub-scales indicate higher levels of monitoring, disclosure or control.

Psychometric information

Stattin and Kerr (2000) report reliabilities for a sample of 703 14-year-old students and 539 of their parents who completed the questionnaires (mother, father or guardian). Internal consistency reliabilities for the sub-scales were substantial for both student and parent scores: Monitoring (0.89, 0.86), Disclosure (0.84, 0.81) and Parental Control (0.82, 0.77). The authors point out that mothers and fathers can have different levels of knowledge under certain conditions (e.g. Crouter, Helms-Erikson, Updegraff & McHale, 1999); however, this was not addressed in their study because they could not compare mothers and fathers in the same families as they did not collect data from both – an issue that can be addressed in *Growing Up in Ireland*

F4 – F5: Family time together

Parents influence their children by providing structure in their daily lives. Some findings have shown that regular, predictable routines and time spent together result in more positive outcomes for children than when their family life is disorganised (Boyce et al, 1983). The positive influence of parental time with children on child outcomes is well established in the literature, which has highlighted fewer behavioural problems later in childhood (Amato & Rivera, 1999; Hofferth, 2006) and positive associations with academic performance (Cooksey & Fondell, 1996). Moreover, Hofferth and Sandberg (2001) suggest that time with parents provides opportunities for children's social, cognitive and emotional development.

F4 and F5 asked about time spent doing various activities together as a family such as eating a meal, playing games and going shopping, and how often the Study Child spent time with or saw relatives.

F6: Work-life balance

These questions relate to work-life balance; not just the impact of work on family, but also of family on work. Rather than focus on the fact that parents work, researchers have begun to focus instead on how they work (Galinsky, 1999), and the issue of work-life balance is of increasing interest to researchers given the greater work demands placed on individuals and especially on the increasing number of women participating in the labour force. More recent focus has turned to the actual quality of the work experience for parents; the bidirectional influence between this and family life can also be explored in the context of parental working patterns.



This is an issue of interest that has been spurred by research indicating that, even when job characteristics and other factors were controlled for, work-family tension was higher among those with young children and among women (O'Connell & Russell, 2005). That said, results from Growing Up in Australia, where the questions were developed, showed that it was fathers who had the higher levels of work-to-family spillover, taking account of the effect of work on family as well as the effect of family responsibilities on work. Considering other factors such as family context and work patterns, for example, researchers will be able to compare the findings from the Irish study with those from Australia. It is also likely that any discernible impact on child outcomes will have potentially important implications for employment policies.

Parental satisfaction with their current work-life balance was assessed using four questions adapted from Growing Up in Australia and which had previously been used with both waves of the Infant Cohort, and the Child Cohort at Wave 1.

F7: Household tasks

Respondents were asked to rate on a three-point scale how fairly the primary caregiver felt household tasks were distributed between them and their partner. This question was also asked of the secondary caregiver for comparison. As well as adding to the description of family relationships, it may also indicate the presence of certain types of gender role modelling within the household.

F8: Child conduct disorder

Conduct disorder (CD) is a disorder of childhood and adolescence defined by rule-breaking and aggressive and destructive behaviours. It has generally been accepted that about 40 per cent of individuals with CD persist in their behaviour. Individual CD criteria have also been found to differentially predict severity and persistence of antisocial behaviour, with victim-oriented, aggressive behaviours generally being more predictive of persistence (Gelhorn, Sakai et al, 2007).

The questions used in *Growing Up in Ireland* asked about the Study Child's conduct over the last year, and extend the questions asked at nine years to include more serious behaviours. The items, taken from the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) classification of conduct disorder, include behaviours such as being physically cruel to other people or animals and deliberately damaging property. These items tap symptoms only and are not intended to diagnose any child with a psychiatric condition.

6.1.7 SECTION G – SOCIODEMOGRAPHICS

G1&G2: Nature of accommodation and status of tenure

These questions recorded whether the household was owner-occupied, rented, etc. Tenure status has been very widely used in ESRI surveys over several decades and has been linked to measures of wellbeing independently of covariates. This question was also asked at nine years and will highlight stability or change in the nature of tenure status for families over time, especially bearing in mind the recent recession, and what effects these may have on child outcomes.

Questions captured basic descriptive information relating to tenure status and whether the accommodation had access to a garden or common space where the child could play. These questions have been routinely used in other ESRI surveys.

G3 – G21: Principal economic status and related variables

As at age nine, and depending on whether or not they were currently working (either as an employee, self-employed or farmer) outside the home, the respondent provided information on current or historic occupation and supervisory or managerial functions in the workplace. This information was recorded to allow a social-class classification to be assigned to each household. This section also



recorded details on number of hours worked outside the home. This information is of direct relevance to issues of parental work-life balance, childcare, time spent with the Study Child and their impact on the child's outcomes, accounting for other covariates. Furthermore, tracking this information across waves means that changes in employment status can be captured; again, this is especially relevant given the recent recession in Ireland.

G22: Reason for not working in a paid job outside the home

This question was asked of those who did not work outside the home. A choice of nine options was provided, including *cannot find a job*, and *prefer to look after children oneself*.

G23: Occupation of spouse or partner

This question was principally asked in the main interview so that the information was available to the Study Team should the spouse or partner not be available to complete the Secondary Caregiver interview.

G24 – G28: Household income

These questions addressed issues related to household income. G24 and G25 recorded the main sources of income received by the household. G26-G28 recorded details on the level of household income. The concept is total household income from all sources and all household members, net of the statutory deductions of income tax and social insurance contributions (PRSI). This is a measure of the household's total disposable income. G26 offered the respondent the opportunity to record an exact figure per week/month/year. If this was not known or not forthcoming, G27 and G28 were then used to record the information using a series of rolling categories. The respondent was first asked to select which of the 10 categories his/her household fell into. This category was subsequently broken into sub-categories in an attempt to record the information on the most disaggregated basis possible. These income questions were used in the Living in Ireland survey, the Irish component of the European Community Household Panel survey (ECHP). A major aim of this survey was to provide an up-to-date and comparable data source on personal incomes. Numerous publications have been based on the income data from this survey, particularly in the area of poverty and anti-poverty strategies (see for example Whelan et al, 2003). These questions were also asked at age nine, allowing analysis of change or stability in income and how this related to outcomes for the child, particularly in the context of the impact of the recession on the household (see G40-G41).

G29 – G34: Receipt of social welfare payments in the household

All welfare schemes were listed and the household's estimate of its social welfare dependency was recorded. This was included as a cross-check on the welfare dependency level, which can be derived from the household income and receipt of welfare payments under various schemes. The details on social welfare receipts and dependency are interesting in a longitudinal as well as a cross-sectional perspective. Longitudinally, they will enable analysis of welfare receipt and transitions over time and its impact on child development.

G35 & G37 – G38: Basic Deprivation scale (Whelan, Maitre & Nolan, 2007)

A substantial amount of research into poverty and deprivation, as well as their influence on outcomes across a very wide range of substantive research areas, has been undertaken in Ireland in recent years (for an overview see, for example, Whelan et al, 2007). Fundamental to much of this work has been the development and implementation of a Basic Deprivation scale.

The Basic Deprivation scale developed by the Economic and Social Research Institute (ESRI), is one of four identified in analysis of the Central Statistics Office (CSO) EU-SILC data. The other three sub-scales relate to Secondary Deprivation, Housing Deprivation, and Neighbourhood/Environmental deprivation. Given the focus of the *Growing Up in Ireland* project and space constraints in the



relevant instruments, only the items associated with Basic Deprivation were included. The Basic Deprivation scale is made up of 11 items relating to poverty in areas such as food, clothing, furniture, debt and minimal participation in social life. The index can be used on its own as a measure of non-monetary deprivation. It has also been widely combined with thresholds of relative income poverty to provide a measure of 'consistent' poverty status and changes therein over time. Using it in this way allows one to obtain a comprehensive picture of the household's command over financial and other resources.

The Basic Deprivation scale has been extremely important in framing Ireland's National Anti-Poverty Strategy as well as in monitoring progress towards achieving national targets. Item loadings on the Basic Deprivation dimension ranged from 0.55 for going without heating to 0.71 for being able to afford new clothes and eating a roast joint or equivalent (Whelan, Maitre & Nolan, 2007). Convergent validity was also excellent, with the scale exhibiting high correlations with others in this area including the ECHP eight-item Basic Deprivation index.

G40 – G41: Impact of the recession on the household

Since first interviewing the families of the 13-year-olds in 2007 through early 2008, which heralded the peak of an unprecedented boom in Ireland, there has been an unprecedented bust. Unemployment increased from 6.6 per cent in September 2008 to 14.4 per cent in August 2011. A large proportion of workers suffered pay-related deductions or cuts, and Government initiatives to address the structural deficit resulted in reductions in social welfare payments and Child Benefit.

These questions, developed by the Study Team, were designed to gauge the impact of the recession on households. Question G40 was a routed question that asked about the extent to which the recession was affecting the household, with four response categories ranging from *a very significant effect on your family* to *no effect at all on your family*. Those who indicated that the recession was having an impact on their family were routed into G41, a 10-item multi-response listing, to ascertain how the recession had affected the family, with options including redundancy of self or partner, and difficulty in paying mortgage, utility bills, etc.

6.1.8 SECTION H – ABOUT YOU

H1 – H2: Highest level of educational attainment

Parental education level is an important explanatory variable in the analysis of socio-economic variation in children's outcomes (Davis-Kean, 2005). The effect of maternal education on a child's development has been implicated in a number of domains: for example, accessing information in relation to child physical development (Thomas, Strauss & Henriques, 1991), an enriched home learning environment in relation to child educational achievement (Christian, Morrison & Bryant, 1998), parental expectations of how far the child will go in school (Williams, Greene, Doyle et al, 2003), and the child's academic attainment (Haveman & Wolf, 1995; Sirin, 2005). In addition to these direct effects on child achievement, parental education may also influence child outcomes through indirect pathways such as its effects on parenting beliefs and behaviours (c.f. Davis-Kean, 2005).

Question H1 was taken from the Irish Census of Population, with parental education disaggregated into a 13-level discrete variable representing gradations in primary, secondary and third-level education. This question was supplemented with item H2 which asked what age the respondent was when they left full-time education for the first time; this will allow us to examine whether increases in maternal education that occur after the birth of her child will improve their academic outcomes (e.g. Magnuson, 2007).

H3: Study Child's first language

One item asked about the Study Child's first language, with the answer options of *English, Irish, Other (please specify)*. This question was used to highlight whether or not language difficulties could be



implicated in any negative social interactions with peers, and could also be used to contextualise school performance

H4 – H7: Parental literacy and numeracy

Parental literacy is a proximal variable that can affect child outcomes directly through its influence on the home literacy environment (Burgess, Hecht & Lonigan, 2002). Most studies have examined the relationship between storybook exposure and children’s language skills; studies indicate that parent-child reading interactions are positively associated with children’s language skills, including the acquisition of word knowledge, vocabulary, and the rules of written syntax (c.f. Sénéchal, LeFevre, Thomas et al, 1998).

This set of questions was adapted from the Millennium Cohort Study. H4 asked whether the respondent could read aloud to a child from a children’s book written in their native language (if this was other than English), while H5 asked whether this competency extended to the English language. H6 asked whether the respondent could comprehend and complete forms in English. H7 asked whether respondents could usually tell if they had the correct change in shops from a five or 10-euro note.

H8&H9: Religion

These questions collected information on the denomination of the main caregiver. Such questions should provide important demographic information in an increasingly secular society. They are also important in terms of understanding differences between children who are given some form of religious upbringing and those who are not.

H10: Spirituality

Religious and spiritual beliefs are an important part of how many people deal with issues in life. Often, when families face tough situations, including health problems, their religious and spiritual beliefs and practices can help them fight feelings of helplessness, restore meaning and order to life situations, and promote regaining a sense of control. For some families, spirituality can be a powerful and important source of strength.

A review of the international research literature on family resilience shows that processes that operate at the family level – including strong emotional bonds, effective patterns of communication, the use of coping strategies and family belief systems, especially those based on spiritual or religious values – are important means by which families manage to cope with adversity. This is a key concept in research on resilience, an important component of which is successful engagement with risk, and which has been described as a dynamic process encompassing positive adaptation within the context of significant adversity (Luthar et al, 2000).

H11 – H15: Citizenship and length of time resident in Ireland

As at age nine, information was recorded on citizenship, country of birth, and duration of residency in Ireland for both respondent and Study Child.

H16: Ethnicity

Information about ethnicity has substantive analytical benefit and is also used as an input to the reweighting of the data, having been taken directly from the most recent Irish Census of Population. This question was also asked in the father/partner and non-resident parent questionnaires so that ethnicity for both parents was recorded.



6.1.9 SECTION J – NEIGHBOURHOOD/ COMMUNITY

J1: Length of time living in local area

This question, also asked at nine years, asked how long the respondent had lived in the area. This may give some indication of stability and possible ties to the community.

J2: Intention to continue living in Ireland

This question asked whether the respondent intended to continue living in Ireland. The information will be used for sample retention and tracing purposes, especially in the context of rising emigration as a result of the recession.

J3 – J4: Satisfaction with and perception of the local area/neighbourhood

There is increasing recognition that the social ecology and structure of neighbourhood environs matter for children’s health and wellbeing (Roux, 2007). Neighbourhoods have a range of social and physical characteristics (e.g. perceived safety) that are likely to be important for child outcomes. Sellstrom and Bremberg (2006), for example, reported the results of a systematic review of 13 multi-level studies which examined the relationship between neighbourhood context and a variety of child outcomes, including birth-weight, behavioural problems, risk for injury and child maltreatment. Both neighbourhood socio-economic status and neighbourhood social climate were found to have small to moderate effects on child health outcomes.

Questions J3–J4 asked about the extent to which the respondents agreed with a series of statements about their local area on a four-point Likert scale, ranging from *very common* to *not at all common* or *strongly agree* to *strongly disagree*. With the potential to link to other sources of administrative data about neighbourhood environs, such as the Small Area of Population Statistics (SAPS), the empirical value of the data may be enhanced.

6.2 SECONDARY CAREGIVER QUESTIONNAIRE

The Secondary Caregiver Questionnaire was administered to the resident spouse or partner of the Primary Caregiver. This was usually the male parental figure in the household (generally the father of the Study Child). In situations in which, for example, the father of the Study Child clearly stated that he was the child’s Primary Caregiver, he completed the longer, more detailed, Primary Caregiver Questionnaire (discussed in Section 6.1 above).

The Secondary Caregiver Questionnaire comprised a sub-set of items from the Primary Caregiver Questionnaire, so cross-referencing is used to refer the reader to the relevant sections of the Primary Caregiver Questionnaire. The Secondary Caregiver Questionnaire is provided in Appendix E.

6.2.1 SECTION A – INTRODUCTION

A1: Relationship of respondent to the Study Child

This question was only asked of new respondents or those who had not completed the Secondary Caregiver interview at Wave 1.

6.2.2 SECTION B – PARENTAL HEALTH

B1: General health status

See Section 6.1.3, Question C1.

B2 – B5: Chronic physical or mental health problems, illness or disability – including nature, duration and constraints of current problem(s).



See Section 6.1.3, Questions C2 – C6.

6.2.3 SECTION C – PARENTING AND FAMILY CONTEXT

C1: Quality of the parent-child relationship (Child-Parent Relationship Scale – Short Form, Pianta, 1992)

See Section 6.1.6, Question F1.

C3 – C4: Parental monitoring and disclosure (Monitoring and Supervision measure, Stattin and Kerr, 2000)

See Section 6.1.6, Questions F2 – F3.

C4: Parental work-life balance

See Section 6.1.6, Question F6.

C5: Household tasks

See Section 6.1.6, Question F7.

C6: Family time together

See Section 6.1.6, Question F4.

C7a-b: Amount of time spent with the Study Child

Children with actively involved fathers tend to do better in school, have better grades, and are less likely to be expelled or have to repeat grades (USDHHS, 2004).

Child gender is one factor that may affect the amount of time fathers spend with their children. Several studies indicate that fathers spend more time with sons than with daughters, particularly in play and companionship activities, and in achievement-related activities (Lundberg, Pabilonia & Ward-Batts, 2006; Yeung, Sandberg, Davis-Kean & Hofferth, 2001; Yeung & Stafford, 2002). Mammen (2005) found that girls with brothers spent more time with their fathers than girls without brothers. Fathers of sons are more involved with their children’s discipline, schoolwork and other activities than are fathers of daughters (Lamb et al, 1987).

Two questions were asked about the time spent with the Study Child (either alone or with others) on an average school day and also on an average weekend. These questions were also asked at nine years, and the responses will highlight changes in father-child interactions as the child grows older.

6.2.4 SECTION D – SOCIODEMOGRAPHICS

D1 – D20: Principal economic status and related variables

See Section 6.1.7, Questions G3 – G22.

6.2.5 Section E – About you



E1 – E2: Parental education level

See Section 6.1.8, Questions H1 – H2.

E3 – E6: Parental literacy and numeracy

See Section 6.1.8, Questions H4 – H7.

E7 – E14: Basic demographic details

See Section 6.1.8, Questions H8 – H15.

6.3 PRIMARY/SECONDARY CAREGIVER SENSITIVE QUESTIONNAIRE

A common supplementary sensitive questionnaire was completed by both the Primary and Secondary Caregivers in the home as part of the household interview. The questions were considered more sensitive than those in the main questionnaire and were included in a separate module for the respondent to self-complete on a CASI basis. With the exception of items AS1–AS3, which asked the primary carer reasons for departures from the household since the time of the last visit, the questionnaires were identical for the Primary and Secondary Caregivers. The content of the questionnaires, the rationale and the measures used are detailed below. The Primary Caregiver Sensitive Questionnaire and Secondary Caregiver Sensitive Questionnaire are provided in Appendices D and F respectively.

X1 – X2: Gender and date of birth

AS1 – AS3: Household transitions

This question was designed to capture information about transitions out of the household since Wave 1. If the respondent indicated on the household grid that a member of the household at Wave 1 was no longer resident in the household at Wave 2, questions AS1–AS3 queried the reason for and timing of the departure from the household. These questions were only asked of the Primary Caregiver.

S1 – S11: Respondent’s relationship to the Study Child

S1–S11 was a series of questions about the respondent’s relationship to the Study Child and whether he/she was the biological, adoptive or foster parent of the child.

S12 – S15: Current and previous marital status

Research has repeatedly highlighted the link between family structure, changes in structure, and child outcomes. For example, Cheng, Dunn and Golding (2008) found that parental separation was linked to a significant increase in emotional/behavioural problems for the child even after accounting for demographic and other variables, such as marital quality, maternal depression, and socio-economic circumstances were accounted for (Cheng, Dunn & Golding, 2006). Data from the current study will enable researchers to explore these factors, as well as links with others, such as the parent-child relationship, as a possible mediator of adjustment (Bernardini & Jenkins, 2002).

Questions S12–S15 asked about the current or previous marital status of the parent(s).

