

Growing Up in Ireland

National Longitudinal Study of Children

COHORT '08 (INFANT COHORT)

Design, Instrumentation and Procedures for
Cohort '08 at Wave 3 (5 Years)

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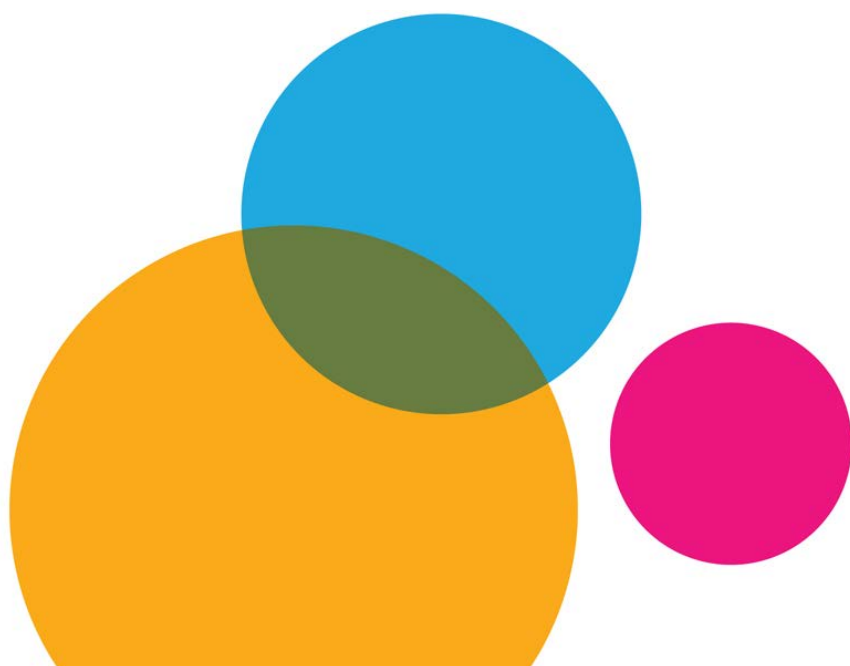
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Chapter 1

INTRODUCTION





1. INTRODUCTION

1.1 INTRODUCTION

The purpose of *Growing Up in