S19 – S20: Quality of the parent/couple relationship (Dyadic Adjustment Scale)

Marital satisfaction is an important factor in family functioning, and the manner in which parents interact is crucial for child outcomes. Marital satisfaction has been highlighted as not only important in affecting the child’s wellbeing, but also that of the parents, as it is seen as a component of adult life satisfaction (Bradbury, Fincham & Beach, 2000). Research has also shown the spousal relationship to be the most important source of support for competent parenting (Belsky, 1984).



Measure

The quality of the couple relationship was indexed using the short four-item form of the Dyadic Adjustment Scale (DAS-4) (c.f. Sabourin, Valois & Lussier, 2005). It provides an assessment of dyadic satisfaction based on self-report and is used as a means of categorising marriages as either distressed or adjusted. Findings from several studies provide strong evidence that the short form of the DAS used in the current study has maintained the content coverage of the original 32-item DAS (Spanier, 1976) while ensuring good psychometric properties (Sabourin et al, 2005).

Psychometric properties

Sabourin found reliability for the four-item measure to be higher than .81 at all levels of couple distress. The reliability of the DAS-4 increased up to .92 for non-distressed participants. The traditional standardised alpha for the DAS-4 was .84, and the standardised alphas for the alternative brief versions used in previous studies were .85 for the DAS-7 (Sharpley & Rogers, 1984) and .94 for the original DAS-32. Differences among the short versions of the DAS were not found to be substantial; the four-item version preserved good internal consistency.

S21: Parenting stress (Parental Stress Scale, Berry & Jones, 1995)

Parenting stress is associated with negative parenting attitudes, negative parenting behaviours, and parental wellbeing (Crnic, Gaze & Hoffman, 2005). Although much research has focused on the determinants of parenting stress, which include poverty, social disadvantage, lack of education, and poor child health (Warfield, 2005), it is the consequences of parenting stress for children's developmental outcomes that is of interest in the present context. For example, studies have shown that parenting stress can interfere with parents' abilities to interact positively with their child (Deater-Deckard, 2005), and is associated with a range of adverse child outcomes including behavioural problems (Crnic & Low, 2002).

Measure

The Parental Stress Scale (Berry & Jones, 1995) is an 18-item self-report scale designed to assess both positive and negative aspects of parenthood. It comprises four sub-scales: parental rewards (6 items); parental stressors (6 items); lack of control (3 items), and parental satisfaction (3 items), with items rated on a five-point Likert-type scale, ranging from *strongly disagree* to *strongly agree*. A total stress score is calculated as a composite of the items (ranging from 18-90), with higher scores indicating higher levels of stress.

Due to time pressures in *Growing Up in Ireland*, only the six-item parental stressors sub-scale was used at Wave 2.

Psychometric information

Berry and Jones (1995) report reliability and validity data for the whole measure. Findings from the second wave of the Infant Cohort of *Growing Up in Ireland* indicate an alpha of .77 for the parental stressors sub-scale. Validity for the measure was also demonstrated at three years as higher parental stress was found to be positively associated with childhood behavioural problems.

S22: Current pregnancy status

This question was asked of female respondents.

S23: Hazardous drinking (FAST Alcohol Screening Test)

A considerable amount of research, much of which is summarised in a review of the literature by Burke, Schmied and Montrose (2006), has examined the relationship between parental alcohol



misuse and children's development. While studies tend to document the adverse impacts of excessive alcohol consumption on a whole range of child outcomes, mediational models now recognise that the effects on child outcomes result from the disruption that alcohol misuse brings to family cohesion, parenting dynamics, psychosocial processes and inter-personal relationships. Additional risk factors for adverse child outcomes tend to aggregate in families where there is alcohol dependency, and this may lead to multiplier effects in terms of their impact on the child.

Measure

The FAST alcohol screening test (Hodgson, Alwyn, Hodgson et al, 2002) was developed in the UK as a short screening tool for alcohol misuse. It follows in the path of work done in a World Health Organisation (WHO) study that resulted in a 10-item questionnaire called the AUDIT (Allen, Litten, Fertig et al, 1997). The average administration time on the FAST reported by the test authors to be 20 seconds. The scale comprises four items (questions 25a-25e), but the test authors assert that 50 per cent of people may be classified as 'hazardous' or 'not hazardous' drinkers using the answer to the first item 'How often do you have EIGHT or more drinks on one occasion?' (six drinks is used as the threshold for women). The five answer categories range from *never* to *daily*. The remaining questions ask whether the respondent was not able to remember the night before (25c), failed to do what was normally expected of them (25d), and whether someone had advised them to cut down (25e).

When these items are scored as 0-16, a person is classified as a 'hazardous' drinker if the total score is three or more. Since anyone who answers S25a/b in terms of having six or eight drinks on one occasion weekly or more often is automatically classified as a hazardous drinker, and the rest of the questions are skipped, not everyone will have a continuous score. If a person answered 'never' to S25a/b, he or she was not classified as a hazardous drinker and the remaining questions were not asked. If a person answered 'monthly' or 'less than monthly', the other three questions were asked so as to complete the screening for hazardous drinking.

Psychometric information

The FAST scale was developed using 3,000 administrations in over 100 medical settings. Cronbach's alpha for the intercorrelation between items was reported to be 0.77, with one-week test-retest reliability given as 0.81. A check on specificity and sensitivity (see Altman & Bland, 1994), compared to the original AUDIT using 2,185 patients admitted to an A&E setting found the sensitivity of the FAST to be 93 per cent, with 88 per cent specificity.

S26 – S28: Parental smoking habits and Study Child's exposure to environmental tobacco smoke (ETS)

There is strong evidence, summarised in Jaakkola and Jaakkola (2002) and Hofhuis, Jongste and Merkus (2003), that environmental tobacco smoke (ETS) is deleterious to child health and development, and increases risk for asthma and other related respiratory conditions.

Questions S26 to S28, derived from the Living in Ireland survey, ask about current smoking and daily smoking habits. Although the validity of self-reported smoking has been challenged on the grounds that smokers are inclined to underestimate the amount that they smoke or deny their smoking status, studies have found that misclassification rates tend to be small in the general population (Studs, Ghate, Gill et al, 2006). Moreover, Patrick, Cheadle, Thompson et al's (1994) meta-analysis of 51 studies comparing self-reported smoking with direct biochemical measures found high levels of sensitivity (87 per cent) and specificity (89 per cent) for self-report averaged across studies, which reinforces the validity of self-reports, given that alternative techniques (e.g. analysis of urinary cotinine) are not operationally feasible. These questions were supplemented with an additional question (S28), which asked how many people smoked in the house, being designed as a crude measure to gauge the child's exposure to ETS.



S29: Parental drug use

Research on the effects of parental drug use on children has typically highlighted such problem behaviours as antisocial behaviour, conduct or oppositional disorders (e.g. Smith, 1993; Willens et al, 1995), and negative impacts on the quality of parenting provided for the child (Dawe et al, 2007).

S29 asked whether the respondent currently used any illicit drugs such as cannabis, marijuana, ecstasy, speed, heroin, methadone, crack or cocaine. Response categories ranged from *regularly* through *occasionally* to *not at all*.

Although it is likely that drug use may be under-reported to some extent, and possibly more so for more 'heavy' drugs, CASI was used in order to alleviate this problem to some extent.

S30 – S31: Treatment for clinical depression, anxiety, nerves or phobias and current parental depression (Centre for Epidemiological Studies Depression Scale, CESD-8)

Parental depression has been linked to various child outcomes including children's socio-emotional and cognitive development (Beardslee et al, 1996). Although evidence for the link between parental mental health and child outcomes is unequivocal, many writers note that it often interacts or is associated with other variables that can either generate resilience, such as a well-functioning family (Dickstein, 2006), or increase risk, such as poverty (Eamon & Zuehl, 2001).

Measure

In addition to questions S31–S32, which concern whether the respondent has received a formal diagnosis of depression, anxiety, nerves or phobias and whether they are currently being treated for this condition, *Growing Up in Ireland* included the Centre for Epidemiological Studies Depression Scale (eight-item) (CESD-8), a short self-report screening instrument for depression in the general population. Answers are given on a four-point rating scale, ranging from *rarely or none of the time (0 days)* to *most or all of the time (5-7 days)*, with a reference period of the previous seven days. A composite score is calculated by summing item responses across the eight items (range: 0–24). Respondents are categorised according to the recommended criterion for depression, with composite scores of seven or more being classified as 'depressed' and scores <7 defined as 'not depressed'. While a score above or equal to seven suggests a clinically significant level of psychological distress, it does not necessarily mean that the participant has a clinical diagnosis of depression. This measure was also used at Wave 1 and will help to identify parents who are more prone to depression (over two waves) or those who experience it at one wave only (in the past or currently), and map this to child outcomes.

Psychometric information

The CESD-8 has good internal reliability consistency ($\alpha = 0.86$) and the scale correlates 0.93 with the original 20-item version of the instrument. Test-retest reliability is 0.83 and 0.87 for assessment at six and 12 months respectively (DiClemente et al, 2005). The concurrent validity of the scale has been established through its association with other depression measures such as the Beck Depression Inventory (Melchior et al, 1993). Furthermore, it has been shown to discriminate depressive disorders from other forms of psychopathology (e.g. Roberts, Andrews, Lewinsohn & Hops, 1990).

S32 – S33: Parental contact with the criminal justice system

According to findings from the Head Start programme in the US, children whose family members had contact with the criminal justice system were more likely to be described as having problem behaviour by parents and teachers, and also likely to score lower on assessed vocabulary. Boys were found to be more likely to become aggressive following parental incarceration and more likely to become involved in delinquency and criminality (Wildeman & Western, 2010). Findings also show that substance abuse, domestic violence, parental mental illness and poverty are more prevalent in



households where parents have been arrested. However, it is important to remember that children of parents involved with the criminal justice system are not a homogenous group.

Questions S32 to S33 asked whether parents had been in trouble with the Garda Síochána (the Irish police service) and if they had ever been to prison.

S34: Parental knowledge of child’s use of alcohol or drugs

As discussed in Section 6.1.6, parental monitoring is a critical source of parental knowledge; it reflects the parents’ effort to find out directly and through their own observation how their child behaves. Parental monitoring is associated with low levels of substance use (Dishion, Capaldi, Spracklen & Li, 1995). (See Section 7.2, Questions S8–9 for a discussion on the effects of drug and alcohol use.)

Question S34 asked the parents, to the best of their knowledge, if the child had tried alcohol, cigarettes or cannabis/marijuana. The answer categories of *yes*, *and I know about it*, *probably*, *possibly*, and *I don’t think so*, were used in place of definitive *yes/no* answer categories, so as to tap in to the respondent’s *perceptions* of the young person’s behaviours, as there is likely to be a concerted effort on the part of the young person to hide these from their parents.

S35: Parent-child discussion of sexual health issues

Sexual activity places young people at an increased risk of sexually transmitted infections (STIs), while there is also the potential for unplanned pregnancy. A growing body of research indicates that good communication between parents and children about sexuality helps to prevent early sexual activity, risky sexual behaviours, and promote the use of condoms. National surveys of adolescents have shown that only about one in 10 adolescents discussed sex with their parents *before* having sex, and fewer than half had ever discussed how to know if they were ready to have sex (Levine, 2011). Lytle et al (1999) found that, compared to discussing other health issues such as diet, exercise and drinking, parents discussed sexual activity the least frequently with their teenagers. It was suggested that parents either do not see sex as a risk for their teenager, do not consider it to be an issue that requires frequent discussion, or that there is a general avoidance of this topic, perhaps because of their discomfort or embarrassment.

S35 asked whether respondents had spoken to their child about a range of sexual issues, including sexual intercourse, contraception and sexually transmitted infections.

S36 – S47: Non-resident parent information

Research has shown that, after separation, the inter-personal climate between the Primary Caregiver and the non-resident parent has important implications for children’s health and wellbeing (Amato & Gilbreth, 1999; Dunn, 2004; Wilson, 2006). Much of this research, summarised in Section 8.1 below, provides the rationale for the questions employed in respect of the Non-Resident Parent Questionnaire. The Primary Caregiver was asked these questions to enable comparisons in the information provided by both parents and to ensure that the information was obtained from at least one source in those instances where contact details were not available for, or it was not possible to contact, a non-resident parent.

This series of questions was also asked at Wave 1, and only of those respondents who indicated that the Study Child’s biological father/mother was not resident in the household. The questions were asked of all respondents who indicated that the biological father/mother was not resident, as much of the information given at Wave 1 could have changed by Wave 2; for example, how often they saw the child or how far away they lived. Questions S36–S38 asked about their relationship status and when they separated/divorced; questions S39–S44 asked about parenting arrangements, frequency of contact with the Study Child and financial contributions towards the maintenance of the child. Finally, questions S45–47 asked about the quality of the parental relationship with the non-resident parent.

Questions S37–S38 and S44 were derived from the Growing Up in Australia Study, and question S46 from the Millennium Cohort Study.

Chapter 7

CHILD INSTRUMENTS





CHAPTER 7: CHILD INSTRUMENTS

7.1 INTRODUCTION

This chapter details the instruments used with the Study Child in the home. As with the instruments outlined in Section 5.2, the child was asked to complete a Main Questionnaire, a Sensitive Questionnaire (subject to parent approval and signed consent) and Parenting Style Inventories (completed as appropriate to the family structure). Questionnaires were administered to the Study Child (subject to consent) on a CAPI basis. An audio CD was available to help children with literacy problems.

Cognitive tests were also administered to the child in the home (these are discussed in detail in Chapter 8). A time-use diary was left to be completed by the Study Child, describing the child's activities for a specified 24-hour period (see Chapter 9).

A detailed discussion of the rationale for inclusion of the items and scales is provided below. The questionnaires are provided in Appendices H and I.

7.2 CHILD MAIN QUESTIONNAIRE

Q1 – Q4: School-related information

Questions 1–4 were questions on the name and address of the school; the child's class in September 2011; the subjects currently being studied by the child (including their favourite and least favourite subjects), and how many of their friends from primary school were (a) at their school and (b) in their class. This information can be used by researchers to explore many issues, including gender differences in choice of subject; number of primary school friends and popularity, and differences between schools in child outcomes – for example, performance on the Drumcondra tests.

Q5x, a-b & Q7 – 8: Child's perception and experience of school, and perception of difficulty or interest in particular subjects

Children's beliefs in their ability to master difficult subjects affect their academic motivation, interest and academic achievement (Bandura et al, 1996). These data can be linked to gender, as well as performance in the Drumcondra Reasoning Tests, completed by the children at age 13. Questions 7 and 8 asked how interesting or difficult they found Maths, Irish, English and Science. Children were also asked how they felt about school in general, as they were asked at nine years. This data has proved very valuable for exploring disaffection with school. Obtaining this information longitudinally will enable researchers to look at change or stability in levels of disaffection, an important correlate of school failure and dropout.

Questions were also asked about things that may have happened in class such as being given out to by a teacher for misbehaving in class, or being praised by a teacher for answering a question correctly. Other questions related to teaching style and included questions on using computers in class, copying notes from the board, expressing opinions in class and using CDs or DVDs as learning aids.

Q6: Amount of time spent on homework each evening

In Ireland, the amount of time spent on homework has been found to be highly predictive of student performance at second level in education. A study of 15-year-old students' experiences indicates that more time on homework and study resulted in positive academic outcomes (Smyth et al, 2007). Engagement with homework emerged as a crucial factor in later achievement and in engagement with schoolwork.

Q9a-b: Extra help received at school



As at age nine, this question was used to identify those children who were receiving extra tuition in school. The measure may be linked to school performance at both nine years and 13 years to ascertain if children with potential difficulties in Reading and Maths are being identified and targeted for support within the school system, and whether or not this has helped in terms of educational outcomes. This has important implications for their experience of school and hence for future outcomes in the labour market, and other areas of life.

Q10: School-related behaviours

Educational qualifications are a crucial determinant of later life-chances (Burgess, Gardiner & Popper, 2001; Hobcraft, 2000). As discussed previously, there is a strong relationship between education and adult outcomes, which is seriously affected when school attendance is poor. Low attendance or skipping classes may indicate a more general disaffection with school and is associated with early school-leaving, academic underperformance and more restricted opportunities in terms of further education, training and the labour market (Malcolm et al, 2003).

Question 10 asked how often the young person had been late for school, got in trouble in school, skipped classes or mitched, or messed in class. They were also asked how often they had to do extra work, undergo detention or been suspended. Suspension as a punishment has the added impact of making the child miss more school. These are important factors that relate to engagement with school, school performance and, ultimately, future life outcomes. While important links can be made between these and child outcomes, it will also be possible to look at associations with factors such as child gender and temperament, family structure, household class and parent education, and indeed school factors such as DEIS status (Delivering Equality of Opportunity in Schools, the Action Plan for Educational Inclusion, launched in 2005), size of school, and the principal's perception of having adequate numbers of teaching staff available.

Q11: Number of days absent from school in the last year

These questions collected information on the number of days the Study Child was absent from school in the last 12 months, as was asked in the Primary Caregiver Questionnaire. Obtaining this type of information from both sources was of interest to the Study Team in terms of whether the child might report different (possibly higher) absence rates than the parent and how this might or might not be linked to measures of parental monitoring and child disclosure.

Q12: Highest qualification expected to achieve

Recent research found that the educational aspirations of the child were linked to such factors as parental educational level, father's unemployment, school atmosphere, attitude towards school, socio-economic background (Chowdry et al, 2011), as well as previous academic achievement (e.g. Goodman & Gregg, 2010). However, besides affinity towards school, the determinants of educational aspirations are found to differ among adolescents on different educational tracks. For example, a Slovakian study found that the educational aspirations of grammar-school students are associated more with father's education, while the aspirations of those on lower educational tracks are more closely linked to mother's education (Geckova et al, 2010). Furthermore, aspirations reflect motivation and predict actual educational outcomes.

Question 12 asked the young person to record the highest qualification they expected to get by the time they finished their education.

Q13 – Q16: Amount of time spent on leisure activities

There is evidence to suggest that the type and amount of time spent engaged in various leisure activities may be differentially related to developmental outcomes. Obesity, for example, has been linked to a number of sedentary leisure pursuits, including excessive television viewing and computer-



game playing (Gortmaker et al, 1996; Robinson, 1999), while leisure-time reading is positively related to tests of verbal ability and reading achievement (Anderson, Fielding & Wilson, 1988; Cullinan, 2000).

These questions were originally based on items in the Millennium Cohort Study and the National Survey of Children's Health. They asked about the time and nature of the child's engagement in pastimes such as non-school-related reading, watching TV or DVDs, using computers and playing video games.

Q17: Electronic equipment in the Study Child's bedroom

Question 17 asked whether the Study Child had a TV, DVD player, computer or games console in the bedroom. This information relates to access to unsupervised material in the media and on the Internet, and the possibility of playing age-inappropriate video games, etc, without parental supervision.

Q18: Ownership of mobile phone

Research has shown that the mobile phone is, for adolescents, a medium that permits communication, particularly with their peers, without the surveillance of parents, families and teachers. Data on mobile-phone ownership among children may be relevant to research on bullying (with mobile phones being a medium for bullying) and possible health-related issues.

The question, which was asked at Wave 1, continues to be of interest given that Ireland has one of the highest mobile-phone ownership rates in the world.

Q19 – Q22: Computer ownership and Internet access

Previous research examining the relationship between home computer use and child outcomes has yielded somewhat mixed findings. Fairlie (2005) and Beltran et al (2010) found that teenagers with access to home computers were more likely to be enrolled in school and were six to eight percentage points more likely to graduate from high school than their counterparts who didn't have home computers. Fuchs and Woessmann (2004), on the other hand, found a negative correlation between home computers and student achievement.

Use of computers for social networking also has implications for potential risk exposure via the Internet; this may be explored, for example, in the context of the bullying questions.

While at nine years, parents were asked about children's access to a computer in the home, at 13 years children were asked themselves about their experience with computers, including ownership (computer in the home), usage and adult supervision of the Internet. Parents were also asked in the course of their interview about their use of Internet security such as Net Nanny.

Q23: Time spent alone at home

The increased participation of women in the workforce in recent years has led to more reliance on non-parental childcare, the high cost of which has affected the ability of working mothers to find appropriate childcare. As a result, some schoolchildren are spending large amounts of time after school without adult supervision. Findings have shown that children with adult supervision are less likely to skip school, or become involved in antisocial or risky behaviour (Aizer, 2004).

Question 23 asked the young people how much time on an average school day they would spend alone at home when no-one else was there. Answer categories ranged from *none* to *6 or more hours a day*.

Q24: Parental rules and limits placed on activities



Some research has shown that when parents are characterised as high in behavioural control and are effective monitors of their children’s behaviour, adolescents are less likely to engage in problem behaviour such as substance use and delinquency (Chassin, Pillow, Curran, Molina & Barrera, 1993; Pettit, Bates, Dodge & Meece, 1999). Stattin and Kerr (2000) and Kerr & Stattin (2000) suggest that the associations between delinquency and parental monitoring and control may not be as clearcut as previously asserted. *Growing Up in Ireland* will attempt to explore parenting monitoring and control levels and adolescent behaviours, to consider, for example, whether influences of key parenting variables on adolescent behaviours should be conceptualised as direct or indirect, by way of their associations with parental knowledge.

The questions used in the child questionnaire are from the control sub-scale of the Stattin and Kerr (2000) measure and will be linked to the Monitoring and Disclosure sub-scales used with the parent(s) of the Study Child (discussed in Section 6.6 above). (See Questions F2 and F3 in the Primary Caregiver Questionnaire for a discussion of the measurements used and relevant psychometric information.)

Q25 – Q26: Amount of spending money available and source(s)

While access to money offers a likely increase in independence for children, in adolescence, at least, more pocket money is associated with increased risk of drinking alcohol (Bellis et al, reported by BioMed Central, May 12 2007) and smoking cigarettes (Scragg, Laugesen & Robinson, 2002).

As at age nine, the Study Child was asked how much money they had to spend on themselves in an average week and where they got the money from.

Q27 – Q28: Study Child’s engagement in hard and light exercise

The Study Child’s engagement in exercise has implications for current and future health. Exercise patterns in children may be compared with parents’ exercise habits and the availability of recreation facilities. It is widely believed that exercise habits in childhood can track into adulthood (e.g. Rimal, 2003).

Q29 – Q30: Participation in team or individual sports or activities in the last 12 months

The Study Child was asked about participation in sports and exercise. Children who did not play sports were asked to specify the main reason why this was the case. These questions relate to how children’s current exercise behaviour can affect their health and wellbeing, as well as learning how to be a team player and understand rules, etc. For example, Strauss, Rodzilsky, Burack and Colin (2001) have outlined how, in addition to immediate physiological benefits, exercise is associated with increased self-confidence and social connectedness.

Q31a-b: Frequency of participation in activities and whether or not they are paid for

These questions examined the child’s organised activities outside school. The section also recorded whether organised activities had to be paid for. These measures will give some measure of how the Study Child spends his/her personal time, how much interaction they have with peers and to what extent children from lower-income families may have reduced participation opportunities. These questions were based on questions asked in the National Longitudinal Survey of Youth and Children.

Q32 – Q33: Eating breakfast and foods eaten yesterday

Q32 sought a simple yes/no answer to whether the child usually had something to eat before going to school. It was also asked of the Primary Caregiver. (The rationale for this question is discussed in detail in Section 6.2.)

The adapted food frequency questionnaire (Q33) was designed to obtain information on the Study Child’s dietary intake over a 24-hour period. Some of the items were derived from Growing Up in



Australia, which were in turn adapted from the Sallis' Amherst Food Frequency Questionnaire (2001); other items were added following consultation with the expert health panel set up by the **Growing Up in Ireland** Study Team. This will provide a semi-quantitative measure of children's dietary intake along a number of dimensions (fruit and vegetable consumption, protein, carbohydrates, calcium, fats and sugars) which are important for assessing the quality of the Study Child's diet. This area is of interest in terms of general health and also because the incidence of children who are overweight or obese in Ireland has increased rapidly in recent years (Griffin, Younger & Flynn, 2004; National Task Force on Obesity, 2005). Studies suggest that the mismatch between energy intake and energy expenditure is a major contributory factor (Livingstone, 2001).

Q34: Frequency of brushing teeth

This question asked the child about regularity of brushing teeth, with answer categories ranging from *more than twice a day* to *not at all*. It is asked in the context of questions asked of the Primary Caregiver about the child's dental health (for the rationale for these types of questions, see Section 6.6).

Q35: Helping with chores

From a list of household chores (e.g. washing dishes, cleaning the car, vacuuming), children were asked to indicate the frequency with which they did each, ranging from *every day* to *never*. This question is particularly relevant to children who may be engaged in a caring role within the home. Chores are important as they teach children responsibility, thus enhancing their maturity, as well as the ability to share tasks. As well as adding to the description of family behaviours, the measure may also indicate the presence of gender roles within the household.

Q36 – Q39: Number of and composition of friendship network

These questions ask about the number of friends the Study Child usually hangs around with, how many they would describe as close friends, the ages of their friends (whether younger, older, or the same age), and how many of these friends their parents have met. These questions relate to peer relationships and self-concept, especially in terms of popularity. In terms of peer age, the data will allow researchers to explore whether or not having older peers is associated with higher levels of antisocial behaviour.

Q40: Inventory of parent and peer attachment

Relationships with peers have an influence on the child that is distinct from that of parent-child relationships, though the latter can influence the peer relationships that children form (Schaffer, 2007). Although peers become important in middle childhood, evidence suggests that they do not become attachment figures at that point. Attachment to peers tends to emerge in adolescence, although parents continue to be attachment figures (Kerns, 2008).

Measure

The Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987) was developed to assess adolescents' perceptions of the positive and negative affective and cognitive dimensions of relationships with their parents and close friends – and particularly how well these figures serve as sources of psychological security. Only peer relationships are looked at here. The theoretical framework is attachment theory, originally formulated by Bowlby and since then expanded by others. Three broad dimensions are assessed: degree of mutual trust; quality of communication, and extent of anger and alienation. The development samples were 16 to 20 years of age; however, the IPPA has been used successfully in several studies with adolescents as young as 12. The instrument is a self-report questionnaire with a five-point Likert-scale response format. The measure comprises 25 items, but because of time constraints only the 17 items comprising the Trust and Alienation sub-scales were used.



Psychometric information

Work carried out by Gullone and Robinson (2005) to assess the properties of this version of the IPPA found internal reliabilities for peer trust of 0.86 and for alienation of 0.68. In terms of validity, they found peer trust to be positively related to self-esteem and alienation to be negatively associated with self-esteem.

Q41: Mood and Feelings Questionnaire

About 10 to 15 per cent of all children report moderate to severe signs of depression. Although depressive disorders are relatively common in children and adolescents, many depressed youth do not seek or receive either psychiatric evaluation or treatment. Without effective treatment, depression can leave young people with psychological problems that increase vulnerability to recurring depressive episodes, impaired occupational functioning in the future, and lowered life satisfaction. Depression in childhood has also been linked to antisocial behaviour, school performance, alcohol use and withdrawal from family and friends.

Measure

The Short Mood and Feelings Questionnaire (SMFQ) (Angold et al, 1995) was chosen for use in the ***Growing Up in Ireland*** as it is a brief (13-item) self-report measure, and is an easy-to-administer measure of childhood and adolescent depression. The 13 items, derived from the original Mood and Feelings Questionnaire (MFQ), focus on affective and cognitive symptoms, including one item pertaining to low mood (*I felt miserable or unhappy*) and one item addressing anhedonia (*I didn't enjoy anything at all*). The informant rates each statement as *true, sometimes true, or not true*, over the past two weeks.

Psychometric information

The developers of the 13-item SMFQ found it to have good internal reliability (0.87). Rhew et al (2010), using a school-based sample of 521 11-13-year-old children, also found internal reliability to be good, at 0.84. The score for depression is calculated by summing across the items. While the authors found a sensitivity of 0.60 and a specificity of 0.85 at a recommended cut-off score of eight or above to differentiate between those who are depressed and those who aren't, theirs was a clinical sample and therefore this cut-off may not be appropriate for a community sample (e.g. see Rhew et al, 2010).

Q42 – Q53: Being bullied and bullying others

This information is important in terms of how experiences of bullying can affect children's psychological wellbeing. Research indicates that the effects of victimisation include loneliness, school avoidance, reduced performance, low self-esteem, panic attacks, digestive disorders, depression both at the time of the bullying and in later life (Bee & Boyd, 2007; Anti-Bullying Centre, 2002) and delinquent behaviour and future criminality (Parada et al, 2005).

Questions 42–48 looked at whether the Study Child had been bullied over the last three months, the form the bullying took (e.g. physical, verbal), and the reason for it (e.g. ethnicity, disability). Results from the current study will serve to expand the Irish research base on numbers of children experiencing bullying (e.g. O'Moore et al, 1997) and the nature of bullying, as well as helping to clarify whether victims of bullying experience poorer outcomes than their peers.

The Primary Caregiver was also asked questions about whether the child had been bullied in the last three months (see Section 6.1.5, E11–E14). This will add to the information obtained from the Study Child and will also enhance the information on parental knowledge of the child's experiences. Furthermore, information on bullying at age nine can also be used to track these behaviours longitudinally, and enable researchers to look at the characteristics of children who have been bullied



across time, or indeed who have bullied across time, and also to look at the outcomes for these children in the future.

Questions 49–53 asked the child about being a bully themselves in the last three months, and if relevant, the type of bullying he/she carried out. This information relates to how experiences of perpetrating bullying can affect a child’s psychological wellbeing, as well as factors that may promote bullying behaviour. Olweus (summarised by Bee & Boyd, 2007) proposes four factors that contribute towards the development of a bully: experience of indifference and lack of warmth in the early years; parental failure to set clear limits on aggressive behaviour; parents’ use of physical punishment, and a difficult, impulsive temperament in the child.

Q54 – Q58: Perception of own weight and dieting behaviour

The Study Child was asked how he or she would describe their physical appearance with regard to weight. Response options ranged from *very skinny* to *very overweight*. As the child’s actual height and weight were measured by an interviewer in the home, this question provides an indication of the child’s self-perception of physical build (Collins, 1991) and links to questions on health and body image in the qualitative study. The mother or lone father was also asked to assess the appropriateness of the child’s current weight.

Questions 55–58 are about dieting behaviour. As with question C9 in the Primary Caregiver Questionnaire, it will be possible to take a longitudinal perspective in attempting to understand the precursors of eating disorders in children, such as parents’ modelling of concerns about weight and shape (Smolak, Levine & Schermer, 1999).

Q59: Parental discipline

Discipline methods are seen as an important aspect of parenting and are considered as having an important influence on child behaviour and development (Grusec & Goodnow, 1994). Distinctions have been drawn between inductive techniques (such as explaining why a particular act was wrong) and punishment (e.g. smacking or shouting), with the former possibly being more effective in internalising moral rules (Kerr, Lopez, Olson, & Sameroff, 2004). There has been increasing debate in the media and academic literature about the effects of smacking or hitting; most, but not all, studies report negative effects (e.g. Gershoff, 2002).

Q60: The Piers-Harris II Children’s Self-Concept Scale

Self-concept is a collection of beliefs about how people see themselves. Having high self-concept usually leads to self-confidence, self-acceptance and a sense of individualism. However, self-concepts do not necessarily coincide with reality. For example, some people might rate themselves highly in terms of their abilities in academic tasks, but their school results may tell a different story. Congruence is achieved when a person’s self-concept matches up to reality (Rogers, 1959), and leads to a higher sense of self-worth and good psychological health.

Measure

Piers-Harris II is a widely used and efficient quantitative measure of children’s self-concept. It was previously used with the nine-year-olds in *Growing Up in Ireland* and so provided longitudinal continuity at 13 years of age. It is also relatively easy to administer and has a response time that does not place an unreasonable burden on the respondent.

The measure is a 60-item self-report instrument for the assessment of self-concept in children and adolescents between the ages of seven and 18. The items in Piers-Harris II are statements that express how people feel about themselves. The domain sub-scales include: *Behavioural Adjustment*, a sub-scale of 14 items measuring the existence or not of problematic behaviours; *Intellectual and School Status*, a sub-scale of 16 items reflecting the Study Child’s assessment of his/her abilities with



respect to intellectual and academic tasks; general satisfaction with school and perceptions of future achievements; *Physical Appearance and Attributes*, a sub-scale of 11 items about perceptions of physical appearance and other attributes such as leadership and ability to express ideas; *Freedom from Anxiety*, a sub-scale of 14 items exploring a variety of feelings including fear, unhappiness, nervousness, shyness and feeling left out of things; *Popularity*, a sub-scale of 12 items exploring the Study Child's evaluation of his or her social functioning, and *Happiness and Satisfaction*, a sub-scale of 10 items reflecting feelings of happiness and satisfaction with life. A *Total Self-concept* Scale can also be derived from the questionnaire.

These questions will not only enable researchers to explore different levels of self-concept (in total, or by sub-scale), but can also do this by the child's gender, etc. Furthermore, congruence or incongruence can also be explored. For example, body image as measured here by *Physical Appearance and Attributes* may be compared to data collected on the child's own perception of their weight, and mapped back to actual measured BMI.

Psychometric information

Piers and Herzberg (2002) report reliability data for a sample of 271 13-14 year-old children. They report internal consistency reliabilities for the global measure of self-concept as well as for each of the domains: Total Self-concept (0.91), Behavioural Adjustment (0.81), Intellectual and School Status (0.82), Physical Appearance and Attributes (0.77), Freedom from Anxiety (0.82), Popularity (0.79), and Happiness and Satisfaction (0.77). Examples of validity presented by the authors demonstrate negative correlations between for example, depression and Freedom from Anxiety; general maladjustment and Total Self-concept, Behavioural Adjustment and Intellectual and School Status.

Q61: Career aspirations

The Study Child was asked what job they would really like to get when they had finished their education, in order to elicit some indication of their aspirations at age 13, how these change over time, and whether or not they were in line with parents' aspirations for their son or daughter's future education, or indeed differed by factors such as gender, social class and maternal education, etc.

7.3 CHILD SENSITIVE QUESTIONNAIRE

The Child Sensitive Questionnaire covered more sensitive issues than the Child Main Questionnaire, pertaining to smoking, alcohol and drug use as well as delinquent behaviours, sex and relationship guidance and maturation. The questionnaire was also self-completed by the Study Child on a CASI basis. A paper version of the questionnaire was shown to the Primary Caregiver in advance and they were asked to sign a separate consent form. There was also a small number of questions on maturation, which were gender-specific; for that reason, there were two versions of the Child Sensitive Questionnaire, one for boys, and one for girls. As noted above in Section 5.4, only when the dedicated consent form for the Child Sensitive Questionnaire had been signed by the Primary Caregiver did the interviewer electronically 'open up' the questionnaire on the laptop for the child to complete.

S1 – S3: Relationships and Sexuality Education

These questions asked about current and past Relationships and Sexuality Education (RSE) in school. RSE in schools in Ireland is aimed at providing opportunities for pupils to acquire knowledge and understanding of human relationships and sexuality in a way that will make them think in a moral, caring and responsible manner. Children were also asked whether they had discussed such issues with their parent(s) or guardian(s), and where they would most likely go for information or advice on sex or relationship issues; e.g. nowhere, mum, dad, friends, teacher, etc. This was to ascertain differences in the characteristics of parents who had provided such information to their child, as opposed to those who hadn't, and also whether or not the young person had access to this information outside the school arena, and from whom.



S4: Age of puberty

These questions are important from a number of perspectives in that early versus late maturation has differential effects on both boys and girls, but there are also important differences between boys and girls in terms of early and late maturation. For example, early-maturing boys tend to experience the changes in positive ways while late-maturing boys tend to have lower self-esteem than other boys. Early maturers are more likely to get involved in antisocial activities, including drug and alcohol abuse (Steinberg, 2002).

Early studies found early-maturing girls to be less popular, less poised, less expressive, and more submissive and withdrawn than other girls. More recent research shows that early-maturing girls have more emotional problems, including problems with self-image, depression, anxiety, eating disorders and panic attacks. These problems may be related to girls' feelings about their weight (Steinberg, 2002).

Girls were asked whether or not they had started their periods; if they had, they were asked what age (years and months) they were when they started. This is regarded as a concrete marker of puberty for girls and has been widely used in previous research. Boys were asked whether their voice had changed at all and, if so, whether it was *occasionally a lot lower*, *totally changed*, or *they were not sure*. Although not the gold standard in terms of measuring boys' puberty onset (which would be a physical test), change in voice is generally regarded as a marker, although not as specific as menarche is for girls.

S5a & S6: Delinquency questions and ever been in trouble with the gardaí

Most researchers accept the complexity surrounding the causes of delinquent behaviour, which are difficult to disentangle, but previous research demonstrated links between child characteristics such as: aggression (Tremblay & LeMarquand, 2001), hyperactivity (Hawkins et al, 1998) and problems at school (Herrenkohl, 2001); on the one hand and on the other, family characteristics such as poor parenting skills, family size and discord in the home. (Derzon & Lipsey, 2000; Wasserman and Seracini, 2001). Involvement with deviant peers is likely to lead to delinquent behaviour, especially in the early teenage years when young people are especially vulnerable to peer pressure (Vitaro, Brendgen & Tremblay, 2002).

Respondents in *Growing Up in Ireland* were asked a sequence of questions about 15 kinds of delinquent behaviour, which can be linked to the conduct questions asked of the Primary Caregiver about the Study Child. These ranged in seriousness from not paying the correct fare on a bus to carrying a knife or weapon; using force or threats to get money or something else from someone; hitting, kicking or punching someone to hurt or injure them, etc. The questions were developed by researchers in the Edinburgh Study of Youth Transitions and were also used in the Belfast Youth Development Study with 13-year-old children. To gain a more comprehensive perspective on the child, these questions can be linked to other information obtained in the course of the interviews, such as the individual characteristics of the child (including gender, temperament), family (size, structure, SES, parenting, parental antisocial behaviour or incarceration), and relationships with peers.

S5b: Questions on psychotic experiences

Hallucinations and delusions are the classic symptoms of psychosis and have recently been shown to be far more prevalent in the general population than psychotic disorder (van Os et al, 2009). A New Zealand birth cohort study followed children who at age 11 had reported these symptoms and found an increased risk for psychotic disorder in adulthood (Poulton et al, 2000). This finding has since been replicated several times (Welham et al, 2009). More recently, however, research has shown that psychotic symptoms are associated with a wide range of psychopathology, including depression and anxiety. Ongoing work being undertaken in the Royal College of Surgeons in Ireland (RCSI) on a



number of population studies of adolescents in Dublin and Cork is finding that psychotic symptoms predict more severe psychopathology in particular, including comorbid diagnoses and suicidal behaviour.

There are six questions in this section which refer to the child's experience of hearing voices or sounds that no-one else can hear, seeing things that other people can't see, or thinking that they were being followed or spied upon. They have been found in previous studies of children of this age in Ireland to index not just risk of later psychosis but a range of other psychopathologies (including suicidal behaviours) (e.g. Kelleher et al. 2008, 2011).

Q7a-c: Smoking behaviour

Tobacco use is one of the chief preventable causes of death in the world. The World Health Organisation (WHO) has attributed approximately 4.9 million deaths a year to tobacco use, and that figure is expected to double by 2030. The progression of smoking proceeds through five stages: preparation, onset, experimentation, regular smoking, and dependence. From a policy perspective, early intervention is imperative.

Research from the US has also shown that, while girls are more likely than boys to start smoking, their quit rates (through junior high and high school) are comparable to those of males (Ellickson et al, 2001), highlighting a need to examine those trends further and develop gender-specific interventions. Because adolescence is an important period for the onset of risky behaviours, it is important to start tapping into this issue even though numbers may be low at this stage. This information will provide a useful baseline to study those who become smokers, and indeed those who do not, in the future.

The young people in *Growing Up in Ireland* were asked whether or not they had ever smoked a cigarette, and if they said yes, how often they smoked now, and how many they smoked in an average week.

Q8a-d: Alcohol use

Alcohol is the third highest risk factor for premature death and ill-health in the European Union. Alcohol consumption is linked to more than 60 diseases and conditions, affecting nearly every organ in the human body (HSE, 2008). The harm from alcohol is linked to a range of health and social problems such as accidents, injuries, chronic ill-health, premature death, public safety, violence, child neglect, marital problems and lost productivity.

Research studies over the last decade have shown that alcohol affects an adolescent brain differently from an adult brain (USDHHS, 2007). The brain goes through rapid development and 'wiring' changes during adolescence; alcohol use can cause alterations in the structure and function of the developing brain. Alcohol can damage two key areas of the brain: the prefrontal cortex responsible for self-regulation, judgement, reasoning, problem-solving and impulse control, and the hippocampus, which is involved in learning and memory. Damage from alcohol use during adolescence can be long-term and irreversible. Therefore, it is critically important to delay the age of onset of drinking by young people, as recommended by the World Health Organisation (2001). As with smoking behaviours, it is important to look at this issue at a relatively young age as those who are drinking alcohol now are likely to be the biggest users in later adolescence and into adulthood. It will also be possible to explore comorbidity with depression and delinquent behaviour.

Questions 8a-d asked whether or not the young person had ever had an alcoholic drink (other than just a few sips), and if they had done so in the last year. If yes, they were asked how often they drank alcohol now, and whether they had ever had so much alcohol that they were really drunk. While numbers are likely to be low, especially for those being drunk, this information will also provide a baseline, along with the information above, to identify those who may be engaging in dangerous



drinking at this young age, as well as their individual and family characteristics, and to what extent this behaviour is predictive of future behaviour with regard to alcohol use.

Q9 – Q11: Drug use

The consequences of illegal drug use include physical health outcomes such as kidney, liver and heart damage, loss of memory and concentration, depression, the transmission of viruses through sharing needles, as well as psychological and physical addiction. Some illegal drugs can lead to increased aggression or hostility. There are also associated legal risks of engaging in illegal or dangerous activity.

Some experts believe that mental health problems are risk factors for substance use (substance use as a self-medicating or coping strategy), but others believe that mental health and substance use problems among young people may emerge from a common pre-existing factor such as stress (Adlaf et al, 2002). Research shows that young people who report cannabis use in early adolescence (12-13) are more likely to use high levels of both licit and illicit drugs at 15 years of age (McCrystal et al, 2006).

Although prevalence is likely to be even lower for drug use than alcohol use or smoking, again it is important to identify young people engaging in this behaviour at 13, as well as individual and family characteristics, including parental drug use, and to what extent this behaviour is predictive of future behaviour with regard to drug use.

These questions asked about cannabis use, glue sniffing, or use of any other drugs. The questions required a yes/no answer. They will provide prevalence information on the use of illicit drugs in Ireland and will, even more importantly, allow analysts to investigate both early indicators of drug-taking as well as the extent to which early drug-taking is related to subsequent antisocial or related behaviour. This information, as well as that obtained on smoking and alcohol use, can also be linked to a vast array of other information collected in the study including child mental health issues, family problems and issues around school attitudes and attendance.

7.4 PARENTING STYLE QUESTIONNAIRES

The same questions were asked in respect of mother, father, mother’s partner and father’s partner as applicable.

The interviewers determined at the start of the interviewing process which of the four parenting style questionnaires the child should complete, following discussion with the Primary Caregiver. The Primary Caregiver was shown a prompt card (see Table 7.1) and the different family structures listed on it were clearly explained. He or she therefore controlled which of these sections the child completed on the laptop. For example, a lone mother could request that her child not be asked questions in respect of his/her biological father.

Table 7.1: Table for determining family composition and child sensitive supplements required

Family Situation	Questionnaire
1. Mother and father together (biological / adoptive)	M and D
2. Mother and her partner – where Study Child has had contact with biological father within the last 12 months	M, MP and D
3. Mother and her partner – where Study Child has NOT had contact with biological father within the last 12 months	M and MP
4. Mother with no partner – where Study Child has had contact with biological father within the last 12 months	M and D
5. Mother with no partner – where Study Child has NOT had contact with biological father within the last 12 months	M
6. Father and his partner – where Study Child has had contact with	D, DP and M



biological mother within the last 12 months	
7. Father and his partner – where Study Child has NOT had contact with biological mother within the last 12 months	D and DP
8. Father with no partner – where Study Child has had contact with biological mother within the last 12 months	D and M
9. Father with no partner – where Study Child has NOT had contact with biological mother within the last 12 months	D
10. None of the above – e.g. where sibling or other family member is Primary Caregiver	Do not administer

PS1: Getting along with [mother]

This was a general question on how the Study Child gets on with the individual parent/parental figure. Research in Ireland for the Health Behaviour in School-aged Children (HBSC) survey suggests a link between parent-child relationship and self-ratings of good health and happiness among children aged 10-11 years (Walsh, Clerkin & Nic Gabhainn, 2004). This question was previously used in the National Longitudinal Survey of Children and Youth.

PS2a-j: Parenting Style Inventory II

The term parenting style refers to the degree of warmth and control that parents use when interacting with their children, such as when responding to bad behaviour. Three parenting styles – authoritative (warmth and control), authoritarian (emphasis on control) and permissive (warm but lacking control) – were initially described by Baumrind (1966). This was later extended to a fourfold classification, to include neglectful parenting (lacking both warmth and control) by Maccoby and Martin (1983). Parenting style was assessed using the child’s own report, both at nine and at 13 years.

The measure

The Parenting Style Inventory II (Darling & Toyokawa, 1997) sub-scales of *Responsiveness*, *Demandingness* and *Autonomy-granting* are most closely related to the concepts of warmth and control in parenting, which are the dimensions commonly used to categorise parenting styles as authoritarian, authoritative, neglectful or permissive. Parenting style is widely acknowledged as being an important input into child development and later wellbeing (see literature review in **Growing Up in Ireland** Research Paper 2), particularly in relation to the positive impact of an authoritative parenting style (high warmth combined with high control).

For age nine years, the measure was adapted because the children were younger than the adolescents for whom the scale was originally constructed; for age 13 years, the original measure was used.

Psychometric information

The authors used a sample of 318 11-14 year-olds and found sub-scale reliabilities of 0.72 for Responsiveness, 0.72 for Demandingness and 0.75 for Autonomy-granting. The authors also demonstrated validity for the scales. For example, Responsiveness was found to correlate with Parental Monitoring (0.52) and Self-esteem (0.34), while Demandingness was associated with School Involvement (0.52) and Parental Monitoring (0.30).



7.5 SELF-COMPLETION TIME-USE DIARY

At the end of the interview the interviewer left a copy of a self-completion time-use diary with the Study Child and asked him/her to fill it out on a specified day,¹⁴ for return to the Study Team by post in a prepaid envelope. The purpose of the time-use diary was to record what the Study Child did for each 15-minute slot during the reference day for the diary from 12 midnight to 12 midnight.¹⁵ This information will allow researchers to examine variations in time-use with the child and family characteristics; the association with time-use patterns at nine years of age, and (most importantly) the relationship between time-use and outcomes, especially those in subsequent waves of the study in later adolescence.

A worked example of the time-use diary was explained by the interviewer and left with the respondent. A specified date for filling out the diary was filled in on the front cover by the interviewer before leaving the household. The 'diary days' were allocated to respondents in such a way as to provide a sample of days throughout the week. A copy of the time-use diary is given in Appendix J.

There were a total of 25 activities used in the time use diary:

1. Sleeping / resting (including time trying to get to sleep, trying to get up)
2. Personal care or getting ready (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)
3. Eating (breakfast, lunch, dinner, tea)
4. Travelling (to or from school or elsewhere)
5. At school
6. Doing homework or study
7. Just hanging around with friends (outside or inside)
8. Spending time with family
9. Playing with or exercising a pet
10. Playing sport or doing physical exercise (training, matches)
11. Using the Internet / emailing (including social networking, browsing, etc)
12. Playing computer games (e.g. PlayStation, PSP, Xbox or Wii)
13. Talking on the phone or texting
14. Music lessons (or practising music), drama, other hobbies, etc
15. Watching TV, films, videos or DVDs
16. Listening to music
17. Reading for pleasure or interest (not for school)
18. Housework (preparing food, tidying bedroom, feeding pets)
19. Hobbies and other leisure activities
20. On an outing (e.g. to beach, mountains, shopping centre, theatre, match, etc)

¹⁴ The day for completion is provided on the interviewer's Work Assignment Sheet. This was transferred to the diary by the interviewer.

¹⁵ The structure, format and implementation of the diary was taken from a national study carried out by the ESRI; see McGinnity, Russell, Williams and Blackwell (2005).

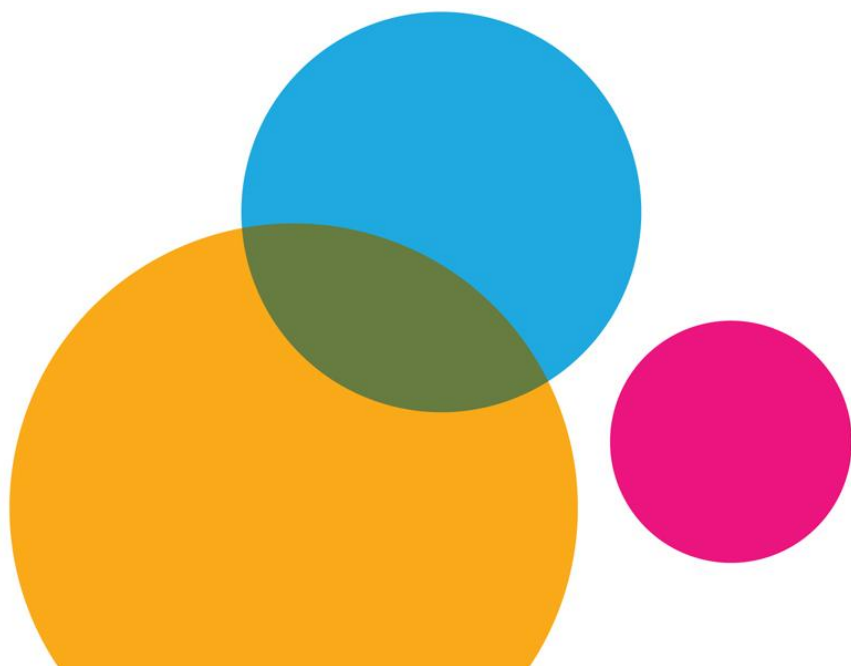


21. Out shopping to buy things (groceries, clothes, etc)
22. Other 1 (specify)
23. Other 2 (specify)
24. Other 3 (specify)
25. Other 4 (specify)



Chapter 8

COGNITIVE TESTS





CHAPTER 8: COGNITIVE TESTS

8.1 MEASURING COGNITIVE ABILITY

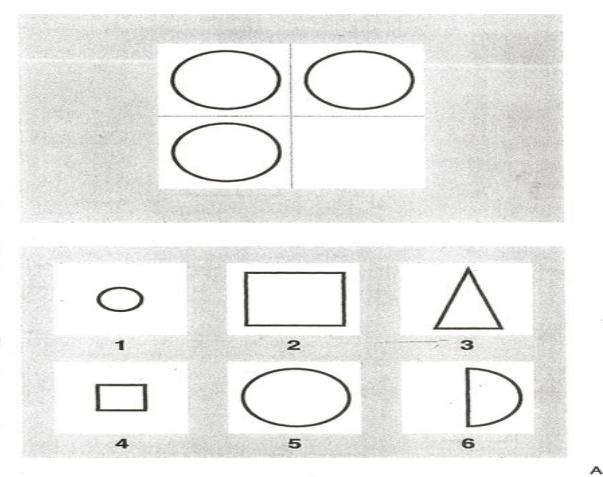
Measuring cognitive development is an important component of *Growing Up in Ireland*. The challenge faced by the Study Team was to find an appropriate set of instruments to measure cognitive development longitudinally, using age-appropriate measures. It was also important to find measures that possessed strong measurement properties, could be adapted for use in a large, general-purpose quantitative survey, and could be administered within an acceptable time. There are few development tests available for this age group; of those that do exist, most are UK or US published scales that do not relate directly to the Irish curriculum and take a long time to administer.

One of the more widely used set of cognitive and achievement tests is the British Ability Scales (BAS). One cognitive test from the BAS – the Matrices sub-test – was selected for the current wave of the study, while another objective test of cognitive skills used in this wave of the study was the Drumcondra Reasoning Test (DRT), designed by the Educational Research Centre in Dublin. This is the only test related to the Irish curriculum and suitable for this age group. Since the Drumcondra Maths and Reading tests were used with the young people when they were nine years old, it was expected that these tests would afford some comparability across waves, since the DRT, while not described as an achievement test as such, has been found to be highly predictive of later school achievement. Both tests are discussed in more detail below.

8.2 MATRICES SUB-TEST

The cognitive component of the BAS includes two batteries: an Early Years Battery, which can be used with children aged 2:6 to 5:11 years, and a School Age Battery, covering six to 17:11 years of age. The Matrices sub-test from the School Age Battery was used in *Growing Up in Ireland* with the 13-year-olds. These were administered through CAPI by the interviewer in the home.

The Matrices test comprises 33 items and measures the young person’s non-verbal reasoning ability. It also reflects their ability in visuo-spatial analysis, including perception of shape, relative size and orientation. In this test, the young person is shown an incomplete matrix of abstract figures and asked to select from among six choices the figure that correctly completes the matrix (see Appendix C9). An example of the matrices test is shown below:



The BAS Matrices tests can be converted to ability scores, percentile ranks, T-scores and age equivalents.

Psychometric information



Elliot et al (1997) report coefficient alphas for the Matrices test as 0.76 and 0.85 for children aged 12:0-12:11 and 13:0-13:11 respectively. Test-retest reliability was estimated at 0.64 for the Matrices in the age range 5:0 to 14:0 years.

Confirmatory factor analyses of the School Age instrument with children aged 6:0 to 17:11 years indicated that the scale loaded highly on the general factor¹⁶ and higher still on respective group factors,¹⁷ having loadings ranging from 0.55 to 0.86. Elliot et al (1997) report that the Matrices sub-test of the BAS correlated 0.47 with the performance IQ component of the Wechsler Intelligence Scale for Children III (WISC-III).

8.3 THE DRUMCONDRA REASONING TEST (DRT)

The DRT, an objective test of cognitive skills, can be used to assess students in transition between primary and post-primary schooling, or in the early years of post-primary schooling. It comprises Verbal Reasoning and Numerical Ability sub-tests designed by the Educational Research Centre in Dublin and is based on the Irish school curriculum. The full DRT is an 80-item test (40 items each in the numeracy and verbal components), which can take over an hour to administer. This was too long for use in *Growing Up in Ireland* so a reduced version of the full DRT was designed by the Educational Research Centre.

The version used in the *Growing Up in Ireland* contained 20 Verbal Reasoning questions (Part 1) and 20 Numerical Ability questions (Part 2), designed for individual or group administration. The child was given a maximum of 25 minutes to complete the test. Students recorded their answers on a machine-scorable answer sheet.

The **Verbal Reasoning test** was completed first. It involved the Study Child answering 20 questions such as the following:

- Q1. Which word is nearest in meaning to: **FURY**
- A. Haste B. Ignorance C. Rage D. Anxiety
- Q10. Which word is nearest in meaning to: **PROVOKE**
- A. Forbid B. Incite C. Condemn D. Defeat
- Q15. Which word is the odd one out?
- A. Taste B. Scent C. Aroma D. Odour
- Q20. Which word is the odd one out?
- A. Generous B. Wealthy C. Affluent D. Prosperous

The **Numerical Ability test** also had 20 questions, including:

¹⁶ The general factor is a variable that summarises positive correlations between different cognitive tasks, reflecting the fact that performance on one type of cognitive task tends to be comparable to performance on others.

¹⁷ Group factors represent variance that groups of tests with similar task demands have in common in addition to the shared general variance.



Q1. $\frac{2}{5}$ of 5 =

- A. $3\frac{1}{2}$ B. $3\frac{1}{3}$ C. $2\frac{1}{3}$ D. 2

Q10. Which numbers do the letters represent?

$$\begin{array}{r} 42P \\ \times Q \\ \hline 2120 \end{array}$$

- A. P = 0, Q = 5 B. P = 2, Q = 5 C. P = 5, Q = 4 D. P = 4, Q = 5

Q15. $\begin{array}{r} 2.04 \\ \times 0.75 \\ \hline \end{array}$

- A. 15300 B. 15.3 C. 1.53 D. 1530

Q20. $\frac{5 \times 7}{14 \times 10}$

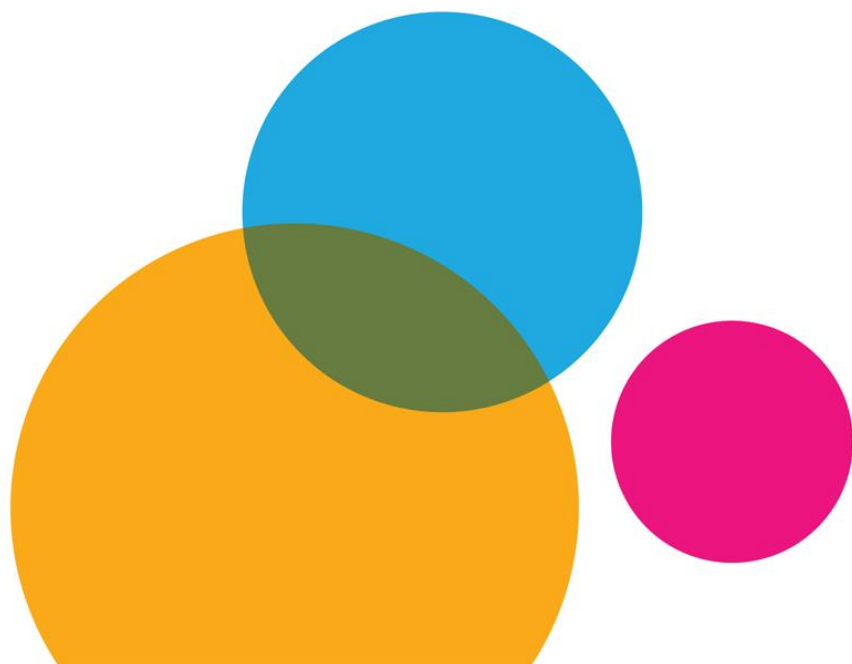
- A. $\frac{1}{4}$ B. $\frac{50}{98}$ C. $1\frac{48}{50}$ D. 4

As stated above, the DRT is not described as an achievement test, but has been found to be highly predictive of later achievement in Junior and Leaving Certificate examinations (Co-education Study, ESRI, 1990). There are national norms for sixth-class, first- and second-year students. The DRT was piloted with 55 students during the Pilot Extension, the results of which indicated trends and associations that were very consistent with other child characteristics and outcomes.



Chapter 9

OTHER INSTRUMENTS AND MEASURES





CHAPTER 9: OTHER INSTRUMENTS AND MEASURES

9.1 INTRODUCTION

This section details other instruments used to collect data during the current wave of the study. Two other questionnaires were administered: the Non-resident Parent Questionnaire and the Principal/Schools Questionnaire (see Appendices K and L respectively).

9.2 NON-RESIDENT PARENT QUESTIONNAIRE

9.2.1 INTRODUCTION

If applicable and if the Primary Caregiver gave permission, the interviewer recorded the contact details of the biological non-resident parent for the purpose of sending out a self-completion questionnaire to that parent. A detailed description of the questions contained in the Non-resident Parent Questionnaire can be found below. Its rationale borrows heavily from reviews of the topic by Dunn (2004), Wilson (2006) and Waldfogel et al (2010). The latter, in particular, synthesises much of the work on non-resident parents' influence on children's wellbeing. An almost identical questionnaire was sent to non-resident fathers and mothers, but with questions relating to naming on the birth certificate and guardianship removed.

Q1 – Q8: Contact visits with the Study Child

Prior research has examined the extent to which the frequency, type, nature and quality of time spent with the non-resident parent affects a variety of indicators of child wellbeing (e.g. Amato & Gilbreth, 1999; Jenkins & Lyons, 2006). Some studies indicate that the frequency of contact matters less than the quality of the non-resident contact (e.g. Amato & Gilbreth, 1999; Dunn, 2004). Interestingly, Amato and Gilbreth's meta-analysis of the literature reported that the effect sizes for the beneficial effects of non-resident contact time on children's outcomes were stronger for studies published between 1989 and 1998 compared with those published earlier. There is also evidence to indicate that contact time varies by socio-economic circumstances, with those who are unemployed or on lower incomes reporting lower levels of contact on average (Bradshaw, Stimson, Skinner et al, 1999). Nevertheless, detailed examination of non-resident parents' time with their children is notably absent in the literature (Jenkins & Lyons, 2006).

To assess contact between the young person and non-resident parent, this set of questions collected information about length of time since last visit and the non-resident parent's contact time with the Study Child (Q1–Q4), their level of satisfaction with these arrangements (Q5–Q6), the location where these visits tended to take place (Q7) and how this arrangement was arrived at (e.g. court-imposed settlement). Question 1 was previously used by the Early Childhood Longitudinal Study (ECLS) and Questions 2, 3 and 5 were previously used by Living in Australia (HILDA).

Q9: Perception of parental role

An understanding of the non-resident parent's perception of their parenting role is important as it is likely to define the way in which they interact with their children (Parke, 2002). Prior research suggests that perception of the parenting role is likely to be influenced by a host of factors, including the parent's gender, marital status, socio-economic position, age and ethnic background (Bronte-Tinkew, Carrano & Guzman, 2006); and there is evidence to indicate that the non-resident father's perception of their parenting role may differ in important ways compared with that of resident fathers (Pryor & Rodgers, 2001).

This question, adapted from an item used by the ECLS, asked the respondent to rank in order of importance the three things that best defined their parental role. A list of six closed-response options, including *showing my child love and affection* and *taking care of my child financially* was provided, and there was also an *other* option to specify an open-ended text response. Analysis of the ECLS data indicated that 64 per cent of fathers rated *showing my child love and affection* as the most important thing for a father to do (Avenilla, Rosenthal &

Tice, 2006) while McBride and colleagues (2004) found that men who viewed their role as more than simply a breadwinner were much more likely to be involved with their children in terms of household and child-centred tasks.

Q10 – Q11: Means of, and amount of, communication with the Study Child

These questions asked about the amount and type of contact between parent and Study Child other than personal visits. The information gathered will help to indicate the importance and impact of this type of contact in contemporary Ireland, and will also follow up on contact levels reported at nine years to see if these have been maintained. It has been suggested that phone calls may be used as a substitute for personal visits, particularly for parents living some distance away (e.g. Skevik, 2006).

Q12: Rating of quality of time spent with the Study Child

Amato and Gilbreth's (1999) meta-analysis of 63 studies demonstrated that the quality of the parent-child relationship is more important than the frequency of contact in terms of its impact on children's cognitive outcomes and externalising/internalising behaviours. This finding has since been affirmed by other investigators, based on children's reports of their relationship with their non-resident father (e.g. Dunn, Cheng, O'Connor et al, 2003).

Parents were asked to rate the perceived quality of time they spent with the Study Child on a five-point rating scale ranging from *excellent* to *poor*. The quality of time spent with the child is likely to relate to the parent-child relationship, where higher quality may equate to more closeness in the relationship and poorer quality to conflict in the relationship.

Q13: Non-resident parent's performance of routine caring tasks

Face-to-face contact between children and their non-resident parents is an important part of parenting after separation. It is important to distinguish between daytime-only contact and overnight stays, because the latter provide greater opportunities for family activities to occur, which encourages emotional bonds to develop between children and their non-resident parents.

The Family Characteristics Survey (ABS, 2003) in Australia found that 50 per cent of children with a non-resident parent not only had face-to-face contact with them but also stayed overnight, while the remaining 50 per cent either had face-to-face contact only or rarely saw their non-resident parent.

The questions in *Growing Up in Ireland* centre on activities such as preparing a meal for the young person, helping them with homework, and taking them to the doctor. Obviously, a child spending more time with a non-resident parent (including overnight stays) will have more opportunities to engage in these types of activities and hence build stronger emotional bonds.

Q14 – Q18: Amount of financial and other support provided to the Study Child

Evidence summarised in Wilson (2006) reports that maintenance payments are linked with the frequency of contact between the non-resident parent and their children and with involvement in childrearing decisions. Other reviews of the literature on non-resident fathers' payment of child support have shown that it is associated with children's wellbeing, educational attainment and health (c.f. Dunn, 2004).

Questions 14–18 asked whether the non-resident parent makes a financial contribution to the Study Child's welfare, how this arrangement had been arrived at, and whether they provide other types of non-financial assistance.

Q19: Status of relationship with Study Child's mother/father at pregnancy

Many studies suggest that a father will be more likely to maintain contact if he has been married to, or at least cohabited with, the mother (e.g. Argys, Peters, Cook et al, 2003; Clarke, Cooksey & Verropoulou, 1998; Skevik,

2006), although some variation as to the relative effect of marriage versus cohabitation has been observed between cultures.

Question 19 asked the parent to describe the status of his/her relationship with the other parent at the time of conceiving the Study Child. Although this question was asked at age nine, it was asked again at age 13 in order to capture information from new non-resident parents and those who had not responded at the last wave.

Q20: Age of Study Child at time of parental separation

Details on the age of the Study Child at the time of separation were recorded to investigate the influence of age on the affects that parental separation had on the child or child outcomes. Recency of separation (measured through age of the child) has been found, for example, to affect the frequency with which the non-resident parent remains involved with the Study Child. Blackwell and Dawe (2003), for example, found that 32 per cent of children whose parents had separated three or more years previously saw their non-resident parent at least once a week compared with more than 50 per cent of those who had broken up less than three years previously. Although there is a general consensus amongst researchers in the field that separation effects are most pronounced at the time of the initial separation, research is inconclusive with regard to whether marital dissolution has stronger adverse effects on younger children as opposed to adolescents, and on boys compared to girls (c.f. Woodward, Fergusson & Belsky, 2000).

Question 20 asked what age the Study Child was when the parents separated. Woodward et al (2000), using data from the Christchurch Health and Development Study, demonstrated the utility of this type of question within a longitudinal framework by showing that there is a direct linear relationship between the timing of parental separation and children's parental attachment. Specifically, earlier separation was associated with lower levels of parental attachment when assessed at 15 years of age.

Q21: Father's name on birth certificate (not asked of non-resident mothers as not applicable)

Being named on the birth certificate suggests some degree of closeness or involvement around the time of the birth (Kiernan, 2006). Studies have shown that fathers were more likely to maintain contact with their children and make maintenance payments if they were named on the birth certificate (Lundberg et al, 2007; Kiernan, 2006).

This question, which asked the parent if they were named on the Study Child's birth certificate, was only asked of fathers, with a view to considering how this status might affect subsequent contact.

Q22 – Q23: Application for guardianship status (not asked of non-resident mothers as not applicable)

This question asked fathers who were not married to the Study Child's mother if they had applied for guardianship status, if this application was through the mother or the courts, and if the application was successful. It will provide useful information indicating the number of fathers who take up this option and whether the status affects their involvement with their children (see discussion above on potential impact of being named on the birth certificate).

Q24 – Q26: Quality of the relationship with the Primary Caregiver

Research on intact and separated families indicates that the interparental relationship quality after separation is an important mediating variable explaining links between parental separation and children's outcomes (Waldfoegel, Craigie & Brooks-Gunn, 2010). Interparental conflict is associated with adverse outcomes for children (Amato & Rezac, 1994; Pryor & Rodgers, 2001; Sarrazin & Cyr, 2007) while better relationship quality is associated with higher levels of contact and greater involvement of the non-resident parent (Ahrons & Miller, 1993). Amato and Rezac (1994) reported that contact with non-resident fathers is related to positive outcomes for the child when the parents have a co-operative relationship but not when they are in conflict. Whiteside and Becker's (2000) meta-analysis of 17 studies found both direct and indirect effects of post-separation interparental relationship quality on children's social and cognitive skills. They found that positive father-child relationships and parental cooperation was associated with beneficial direct effects on children's

cognitive skills and psychological adjustment, while interparental conflict was associated with indirect effects on visitation, father-child relationship quality and child outcomes.

These questions asked about the frequency of contact with the child's biological parent, the quality of the interparental relationship and the extent of the non-resident parent's involvement in major decisions concerning the Study Child. Questions 22 and 24 were based on questions used in the Early Childhood Longitudinal Study, and Question 23 came from the Millennium Cohort Study.

Q27 – Q28: Parent's date of birth and age at which he/she first became a parent

These questions were asked with a view to examining if a particular age group of fathers/mothers is more or less likely to maintain contact as the child grows up. Research from the Fragile Families and Child Wellbeing Study indicates that first-time fathers may be more likely to maintain contact and to have had paternity formally established (Lundberg et al, 2007). This question was also asked in the Early Childhood Longitudinal Study.

Q29 – Q31: Socio-economic status

Socio-economic status is likely to affect the resources and/or time the parent has available to give to the Study Child. There is evidence summarised in Wilson (2006) that non-resident fathers who are employed and have higher levels of education are more likely to have contact with their children.

These are standard items used in surveys to measure socio-economic status, including employment and occupation.

Q32 – Q35: Current family/relationship status

The findings on the impact of a 'new' family on contact with the 'old' are conflicting. Some indicate that contact remains steady (Skevik, 2006), others that it decreases (e.g. Parkinson & Smyth, 2003), and others again that it depends on the composition of the new family, with a higher number of new biological children reducing the odds of fathers' contact with their non-resident children (Manning & Smock, 1999).

These questions asked about the non-resident parent's current marital status, whether they were in a relationship with a new partner, how long this relationship had been established, and whether they had other biological children (excluding the Study Child). This information will enable researchers to explore the extent to which commitment to another family affects the relationship with the non-resident child as well as the amount and type of contact with, and the resources available to, the Study Child.

Q36 – Q37: Parent's nationality and residence in Ireland

These questions captured basic demographic information about the non-resident parent's nationality and the length of time they had been living in Ireland.

Q38: Parent's health status

The same item as that used to index the Primary Caregiver's Health Status (see Section 6.1.3 above).

9.3 THE PRINCIPAL'S QUESTIONNAIRE

There is continuing dispute in the literature about the impact of educational inputs (staffing levels, class size, etc) on educational outcomes at the school level. Although Hanushek (1997; 2003) has argued that there is little evidence to support the idea that resources are positively related to educational outcomes, there is good evidence summarised in Greenwald, Hedges and Laine (1996) and Krueger (2003) that school resources such as per-pupil expenditure, teacher-pupil ratio and class size are systematically related to student achievement.

In this study, school principals were sent a short questionnaire to record details about the school. In addition to capturing basic demographic information such as the number of pupils and the number of staff, the

questionnaire measured a variety of important school-level variables such as the adequacy of facilities and resources, the prevailing value system and ethos of the school, and various aspects of school climate. This information will be of value in performing between-school comparisons of educational outcomes, as well as making it possible to link this information to the Study Child's individual-level data. The questionnaire was administered on paper and contained the following questions:

P1 – P3: Personal information

These items captured basic descriptive information about the principal such as age, gender, the number of years he/she had been principal at their current school, and the number of years as principal in other primary schools, if applicable.

P4 – P7: Basic information about the school

These questions asked about the gender makeup of the school, its religious ethos, the type of school (fee-paying, community college, comprehensive, mainstream, etc), and whether the school participated in the DEIS (Delivering Equality in Schools) Programme.

P8 – P10: Staffing resources

The questions on staff resources included the number of teaching and administrative staff employed in the school on a full-time and part-time basis, their gender breakdown, and whether the school had additional capacities in terms of learning supports such as resource teachers, special-needs assistants, a Home-School Community Liaison Officer, etc.

P9b: Provision in the school of a breakfast club or free school meals

This question asked whether the school provided such resources as a breakfast club or free school meals. This is frequently used as a proxy for disadvantage.

P11: Perception of adequacy of resources in terms of teachers, classrooms, sports

facilities, etc

This question, adapted from the Early Childhood Longitudinal Study, was designed to assess the adequacy of the school's facilities and resources across a number of areas (e.g. number of teachers, number of classrooms), with responses indicated on a four-point Likert scale ranging from *poor* to *excellent*. Evidence summarised by Schneider (2002) suggests that student achievement is correlated with better school facilities such as newer school buildings and with modern libraries and laboratories.

P12: Year school was built and number of pupils the school was designed for

This question asked what year the school was built and the number of children the school was designed to accommodate.

P13: Pupils with difficulties

Question P13 recorded details on the proportion of students who had such literacy, numeracy or behavioural problems such as would adversely affect their educational development. A high incidence of children with these types of problems may indicate a challenging teaching and learning environment.

P14: School support to new students (incl. induction days, class tutor, etc)

These questions ascertain school approaches to helping first-year pupils adapt to second-level education. They record information on the approaches which are adopted by the school and what is the single most important approach. This information will be used in conjunction with other school-level information to assess the importance of these factors on child outcomes.



P15 – P16: Over-subscription to school and entrance criteria

The increasing pressure on school places in large urban areas has prompted interest in the extent to which there is 'selection' within the school sector, and whether this is differentially related to educational outcomes at the school level.

P17 – P18: Attendance and absence levels

Schools return attendance/absence figures to the Department of Education and Science on an annual basis. These relate to the average daily attendance at the school in the academic year, and the proportion of pupils who missed 20 days or more. Research points to the strong link between attendance and educational outcome (e.g. Reid, 2006); studies have found that schools with higher rates of daily attendance tend to outperform schools with lower attendance in achievement tests (Roby, 2004).

P19: School composition

This question seeks information about the number of children who are foreign nationals or from families in the Travelling Community, as well as the number of children with sensory, language and learning difficulties. Studies have consistently shown that the background of fellow students has a strong impact on educational outcomes and that both ability-mix and social-mix have an effect on pupil progress and achievement (Rutter & Maughan, 2002).

P20 – P21: Programmes offered in the school and subjects taught in Junior Cycle

These questions ask about the programmes offered by the school, such as Transition Year programme, Leaving Certificate Applied, and Post-Leaving Certificate Courses, as well as the subjects offered at Junior Cycle and the level they are taught at.

P22: Extracurricular activities offered by the school

These questions relate to the importance attached by the school to a range of curricular and extracurricular activities. Research with adolescents has shown that pupil involvement in extracurricular activities such as sport and music can help foster a positive school climate and may be related to positive educational outcomes (Fullarton, 2002; Alva, Elmore, Nord & Zill, 2004).

P23: Basis for allocating pupils to their base class

If there was more than one class in any year group, the principal was asked about the basis on which pupils were allocated to their base class, including randomly/alphabetically, performance on tests, or other.

P24 – P25: Parent-teacher meetings and parent attendance

Information was collected on whether the school held a formal parent-teacher meeting at least once a year and what proportion of parents attended. Parental involvement is often considered a measure of school climate (Ma, 1999); high parental involvement is considered a correlate of school effectiveness (Marzano, 2002), and is of ultimate importance to child outcomes.

P26 – P27: Parent-teacher association

These questions asked about the existence of a parent-teacher association and the principal's perception of parental satisfaction with the school, and reasons for this.

P28: Bullying within the school

This question asked whether the school had an explicit anti-bullying programme. School bullying has become a topic of public concern and considerable research in various countries around the world in the last two

decades (see Smith & Ananiadou, 2003) indicates that schools that employ a formal anti-bullying strategy tend to have lower rates of bullying (Fekkes, Piipers & Verloove-Vanhorick, 2006).

P29 – P30: Student council and student decision-making

This question asked whether or not the school had a student council, and about any other ways that students were involved in decision-making processes in the school. Research suggests that when rules, sanctions and procedures are developed with input from students and teachers, this contributes to a sense of ownership and belongingness that is conducive to learning (Cotton, 2000).

P31 – P33: Principal’s perception of general school climate

Question P31, adapted from the teacher questionnaire used in Smyth (1999) (*Do Schools Differ?*), concerned the principal’s general perception of the attitudes of teachers and children in the school. Question P33 asked about the degree of satisfaction the principal derived from his/her job. Previous research in Ireland indicates that less academically effective schools are characterised by less positive relations between management and staff, and less supportive relations among colleagues (Smyth, 2004).

P34: Healthy eating policy

These questions asked whether the school had a healthy eating policy, whether it had a vending machine, and whether this dispensed diet drinks, unsweetened fruit juices and/or water. In second-level schools, children are at an age when they begin to make informed choices and decisions about their lives. One of these vital areas is food and nutrition. Students need to be aware of the importance of healthy eating practices in order to optimise their growth, health and potential. This information can be explored in conjunction with other dietary information collected from the parents, as well as in the context of the child’s BMI, to ascertain whether or not school policy could be an influencing factor for child weight issues.

Chapter 10

SUMMARY



CHAPTER 10: SUMMARY

10.1 SUMMARY

Growing Up in Ireland is the national longitudinal study of children. It is the most important quantitative study of children ever carried out in Ireland. While the first wave of the study has provided valuable cross-sectional insights, the second wave will offer the opportunity for analyses of children's development as they move into adolescence and of the factors associated with the changes they have experienced since they were nine years of age.

Growing Up in Ireland has a key role in the implementation of the National Children's Strategy. The project has nine key objectives relating to the development of a comprehensive data bank on the whole child, and all the variations encompassed by that concept, which can be used to inform government policies and services (see Chapter 1). The study is multi-disciplinary, collecting information on a broad range of variables that can both affect and describe the lives of 13-year-old children living in Ireland: health, physical development, cognitive development, parenting, family context, personality, income and community. The interconnectedness across domains (as well as time) contributes greatly to the uniqueness and potential of the study for researchers, policymakers and all involved in childhood and child development.

The Study Team is very aware of its responsibilities of conducting the study in an ethical manner. The entire project is overseen by a Research Ethics Committee (Chapter 4). Instruments were developed in consultation with national and international experts, the Scientific and Policy Advisory Committee, stakeholders and other contributors (Chapter 3). All stages of the project have been subject to international peer review.

10.2 SUMMARY OF CROSS-WAVE MEASURES

In designing the instrumentation, the Study Team was always aware of the need to adequately capture the multifaceted nature of the influences on children's development over time. This had to be done while incorporating age-appropriate questions to capture developmental milestones or important periods of transition (such as moving to secondary-level education), but maintaining cross-wave consistency in terms of measures. This exercise was informed by the nine- and 13-year literature reviews, which identified a number of research questions, more of which emerged during the course of discussions with the various expert panels.

Besides changing family structures in Ireland (there has been a dramatic increase in single-parent families, to 24 per cent, the second highest rate in the OECD), child poverty continues to be a significant problem, with levels also well above the OECD average. These will be important foci for researchers and policymakers alike in terms of assessing their impact on child outcomes. Waves 1 and 2 of *Growing Up in Ireland* have also been set in the context of an unprecedented boom followed by a major recession in the Irish economy. This will, essentially, give researchers a unique insight into changes in the period between the two waves. For this reason, the Wave 2 instruments included questions designed to assess the impact of the recession on households participating in the study, questions that would not have been considered at Wave 1.

The questionnaire matrix shown in Table 10.1 below summarises the concepts measured at each wave of the study and indicates how the Study Team's focus has shifted between waves. For example, while some retrospective data collected on the child's birth (birth-weight, breastfeeding, etc) is still salient, it needed only to be asked one time and therefore was not included at the second wave.



The health and wellbeing of parents and children, as well as their use of healthcare services, has been set in the context of rich socio-economic data collected in the study. It is therefore important to obtain this information at subsequent waves so that changes in this important contextual data can be tracked and related to outcomes for the child. Other questions, such as those pertaining to the child's diet, exercise and activities are also still important, and continue to be asked of both parents and children. Questions around sport and other activities, and whether or not these have to be paid for, were asked of the Study Child rather than the parent at Wave 2, as were questions on eating habits.

The focus for the 13-year-olds has clearly shifted to adolescent-appropriate topics. Therefore issues that were not perceived to be as relevant for nine-year-olds – such as parental monitoring, school transition, and alcohol and drug use – were introduced into the instrumentation at 13 years. Since many of these measures were originally developed for self-completion by teenagers, it was deemed appropriate to shift responsibility for reporting on these matters to the Study Child him or herself. Included among these were measures of socio-emotional and behavioural development, including delinquency, psychotic behaviours, alcohol and drug use, peer relationships and depression. While the Primary Caregiver interview was still a major priority at this juncture, the shift in much of the focus of the interview to the Study Child was a major change in the instrumentation at this wave.

After some consideration it was decided to ask the Primary Caregiver to continue to report on some child behaviours. Among these were the Strengths and Difficulties Questionnaire where it was felt that consistency in reporting would be beneficial in terms of longitudinal analysis. While it was considered to have both respondents complete the SDQ (Primary Caregiver and Study Child), time constraints precluded this in the end. The personality scale described in Chapter 6 was originally developed to be self-completed by respondents aged 18 years and older, so it was believed that the Primary Caregiver report would be more appropriate for this measure also. This measure replaced the temperament measure used at nine years as it was thought to be more appropriate for the current age group. Finally, the Primary Caregiver reported on conduct at Wave 1 (Conduct Disorder items from the DSM-IV) and, given the importance of this measure (for tracking children with early-onset, as opposed to adolescent-onset, conduct disorder) it was thought appropriate to ask these questions again at 13 years. While continuity of reporting is maintained on this measure, the Study Child's self-report of delinquent behaviours was also introduced to the study in Wave 2, to further enhance information on both norm-breaking and illegal behaviours.

It is envisaged that the *Growing Up in Ireland* study will continue to grow with the children and enrich our understanding of the factors influencing children's development. Such data form the foundations for effective decisionmaking and the implementation of policies designed to optimise children's wellbeing.

Table 10.1: Summary of cross-wave measures

GUI measures in the Child Cohort	Respondent	9 years	13 years
Household composition			
Demographic information in respect of each household member	Parent	x	x
New entrants to the household	Parent		x
Departures from the household	Parent		x
No. of people living in the household	Parent	x	x
Details of child's birth			
Child's birth-weight	Parent	x	
Delivery details	Parent	x	
Neonatal intensive care stay	Parent	x	
Smoking during pregnancy	Parent	x	
Alcohol consumption during pregnancy	Parent	x	
Breastfeeding	Parent	x	
Child's current general health			
General health status	Parent	x	x
Current chronic illness	Parent	x	x
	Child	x	
Past chronic illness	Parent	x	x
Respiratory problems	Parent		x
Use of antibiotics	Parent		x
Accidents in last year	Parent	x	x
Child exposure to tobacco at home	Parent	x	
Child conditions/disabilities:	Parent	x	x
	Diagnoses	Parent	x
	Medication	Parent	
	School supports	Parent	
	Other support	Parent	
	Adequacy of support	Parent	
	Adequacy of support	Parent	
Healthcare use			
Nights in hospital in lifetime	Parent	x	x
A&E visits in last year	Parent	x	x
Medical insurance	Parent	x	x
Contact with health professionals	Parent	x	x
Reasons for non-receipt of medical treatment	Parent	x	x
Reasons for non-receipt of dental treatment	Parent	x	x
Frequency of dental visits	Parent	x	x
Teeth pulled or filled	Parent		x
Treatment for sight problems	Parent	x	
Treatment for hearing problems	Parent	x	
Mobility support	Parent	x	
Handedness	Parent	x	
Child's diet and exercise			
Eating breakfast before school	Parent	x	x
	Child		x
Brief food frequency questionnaire	Parent	x	



	Child		x
Special diet	Parent	x	
Perception of child's weight	Parent	x	x
	Child	x	x
Child's dieting behaviour	Child		x
Frequency of exercise	Parent	x	
	Child	x	x
Mode of transport to school	Parent	x	x
Child's activities			
Hobbies	Child	x	
Reading/computer/video games	Parent	x	
	Child	x	x
Chores	Child	x	x
Mobile phone ownership	Child	x	x
Computer in the home	Parent	x	x
	Child	x	x
Access to the Internet	Parent		x
	Child	x	x
Spending money	Child	x	x
Participation in sport and other activities and whether or not they are paid for	Parent	x	
	Child		x
Child's socio-emotional and behavioural development			
Life events	Parent	x	x
Emotional and behavioural health: <i>Scale: Strengths and Difficulties Questionnaire</i>	Parent	x	x
Temperament: <i>Scale: EAS Temperament Scale</i>	Parent	x	
Personality: <i>Scale: Ten Item Personality Inventory</i>	Parent		x
Conduct: Items from the DSM-IV classification for Conduct Disorder	Parent	x	x
Delinquency	Child		x
Self-concept: <i>Scale: Piers-Harris II</i>	Child	x	x
Maturation (gender-specific)	Child		x
Presence of psychosis	Child		x
Smoking behaviours	Child		x
Alcohol consumption	Child		x
Use of illicit drugs	Child		x
Child peer relationships			
Number of close friends	Parent	x	x
	Child		x
Age of friends	Child		x
Peer relationships: <i>Scale: Inventory of Parent and Peer Attachment</i>	Child		x
Bullying – child bullied and bullying behaviour by the child	Parent	x	x
	Child	x	x
Depression:	Child		x



<i>Scale: Short Mood and Feelings Questionnaire</i>			
Child's cognitive development			
Drumcondra Reading and Maths tests	Child	x	
Drumcondra Reasoning Tests	Child		x
BAS Matrices	Child		x
Child's education			
Out-of-school care	Parent	x	x
Current class in school	Parent		x
	Child		x
Subjects taken in school	Child		x
School transition	Parent		x
Parent involvement with school	Parent	x	x
Absence from school in last year	Parent	x	x
	Child		x
Homework	Parent	x	x
	Child	x	x
Perception of ability in Maths and Reading	Parent	x	
Extra tuition	Child		x
Lateness/truancy/detention	Child		x
Expectation of how far the child will go in education	Parent	x	x
	Child		x
Number of books in the household	Parent	x	x
	Child	x	x
Use of Internet filter system	Parent		x
Time spent by child on computer	Parent		x
Attitude towards school	Child	x	x
Relationship and Sexuality Education	Child		x
Family context / parenting			
Parent-child relationship: <i>Scale: Pianta parent-child relationship scale</i>	Parent	x	x
Parental monitoring: <i>Scale: Sub-scale from Stattin & Kerr Monitoring and Supervision Scale</i>	Parent		x
Child disclosure: <i>Scale: Sub-scale from Stattin & Kerr Monitoring and Supervision Scale</i>	Parent		x
Parental control: <i>Scale: Sub-scale from Stattin & Kerr Monitoring and Supervision Scale</i>	Child		x
Parenting style: <i>Scale: Parenting Style Inventory</i>	Child	x	x
Parental knowledge of child smoking, alcohol or drug use	Parent		x
Parental stress: <i>Scale: Sub-scale from Parental Stress Scale</i>	Parent		x
Parental discipline	Parent	x	
	Child	x	x
Family activities	Parent	x	x
Frequency of time spent with other relatives	Parent	x	x



Work-life balance	Parent	x	x
Parental health and lifestyle			
General health status	Parent	x	x
Current chronic illness	Parent	x	x
Past chronic illness	Parent	x	x
Depression	Parent	x	x
Dieting behaviour	Parent	x	x
Pregnancy status	Parent	x	x
Smoking behaviours	Parent	x	x
Alcohol consumption	Parent	x	x
Marital/partner relationship			
Marital status	Parent	x	x
Marital history	Parent	x	x
Current relationship status	Parent	x	x
Marital conflict	Parent	x	x
Parental relationship: <i>Scale: Dyadic Adjustment Scale</i>	Parent	x	x
Details on non-resident parent	Parent	x	x
Sociodemographic information and household income			
Parental employment and occupational status	Parent	x	x
Household income	Parent	x	x
Household deprivation	Parent	x	x
Child deprivation	Parent		x
Intergenerational deprivation	Parent	x	x
Welfare dependency	Parent	x	x
Residential status	Parent	x	x
Accommodation type	Parent	x	x
Access to garden/common space	Parent	x	x
Receipt of mortgage supplement	Parent	x	x
Impact of recession on the household	Parent		x
Car ownership	Parent	x	x
Neighbourhood and community			
Social support	Parent	x	
Length of time resident in the local area	Parent	x	x
Physical condition of the neighbourhood	Parent	x	x
	Child	x	
Safety of the neighbourhood	Parent	x	x
Services available in the local area	Parent	x	
Community integration	Parent	x	
Family living in the local area	Parent	x	
Population size of the local area	Parent	x	
Intention to continue living in Ireland	Parent		x
Anthropometric measures			
Child height	Direct assessment	x	x
Child weight	Direct	x	x



	assessment		
Parental height	Direct assessment	x	x
Parental weight	Direct assessment	x	x
Parental self-reported height	Parent	x	x
Parent self-reported weight	Parent	x	x
Further information			
Parental educational attainment	Parent	x	x
Main language spoken in the home	Parent	x	x
Parental literacy and numeracy	Parent	x	x
Religious denomination (parent and child)	Parent	x	x
Nationality and citizenship (parent and child)	Parent	x	x
Ethnicity	Parent	x	x



REFERENCES

- Ahrons, C. R. & Miller, R. B. (1993). The effect of the postdivorce relationship on paternal involvement: A longitudinal analysis. *American Journal of Orthopsychiatry*, 63, 441-450.
- Aizer, A. (2004). Home alone: supervision after school and child behaviour. *Journal of Public Economics*, 88, 1835-1848.
- Allen, J. P., Litten, R. Z., Fertig, J. B. & Babor, T. (1997). Review of research on the Alcohol Use Disorders Identification Test (AUDIT). *Alcoholism: Clinical and Experimental Research*, 21(4): 613-619.
- Altman, D. G. & Bland, J. M. (1994). Diagnostic tests. 1: Sensitivity and specificity, *British Medical Journal*, 308 (6943): 1552.
- Amato, P. R. & Gilbreth, J. G. (1999). Nonresident fathers and children's well-being: A meta-analysis. *Journal of Marriage and the Family*, 61, 557-573.
- Amato, P. R. & Rezac, S. (1994). Contact with nonresident parents, interparental conflict, and children's behavior. *Journal of Family Issues* 15, 191-207.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (4th ed.). Washington DC: American Psychiatric Association.
- Anderson, C. A. & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science*, 12, 5, 353-359.
- Anderson, R. C., Fielding, L. G. & Wilson, P. T. (1988). Growth in reading and how children spend their time outside of school. *Reading Research Quarterly* 23, 285-304.
- Angold, A., Costello, E. J., Messer, S. C, Pickles, A., Winder, E & Silver, D. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237-249.
- Anti-Bullying Centre (2002). School issues in bullying. Trinity College Dublin [online]. Available: <http://www.abc.tcd.ie/>.
- Argys, L., Peters, E., Cook, S., Garasky, S., Nepomnyaschy, L., Sorensen, E. & Waller, M. (2003). Nonresidential parenting: Measuring contact between children and their nonresident fathers. In Bethesda, MD: Paper presented at Measurement Issues in Family Demography Workshop.
- Armistead, L., Klein, K. & Forehand, R. (1995). Parental physical illness and child functioning. *Clinical Psychology Review*, 15, 409-422.
- Armsden, G. C. & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Relationships to well-being in adolescence. *Journal of Youth and Adolescence*, 16 (5), 427-454.
- Avenilla, F., Rosenthal, E. & Tice, P. (2006). *Fathers of U.S. Children Born in 2001: Findings from the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)*, E. D. Tab. (NCES 2006-002). Washington, DC: National Center for Education Statistics.
- Bandura A., Barbarabellie, C., Caprara, G. V. & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning, *Child Development*, 67, 1206-1222.
- Baumrind, D. (1966). Effects of authoritative parental control on child behaviour. *Child Development*, 37, 4, 887-907.

- Baumrind, D. (1991). Effective parenting during the early adolescent transition. In P.A. Cowen and E. M. Hetherington (Eds.), *Advances in Family Research*, 2, 111-163, Hillsdale, NJ: Erlbaum.
- Beardslee, W. R., Keller, M. B., Seifer, R., Podorefsky, D., Staley, J., Lavori, P. W. & Shera, D. (1996). Prediction of adolescent affective disorder: Effects of prior parental affective disorders and child psychopathology. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 279-288.
- Bee, H. & Boyd, D. (2007). *The Developing Child* (11th ed.). Boston: Pearson Education.
- Belsky, J. (1984). The determinants of parenting: a process model. *Child Development*, 55, 83-96.
- Bernardini, S. C. & Jenkins, J. M. (2002). *An Overview of Risks and Protectors for Children of Separation and Divorce*. (Rep. No. 2E). Ottawa: Department of Justice Canada; Family, Children and Youth Section.
- Berry, J. O. & Jones, W. H. (1995). The parental stress scale: Initial psychometric evidence. *Journal of Social and Personal Relationships*, 12(3), 463-472.
- Blackwell, A. & Dawe, F. (2003): *Non-resident parent contact*. London, ONS.
- Blanden, J. & Gregg, P. (2004). Family Income and Educational Attainment: A Review of Approaches and Evidence for Britain. CEE Discussion Paper No. 41. London: CEE.
- Blaxter, M. (1989). A comparison of measures of inequality in morbidity. In A. J. Fox (Ed.), *Health Inequalities in European Countries* (pp. 199-230). Aldershot: Gower.
- Boyce, W. T., Jensen, E. W., James, S. A. & Peacock, J. L. (1983). The family routines inventory: Theoretical origins. *Social Science & Medicine*, 17, 193-200.
- Bradbury, T. N., Fincham, F. D. & Beach, S. R. H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and the Family*, 62, 964-980.
- Bradshaw, J., Stimson, C., Skinner, C. & Williams, J. (1999). *Absent Fathers*. London, Routledge.
- Bronfenbrenner, U. & Morris, P. (2006). The bioecological model of human development. In R. M. V. Lerner, W. Damon & R. M. S. Lerner (Eds.), *Handbook of Child Psychology, Vol. 1: Theoretical Models of Human Development* (6th ed., pp. 793-828). Hoboken, NJ: Wiley.
- Bronfenbrenner, U. (1979). *The Ecology of Human development: Experiment by Nature and Design*. Cambridge: Harvard University Press.
- Bronte-Tinkew, J., Carrano, J. & Guzman, L. (2006). Resident Fathers' Perceptions of their Roles and Links to Involvement with Infants. *Fathering*, 4,3, 254-285.
- Burgess, S., Gardiner, K. & Propper, C. (2001). *Growing Up: School, family and area influences on adolescents' later life chances*. CASE paper No. 49, Centre for Analysis of Social Exclusion, London School of Economics.
- Burgess, S., Hecht, S. & Lonigan, C. (2002). Relations of the home literacy environment (HLE) to the development of reading-related abilities: A one-year longitudinal study. *Reading Research Quarterly*, 37, 408-426.
- Burke, S., Schmied, V. & Montrose, M. (2006). *Parental alcohol misuse and the impact on children: Literature Review*. New South Wales Department of Community Services.
- Buss, A.H. & Plomin, R. (1984). *Temperament: Early Developing Personality Traits*. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Callan, T., Nolan, B. & Whelan, C. T. (1993). Resources, deprivation and the measurement of poverty. *Journal of Social Policy*, 22, 2.

- Charlton, T., Panting, C. & Hannan, A. (2002). Mobile telephone ownership and usage among 10- and 11-year-olds. *Emotional and Behavioural Difficulties*, 7, 3, 152-163.
- Chassin, L., Pillow, D. R., Curran, P. J., Molina, B. S. G., & Barrera, M. Jnr. (1993). Relation of parental alcoholism to early adolescent substance use: A test of three mediating mechanisms. *Journal of Abnormal Psychology*, 102, 1, 3-19.
- Cheng, H., Dunn, J., O'Connor, T. & Golding, J. (2006). Factors moderating children's adjustment to parental separation: Findings from a community study in England. *Journal of Abnormal Child Psychology*, 34, 230-241.
- Christian, K., Morrison, F. J. & Bryant, F. B. (1998). Predicting kindergarten academic skills: Interactions among child care, maternal education and family literacy environments. *Early Childhood Research Quarterly*, 13, 3, 501-521.
- Clarke, E. C., Cooksey, E. C. & Verropoulou, G. (1998). Fathers and absent fathers: Sociodemographic similarities in Britain and the United States. *Demography*, 35, 217-228.
- Cohet, C., Cheng, S., MacDonald, C., Baker, M., Foliaki, S., Huntingdon, J., Douwes, J. & Pearce, N. (2004). Infections, medication use, and the prevalence of symptoms of asthma, rhinitis, and eczema in childhood. *Journal of Epidemiological and Community Health*, 58, 10, 852-857.
- Collins, C. (2001). *Design of the National Children's Strategy Longitudinal Study of Children*. Unpublished report submitted to the Health Research Board by the consortium represented by S. Greene, A. Hyland, C. Kelleher, S. Mennell, B. Whelan and J. Wilde.
- Collins, M. E. (1991). Body figure perceptions and preferences among preadolescent children. *International Journal of Eating Disorders*, 10, 199-208.
- Crnic, K. A. & Low, C. (2002). Everyday Stresses and Parenting. In M. Bornstein (Ed.), *Handbook of Parenting, Vol. 4* (2nd Edition). Hillsdale, NJ: Erlbaum (pp. 243-268).
- Crnic, K. A., Gaze, C. & Hoffman C. (2005). cumulative parenting stress across the preschool period: Relations to maternal parenting and child behaviour at age 5. *Infant and Child Development*, 14, 117-132.
- Crouter, A. C., Helms-Erikson, H., Updegraff, K. & McHale, S. M. (1999). Conditions underlying parents' knowledge about children's daily lives in middle childhood: Between- and within-family comparisons. *Child Development*, 70, 246-259.
- Cullinan, B. E. (2000). Independent Reading and School Achievement. *School Library Media Research*, 3. <http://news.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume32000/independent.cfm>
- Dalziel, D. & Henthorne, K. (2005). Parents'/Carers' Attitudes towards School Attendance. Research Report 618, London, DfES.
- Darling, N. & Toyokawa, T. (1997). *Construction and Validation of the Parenting Style Inventory II (PSI-II)*. Available online at: <http://www.oberlin.edu/faculty/ndarling/lab/psiii.pdf>.
- Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology*, 19, 294-304.
- Dawe, S., Frye, S., Best, D., Moss, D., Atkinson, J., Evans, C. & Lynch, M. H. P. (2007). ANCD Research Paper: *Drug use in the family: impacts and implications for children*. Australian National Council on Drugs.
- Department of Health and Children (1999). *Children First: National Guidelines for the Protection and Welfare of Children*. Dublin: The Stationery Office.

- Department of Health and Children (2006), *North South Survey of Children's Oral Health in Ireland, 2002*; Department of Health and Children, Dublin 2006.
<http://www.lenus.ie/hse/bitstream/10147/119028/1/OralHealthReport.pdf>
- Derzon, J. H. & Lipsey, M. W. (2000). The correspondence of family features with problem, aggressive, criminal and violent behavior. Unpublished manuscript. Nashville, TN: Institute for Public Policy Studies, Vanderbilt University.
- DiClemente, R. J., Wingood, G. M., Lang, D. L., Crosby, R. A., Salazar, L. F., Harrington, K. & Hertzberg, V. S. (2005). Adverse health consequences that co-occur with depression: A longitudinal study of black adolescent females. *Pediatrics*, 116, 78-81.
- Dishion, T. J., Capaldi, D., Spracklen, K. M. & Li, F. (1995). Peer ecology of male adolescent drug use. *Development and Psychopathology*, 7, 803-824.
- Dornbusch, S., Ritter, P., Leiderman, P., Roberts, D. & Fraleigh, M. (1987). The relation of parenting style to adolescent school performance. *Child Development*, 58, 1244-1257.
- Dumas, J. E., Nissley, J., Nordstrom, A., Phillips Smith, E., Prinz, R. J. & Levine, D. W. (2005). Home chaos: Sociodemographic, parenting, interactional, and child correlates. *Journal of Clinical Child and Adolescent Psychology*, 34, 93-104.
- Dunn, J. (2004). Annotation: Children's relationships with their nonresident fathers. *Journal of Child Psychology and Psychiatry*, 45, 4, 659-671.
- Eamon, M. K. & Zuehl, R. M. (2001). Maternal depression and physical punishment as mediators of the effect of poverty on socioemotional problems of children in single-mother families. *American Journal of Orthopsychiatry*, 71, 2, 218-226.
- Edward, S. & Malcolm, H. (2002). The causes and effects of truancy. Research in Education, SCRE Newsletter No. 71. SCRE Centre/University of Glasgow (literature review).
- Eiser, C. (1997). Effects of chronic illness on children and their families. *Advances in Psychiatric Treatment*, 3, 204-210.
- Ellickson, P. L., Tucker, J. S. & Klein, D. J. (2001). High-risk behaviors associated with early smoking: Results from a 5-year follow-up. *Journal of Adolescent Health*, 28, 465-473.
- Erel, O. & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin*, 118, 108-132.
- Etelson, D., Brand, D.A., Patrick, P.A. & Shirali, A. (2003). Childhood obesity: Do parents recognize this health risk? *Obesity Research*, 11, 1362-1368.
- Fahey, T., Delaney, L. & Gannon, B. (2005). *School Children and Sport in Ireland*. Dublin: The Economic and Social Research Institute.
- Fairlie, R. W. (2005). The Effects of Home Computers on School Enrollment, *Economics of Education Review*, 24, 533-547.
- Fairlie, R. W, Beltran, D. O. & Kuntal, K. D. (2010). Home computers and educational outcomes: Evidence from the NLSY97 and CPS. *Economic Inquiry*, 48, 3, 771-792.
- Feinstein, L. S. J. (1999). Attainment in Secondary School. *Economic Papers*, 51.

- Family Impact Information Sheet No. 2 (2009). *Impacts of government policy on children's health, development and general wellbeing*. Available at www.pmc.gov.au
- Friel, S., Hope, A., Kelleher, C., Comer, S. & Sadlier, D. (2002). Impact evaluation of an oral health intervention amongst primary school children in Ireland. *Health Promotion International*, 17, 119-126.
- Fryer, R. G. and Levitt, S. D. (2004). Understanding the black-white test score gap in the first two years of school. *Review of Economics and Statistics* 86, 551-560.
- Fuchs, T. & Woessmann, L. (2004). Computers and Student Learning: Bivariate and Multivariate Evidence on the Availability and Use of Computers at Home and at School. CESIFO Working Paper 1321.
- Galinsky, E. (1999). *Ask the Children: What America's Children Really Think About Working Parents*. New York, William Morrow & Co.
- Gannon, B. & Nolan, B. (2005). *Disability and Social Inclusion in Ireland*. Dublin: Equality Authority and National Disability Authority.
- Geckova, A. M., Tavel, P., van Dijk, J. P., Abel, T. & Reijneveld, S. A. (2010). Factors associated with educational aspirations among adolescents: cues to counteract socioeconomic differences? *Biomed Central Public Health*. <http://www.biomedcentral.com/1471-2458/10/154>.
- Gelhorn, H. L., Sakai, J. T., Price, R. K. & Crowley, T. J. (2007). *DSM-IV conduct disorder criteria as predictors of antisocial personality disorder*. Department of Psychiatry, University of Colorado Health Sciences Center.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviours and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, 128, 539-579.
- Gil-Rivas, V., Greenberger, E., Chen, C. & Lopez-Lena, M. M. (2003). Understanding depressed mood in the context of a family-oriented culture. *Adolescence*, 38, 93-109.
- Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38, 581-586.
- Gortmaker, S. L., Must, A., Sobol, A. M., Peterson, K., Colditz, G. A. & Dietz, W. H. (1996). Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. *Archives of Pediatric and Adolescent Medicine*, 150, 356-362.
- Gosling, S. D., Rentfrow, P. J. & Swann, W. B., Jr. (2003). A very brief measure of the big five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Greer, F. R. & Krebs, N. F. (2006). Optimizing bone health and calcium intakes of infants, children, and adolescents. *Pediatrics*, 117, 2, 578-585
- Griffin, A. C., Younger, K. M. & Flynn, M. A. (2004). Assessment of obesity and fears of fatness among inner city Dublin school children in a one-year follow-up study. *Public Health Nutrition*, 729-735.
- Grusec, J. E. & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*, 30, 1, 4-19.
- Haas, S. A. (2007). The long-term effects of poor childhood health: An assessment and application of retrospective reports. *Demography*, 44, 1, 113-135.
- Hawkins, J. D., Farrington, D. P. & Catalano, R. F. (1998). Reducing violence through the schools. In D. S. Elliott, B. A. Hamburg and K. R. Williams (Eds.), *Violence in American schools: A new perspective* (pp. 188-216). Cambridge, UK: Cambridge University Press.

- Haynes, R., Reading, R. & Gale, S. (2003). Household and neighbourhood risks for injury to 5-14 year old children, *Social Science and Medicine*, 57, 625-636.
- HBSC, (2006). *Oral hygiene among school children in Ireland*, Health Behaviours in School aged Children, NUI, Galway (2006).
- Herrenkohl, T. L., Hawkins, J. D., Chung, I., Hill, K. G. & Battin-Pearson, S. (2001). School and community risk factors and interventions. In *Child Delinquents: Development, Intervention, and Service Needs*, edited by R. Loeber and D.P. Farrington. Thousand Oaks, CA: Sage Publications, pp. 211-246.
- Hippisley-Cox, J., Groom, L., Kendrick, D., Coupland, C., Webber, E. & Savelyich, B. (2002). Cross sectional survey of socioeconomic variations in severity and mechanism of childhood injuries in Trent 1992-7. *British Medical Journal*, 324(7346): 1132.
- Hobcraft, J. (2000). *The Roles of Schooling and Educational Qualifications in the Emergence of Adult Social Exclusion*, CASE paper No. 43, London: London School of Economics.
- Hodgson, R. J., John, B., Alwyn, T., Hodgson, R. C., Waller, S., Thom, B. & Newcombe, R. (2002). *Fast Screening for Alcohol Misuse: Manual for the FAST Alcohol Screening Test*. London: Health Development Agency.
- Hofhuis, W., de Jonste, J. C., Merkus, P. J. F. M. (2003). Adverse health effects of prenatal and postnatal tobacco smoke exposure on children. *Archives of Disease in Childhood*, 88, 1086-90.
- Huang, J. S., Becerra, K., Oda, T., Walker, E., Xu, R., Donohoe, M., Chen, I., Curbelo, V. & Breslow, A. (2007). Parental Ability to discriminate the weight status of children: Results of a survey. *Pediatrics*, 120, e112-e119.
- Jaakkola, J. J. K. & Jaakkola, M. S. (2002). Effects of environmental tobacco smoke on the respiratory health of children. *Scandinavian Journal of Work, Environment and Health*, 28, 2, 71-83.
- Jacobson, K. C. & Crockett, L. J. (2000). Parental monitoring and adolescent adjustment: An ecological approach. *Journal of Research on Adolescence*, 10, 65-97.
- Janicke, D. M. & Finney, J. W. (2000). Determinants of children's primary health care use. *Journal of Clinical Psychology in Medical Settings*, 7, 29-39.
- Jenkins, J. M. & Lyons, K. D. (2006). Non-resident fathers' leisure with their children. *Leisure Studies*, 25(2): 219-232.
- Judge, K. & Benzeval, M. (1993) Health inequalities: new concerns about the children of single mothers. *British Medical Journal*, 306: 677-680.
- Kearney, C. A. (2003). Bridging the gap among professionals who address youths with school absenteeism: Overview and suggestions for consensus. *Professional Psychology: Research and Practise*, 34, 57-65.
- Kelleher I Harley M, Lunch F, Arseneault L, Fitzpatrick C, Cannon M (2008). Associations between childhood trauma, bullying and psychotic symptoms among a school-based adolescent sample. *British Journal of Psychiatry* 193, 378-382.
- Kelleher I, Harley M, Murtagh A, Cannon M (2011a). Are screening instruments valid for psychotic-like experiences? A validation study of screening questions for psychotic-like experiences using in-depth clinical interview. *Schizophrenia Bulletin* 37, 362-369.
- Kelvin, R. G., Goodyer, I. M. & Altham, P. M. E. (1996). Temperament and psychopathology amongst siblings of probands with depressive and anxiety disorders. *Journal of Child Psychology and Psychiatry*, 37, 543-550.

- Kerns, K. A. (2008). Attachment in Middle Childhood. In Cassidy, J., Shaver, P. R. *Handbook of Attachment: Theory, Research and Clinical Applications*. New York and London: Guilford Press. pp. 366-82.
- Kerr, D. C. R., Lopez, N. L., Olson, S. L. & Sameroff, A. J. (2004). Parental discipline and externalising behaviour problems in early childhood: The roles of moral regulation and child gender. *Journal of Abnormal Child Psychology*, 32 (4), 369-383.
- Kerr, M. & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology*, 36, 3, 366-80.
- Kiernan, K. (2006). Non-residential fatherhood and child involvement: evidence from the millennium cohort study. *Journal of Social Policy*, 35, 4, 651-669.
- Kurth, A. E., Spielberg, F., Rossini, A., the U.A.W. Group (2001). STD/HIV risk: What should we measure, and how should we measure it? *International Journal of STD & AIDS*, 12, 2, 171.
- Laird, R. D., Pettit, G. S., Dodge, K. A. & Bates, J. E. (2003). Change in parents' monitoring knowledge: Links with parenting, relationship quality, adolescent beliefs, and antisocial behavior. *Social Development*, 12, 401-419.
- Lamb, M. E., Pleck, J. H. & Levine, J. A. (1987). Effects of Increased Paternal Involvement on Fathers and Mothers (pp. 109-125). In *Reassessing Fatherhood: New Observations on Fathers and the Modern Family*, edited by C. Lewis and M. O'Brien. Newbury Park, CA: Sage Publications.
- Lamdin, D. J. (1996). Evidence of student attendance as an independent variable in education production functions. *Journal of Educational Research*, 89, 155-162.
- Layte, R. & Nolan, B. (2004). Equity in the utilisation of health care in Ireland. *The Economic and Social Review*, 35, 111-134.
- Layte, R., Nolan, B. & Whelan, C. T. (2001). Reassessing income and deprivation approaches to the measurement of poverty in Ireland. *Economic and Social Review*, 32, 3.
- Livingstone, M. B. E. (2001). Childhood obesity in Europe: a growing concern. *Public Health Nutrition*, 4, 109-116.
- Lundberg, S., McLanahan, S. & Rose, E. (2007). Child gender and father involvement in fragile families, *Demography*, 44: 1, 79-92.
- Lundberg, S., Pabilonia, S. & Ward-Batts, J. (2006) *Time Allocation of Parents and Investments in Sons and Daughters*. Working paper.
- Luthar, S. S., Cicchetti, D. & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562.
- Lytel, L. A., Birnbaum, A., Boutelle, K & Marray, D. M. (1999). Wellness and risk communication from parent to teen: the parental energy index. *Health Education*, 5, 207-214.
- Maccoby, E. E. & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. H. Mussen & E. M. Hetherington, *Handbook of Child Psychology: Vol. 4. Socialization, personality, and social development* (4th ed.). New York: Wiley.
- Magnuson, K. (2007). Maternal education and children's academic achievement during middle childhood. *Developmental Psychology*, 43, 1497-1512.
- Maitre, B., Nolan, B. & Whelan, C. T. (2006). Reconfiguring the measurement of deprivation and consistent poverty in Ireland. Economic and Social Research Institute, *Policy Research Series*, 58.

- Malcolm, H., Wilson, V., Davidson, J. & Kirk, S. (2003). *Absence from School: A study of its causes and effects in seven LEAs*. SCRE Centre, University of Glasgow, Research Report No. 424.
- Mammen, K. (2005). "Fathers' Time Investments in Children: Do Sons Get More? Working paper, Barnard College.
- Manning, W. & Smock, P. (1999). New Families and Nonresident Father-Child Visitation. *Social Forces*, 78, 1, 87-116.
- Matheny, A. P. Jr., Wachs, T. D., Ludwig, J. L. & Phillips, K. (1995). Bringing order out of chaos: Psychometric characteristics of the confusion, hubbub, and order scale. *Journal of Applied Developmental Psychology*, 16, 429-444.
- Maynard, L. M., Galuska, D. A., Blanck H. M. & Serdula, M. K. (2003). Maternal perceptions of weight status of children. *Pediatrics*, 111, 1226-1231.
- McBride, B. A., Brown, G. L., Bost, K. K., Shin, N, Vaughn, B. & Korth, B. (2005). Paternal identity, maternal gatekeeping, and father involvement. *Family Relations*, 54, 360-372.
- McCoy, S., Darmody, M., Smyth, E., and Dunne, A. 2007. Attendance and Students' School Experiences. Dublin: National Educational Welfare Board.
- McCrystal, P., Percy, A. & Higgins, K. (2006). Drug use patterns and behaviours of young people at an increased risk of drug use during adolescence. *International Journal of Drug Policy*, 17, 393-401.
- McGowan, B., Bergin, C., Bennett, K. & Barry, M. (2008). Utilisation of antibiotic therapy in community practice. *Irish Medical Journal*, 101, 273-276.
- McKeown, K., Pratschke, J. & Haase, T. (2003). *Family Wellbeing: What Makes a Difference? Insights and Initiatives for a Changing Society*. County Clare, Ireland: Report to the Céifin Centre.
- McShane, G., Walter, G. & Rey, J. M. (2001). Characteristics of adolescents with school refusal. *Australian and New Zealand Journal of Psychiatry*, 35, 6, 822-826.
- Meece, J. L., Anderman, E. M. & Anderman, L. H. (2006). Classroom goal structure, student motivation and academic achievement. *Annual Review of Psychology*, 57, 487-503.
- Mosley, J. & Thompson, E. (1995). Fathering behavior and child outcomes: The role of race and poverty. In W. Marsiglio (Ed.), *Fatherhood: Contemporary Theory, Research, and Social Policy* (pp. 148-165). Thousand Oaks, CA: Sage.
- Mounts, N. S. (2001). Young adolescents' perceptions of parental management of peer relationships. *Journal of Early Adolescence*, 21, 92-122.
- National Institute of Child Health and Human Development Early Child Care Research Network (2003). Child care and communicable illnesses in children aged 37 to 54 months. *Archives of Pediatric and Adolescent Medicine*, 157, 196-200.
- National Task Force on Obesity (2005). *Obesity – the Policy Challenges. Report of the National Task Force on Obesity*. Dublin: Department of Health and Children.
- Newacheck, P. W. & Halfon, N. (1998). Prevalence and Impact of disabling chronic conditions in childhood. *American Journal of Public Health*, 88, 610-616.
- Nicklas, T. A., Bao, W., Webber, L. S. & Berenson, G. S. (1993). Breakfast consumption affects adequacy of total daily intake in children. *Journal of the American Dietetic Association*, 93, 8, 886-891.

- Nolan, B., Gannon, B., Layte, R. Watson, D., Whelan, C. T. & Williams, J. (2002). Monitoring poverty trends in Ireland: Results from the 2000 Living in Ireland survey. Economic and Social Research Institute, *Policy Research Series*, 45.
- Nunn, J. (2006). The burden of oral ill health for children. *Archives of Disease in Childhood* 91, 251-253.
- O’Brain, E. (2006). *Analysis of School Attendance Data at Primary and Post-Primary Levels for 2004/2005*. Report to the National Educational Welfare Board.
- O’Connell, P. J. and Russell, H. (2005). *Equality at work? Workplace equality policies, flexible working arrangements and the quality of work*. Dublin: Equality Authority.
- O’Connor, T. G., Hetherington, E. M. & Clingempeel, W. G. (1997). Family systems and adolescent development: Implications for bidirectionality in development. *Journal of Social and Personal Relationships*, 14, 491-504.
- Olweus, D. (1995). Bullying or peer abuse at school: Facts and intervention. *Current Directions in Psychological Science*, 4, 200.
- O’Moore, A. M., Kirkham, C. & Smith, M. (1997). Bullying behaviour in Irish schools: A nationwide study. *Irish Journal of Psychology*, 18, 141-169.
- Parada, R. H., Marsh, H. W., Craven, R. G. & Papworth, B. A. (2005). *Bullying in Schools: What Can We Glean from Self-concept Theory?* SELF Research Centre, University of Western Sydney, Australia.
- Parkinson, P. & Smyth, B. (2003). *When the difference is night and day: Some empirical insights into patterns of parent-child contact after separation*. In: Melbourne: Paper presented at 8th Australian Institute of Family Studies Conference.
- Patrick, D. L., Cheadle, A., Thompson, D., Diehr, P., Koepsell, T. & Kinne, S. (1994). The validity of self-reported smoking: A review and meta-analysis. *American Journal of Public Health*, 84, 7, 1086-1093.
- Pedersen, S. & Revenson, T. A. (2005). Parental illness, family functioning, and adolescent well-being: A family ecology framework to guide research. *Journal of Family Psychology*, 19, 404-409.
- Pettit, G. S., Bates, J. E., Dodge, K. A. & Meece, D. W. (1999). The impact of after-school peer contact on early adolescent externalizing problems is moderated by parental monitoring, perceived neighborhood safety, and prior adjustment. *Child Development*, 70, 768-778.
- Pettit, G. S., Laird, R. D., Bates, J. E. & Dodge, K. A. (1997). Patterns of after-school care in middle childhood: Risk factors and developmental outcomes. *Merrill-Palmer Quarterly*, 43, 515-538.
- Pettit, G. S., Laird, R. D., Bates, J. E., Dodge, K. A. & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72, 583-598.
- Phillips, S. D. & Gleeson, J. P. (2007) What We Know Now that We Didn’t Know Then about the Criminal Justice System’s Involvement in Families with whom Child Welfare Agencies Have Contact. Children, Families, and the Criminal Justice System Research Brief, July. Chicago: University of Illinois at Chicago.
- Pianta, R. C. (1992) *Child-parent relationship scale*. Unpublished measure, University of Virginia.
- Piers, E. V. & Herzberg, D. S. (2007). *Piers-Harris Children’s Self-Concept Scale – Second Edition, Manual*. Western Psychological Services, Los Angeles, Ca.

- Pilowsky, D. J., Zybert, P. A. & V. D. (2004). Resilient children of injection drug users. *Journal of American Academy of Child and Adolescent Psychiatry*, 43, 1372-1379.
- Poulton, R., Caspi, A., Moffitt, T. E., Cannon, M., Murray, R. & Harrington, H. (2000). Children's self-reported psychotic symptoms and adult schizophreniform disorder: a 15-year longitudinal study. *Archives of General Psychiatry*, 57, 11, 1053-8.
- Prescott, C. A., McArdle, J. J., Hishinuma, E. S., Johnson, J. C., Miyamoto, R. H., Andrade, N. N., Edman, J. L., Makini, G. K., Nahulu, L. B., Yuen, N. Y. C. & Carlton, B. S. (1998). Prediction of major depression and dysthymia from CES-D scores among ethnic minority adolescents. *Journal of American Academy of Child Adolescent Psychiatry*, 37, 5, 495-503.
- Pryor, J. & Rodgers, B. (2001). *Children in changing families: Life after parental separation*. Malden, MA, US, Blackwell.
- Rampersaud, G. C., Pereira, M. A, Girard, B. L., Adams, J., Metz, J. D. (2005). Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. *Journal of the American Dietetic Association*, 105, 5, 743-760.
- RCPI, *Antibiotic Use and the Implications for Healthcare-Associated Infection*, Royal College of Physicians in Ireland, 2012. <https://www.rcpi.ie/wp-content/uploads/2012/05/Antibiotic-Use-and-Implications-for-Healthcare-Associated-Infection.pdf>
- Reading, R., Langford, I. H., Haynes, R. & Lovett, A. (1999). Accidents to pre-school children: comparing family and neighbourhood risk factors. *Social Science and Medicine*, 48(3), 321-30.
- Reading, R., Jones, A., Haynes, R., Daras, K. & Edmond, A. (2008). Individual factors explain neighbourhood variations in accidents to children under 5 years of age. *Social Science and Medicine*, 67, 915-927.
- Redmond, S. M. & Rice M. L. (1998). The socio-emotional behaviours of children with Speech and Language Impairment: Social adaption or social deviance? *Journal of Speech, Language and Hearing Research*, 41, 688-700.
- Rhew, I. C., Simpson, K., Tracy, M., Lymp, J., McCauley, E., Tsuang, D. & Stoep, A. (2010). Criterion validity of the Short Mood and Feelings Questionnaire and one- and two-item depression screens in young adolescents. *Child and Adolescent Psychiatry and Mental Health*, 4, 8.
- Riley, D. & Steinberg, J. (2004). Four popular stereotypes about children in self-care: Implications for family life educators. *Family Relations*, 53, 95-101.
- Rimal, R. N. (2003). Intergenerational transmission of health: the role of intrapersonal, interpersonal, and communicative factors. *Health Education and Behaviour*, 30, 10-28.
- Riordan, S. (2001). *Supporting Parenting: A Study of Parents' Support Needs*. Dublin: Department of Social, Community and Family Affairs.
- Roberts, I. & Pless, B. (1995). Social policy as a cause of childhood accidents: the children of lone mothers. *British Medical Journal*, 311, 925-928.
- Roberts, I. & Power, C. (1996). Does the decline in mortality vary by social class? A comparison of class specific mortality in 1981 and 1991. *British Medical Journal*, 313, 784-786.
- Roberts, R. E., Andrews, J. A., Lewinsohn, P. M. & Hops, H. (1990). Assessment of depression in adolescents using the Center of Epidemiologic Studies Depression Scale. *Journal of Consulting and Clinical Psychology*, 2, 122-128.

- Robinson, T. N. (1999). Reducing children's television viewing to prevent obesity: A randomized controlled trial. *The Journal of the American Medical Association*, 282, 1561-1567.
- Roux, A. V. D. (2007). Neighborhoods and health: where are we and where do we go from here? *Revue d'épidémiologie et de santé publique*, 55, 1, 13-21.
- Rutter, M. (1987). Temperament, personality and personality disorder. *British Journal of Psychiatry*, 150, 443-558.
- Sabourin, S., Valois, P. & Lussier, Y (2005). Development and validation of a brief version of the dyadic adjustment scale with a nonparametric item analysis model. *Psychological Assessment*, 17, 1, 15-27.
- Sallis, J. F., Taylor, A. H., Dowda, M., Freedson, P. S. & Pate, R. R. (2002). Correlates of vigorous physical activity for children in grades in 1 through 12: Comparing parent reported and objectively measured physical activity. *Pediatric Exercise Science*, 14, 1, 30-44.
- Santrock, J. W. (1998). *Child Development (International Edition) (8th Ed.)*. Boston: McGraw Hill.
- Sarrazin, J. & Cyr, F. (2007). Parental conflicts and their damaging effects on children. *Journal of Divorce and Remarriage*, 47, 77-93.
- Saxena, S., Majeed, A. & Jones, M. (1999). Socio-economic differences in childhood consultation rates in general practice in England and Wales: prospective cohort study. *British Medical Journal*, 318, 642-646.
- Schaffer, R. (2007). *Introducing Child Psychology*. Oxford: Blackwell, pp. 83-121.
- Schroder, K. E., Carey, M. P. & Vanable, P. A. (2003). Methodological challenges in research on sexual risk behavior: Accuracy of self-reports. *Annals of Behavioral Medicine*, 26, 104-123.
- Scragg, R., Laugesen, M. & Robinson, E. (2002). Cigarette smoking, pocket money and socioeconomic status: Results from a national survey of 4th form students in 2000. *The New Zealand Medical Journal*, 115, 1158. Retrieved online 14/12/2007 from <http://www.nzma.org.nz/journal/115-1158/108>.
- Sellstrom, E. & Bremberg, S. (2006). The significance of neighbourhood context to child and adolescent well-being: A systematic review of multi-level studies. *Scandinavian Journal of Public Health*, 34, 544-554.
- Sénéchal, M., LeFevre, J., Thomas, E. M. & Daley, K. E. (1998). Differential effects of home literacy experiences on the development of oral and written language. *Reading Research Quarterly*, 33, 96-116.
- Sharpley, C. F. and Rogers, H. J. (1984). Preliminary Validation of the Abbreviated Spanier Dyadic Adjustment Scale: Some Psychometric Data Regarding a Screening Test of Marital Adjustment. *Educational and Psychological Measurement*, 44, 1045-1049.
- Sickmund, M., Snyder, H. N. & Poe-Yamagata, E. (1997). *Juvenile offenders and victims: 1997 update on violence*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Silversides, J. A., Gibson, A., Glasgow, J. F. T., Mercer, R. & Cran, G. W. (2005). Social deprivation and childhood injuries in North and West Belfast. *Ulster Medical Journal*, 74,1, 22-28.
- Skevik, A. (2006). 'Absent fathers' or 'reorganized families'? Variations in father-child contact after parental break-up in Norway. *The Sociological Review*, 54, 114-132.
- Smith, H. G. (1993). Intervention strategies for children vulnerable for school failure due to exposure to drugs and alcohol. *International Journal of Addiction*, 28, 1435-1470.
- Smolak, L., Levine, M. P. & Schermer, F. (1999). Parental input and weight concerns among elementary school children. *International Journal of Eating Disorders*, 25, 263-271.

- Smyth, E., Dunne, A., Darmody, M. & McCoy, S. (2007). *Gearing Up for the Exam?: The Experience of Junior Certificate Students*. The Liffey Press in association with the ESRI.
- Smyth, E., Whelan, C. T., McCoy, S., Quail, A. & Doyle, E. (2010). Understanding parental influence on educational outcomes among 9 year olds in Ireland: the mediating role of resources, attitudes and children's own perspectives. *Child Indicators Research*, 3, 85-104.
- Snyder, H. (1997). Juvenile arrests 1996. Juvenile Justice Bulletin. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing quality of marriage and similar dyads. *Journal of Marriage and the Family*, 38, 1, 15-28.
- Starfield, B. & Budetti, P. P. (1985). Child health status and risk factors. *Health Services Research*, 19, 817-886.
- Stattin, H. & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, 1072-1085.
- Steinberg, L. (2002). *The Fundamental Changes of Adolescence – Biological Transitions*. McGraw-Hill Higher Education, Online Learning Center.
- Steinberg, L., Lamborn, S. D., Dornbusch, S. M., and Darling, N. (1992). Impact of parenting practices on adolescent achievement: authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, 63, 1266-1281.
- Strauss, R. S., Rodzilsky, D., Burack, G. & Colin, M. (2001). Psychosocial correlates of physical activity in healthy children. *Archives of Pediatric and Adolescent Medicine*, 155, 897-902.
- Studts, J. L., Ghate, S. R., Gill, J. L., Studts, C. R., Barnes, C. N., LaJoie, A. S., Andrykowski, M. A. & LaRocca, R. V. (2006). Validity of self-reported smoking status among participants in a lung cancer screening trial. *Cancer Epidemiology Biomarkers & Prevention*, 15, 1825-1828.
- Sullivan, T. N., Kung, E. M. & Farrell, A. D. (2004). Relation between witnessing violence and drug use initiation in early adolescence: Parental monitoring and support as protective factors. *Journal of Clinical Child and Adolescent Psychology*, 33, 488-498.
- Thomas, D., Strauss, J. & Henriques, M-H. (1991). How does mother's education affect child height? *The Journal of Human Resources*, 27, 2, 183-211.
- Tremblay, R. E., and LeMarquand, D. (2001). Individual risk and protective factors. In R. Loeber and D. P. Farrington (Eds.), *Child Delinquents: Development, Intervention, and Service Needs*. Thousand Oaks, CA: Sage Publications, pp. 137-164.
- Truby, D. (2001). Attendance makes the difference. *Instructor*, 110.
- US Department of Health and Human Services, Administration for Children and Families, Child Care Bureau. (2004). *Promoting responsible fatherhood through child care*. Retrieved November 17, 2010, from <http://researchconnections.org/childcare/resources/4398/pdf;jsessionid=0F0A263730140D8F98F09356DC3E98EB>.
- US Department of Health and Human Services (2007). *The Surgeon General's Call to action to prevent and reduce underage drinking*. US Department of Health and Human Services, Office of the Surgeon General. www.surgeongeneral.gov.
- van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P. & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: evidence for a psychosis proneness-persistence-impairment model of psychotic disorder. *Psychological Medicine*, 39, 2, 179-95.

- Vitaro, F., Brendgen, M. & Tremblay, R. E. (2000). Influence of deviant friends on delinquency: searching for moderator variables. *Journal of Abnormal Child Psychology*, 28 (4), 313-322.
- Waldfoegel, J., Craigie, T. A. & Brooks-Gunn, J. (2010). Fragile Families and Child Wellbeing, *The Future of Children*, 20, 2, 87-112.
- Walsh, K., Clerkin, P. & Nic Gabhainn, S. (2004). *Relationship with mothers among Irish schoolchildren*. Health Behaviour Survey of Children 2002 [online]. Retrieved from http://www.nuigalway.ie/hbsc/documents/factsheet_12.pdf
- Warfield, M. E. (2005). Family and work predictors of parenting role stress among two-earner families of children with disabilities. *Infant and Child Development*, 14, 155-176.
- Wasserman, G. A. & Seracini, A. G. (2001). Family risk factors and interventions. In R. Loeber and D. P. Farrington (Eds.), *Child Delinquents: Development, Intervention, and Service Needs*. Thousand Oaks, CA: Sage Publications, pp. 165-189.
- Welham, J., Scott, J., Williams, G., Najman, J., Bor, W., O'Callaghan, M. et al (2009). Emotional and behavioural antecedents of young adults who screen positive for non-affective psychosis: a 21-year birth cohort study. *Psychological Medicine*, 39, 4, 625-34.
- Wheeler, B., Shaw, M., Mitchell, R. & Dorling, D. (2005). *The Relationship between Poverty, Affluence and Area*. Findings Ref. 0425. York: Joseph Rowntree Foundation.
- Whelan, C. T., Maître, B., Nolan, B. (2007). *Multiple Deprivation and Multiple Disadvantage*. Economic and Social Research Institute, Dublin.
- Whelan, C. T., Layte, R., Maître, B. & Nolan, B. (2003). Persistent income poverty and deprivation in the European Union: an analysis of the first three waves of the European community household panel. *Journal of Social Policy*, 32, 1-32.
- Whiteside, M. F. & Becker, B. J. (2000). Parental factors and the young child's postdivorce adjustment: a meta-analysis with implications for parenting arrangements. *Journal of Family Psychology*, 14, 1, 5-26.
- WHO (2001). *Declaration on Young people and Alcohol*. World Health Organisation.
- Wildeman, C. & Western, B. (2010). Incarceration in fragile families. *The Future of Children*, 20(2), 157-177.
- Willens, T. E., Biederman, J., Kiely, K., Bredin, E., Lic, S. W. & Spencer, T. J. (1995). Pilot study of behavioural and emotional disturbances in the high-risk children of parents with opioid dependence. *Journal of American Academy of Child Adolescent Psychiatry*, 34, 779-785.
- Wilson, G. B. (2006). The non-resident parental role for separated fathers: A review. *International Journal of Law, Policy and the Family*, 20, 286-316.
- Woods, S. A. & Hampson, S. E. (2005). Measuring the Big Five with single items using a bipolar response scale. *European Journal of Personality*, 19, 373-390.
- Woodward, L., Fergusson, D. M. & Belsky, J. (2000). Timing of parental separation and attachment to parents in adolescence: results of a prospective study from birth to age 16. *Journal of Marriage and Family*, 62, 1, 162-174.
- Yeung, W. J. & Stafford, F. (2002) Intra-Family Time Allocation: Stalled Revolution or Destined for Equality? Working paper.



Yeung, W. J., Sandberg, J. F., Davis-Kean, P. E. & Hofferth, S. L. (2001). Children's time with fathers in intact families. *Journal of Marriage and the Family* 63, 1, 136-154.



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

If you would like further information about
Growing Up in Ireland, please visit

www.growingup.ie

e-mail growingup@esri.ie

or freephone 1800 200 434

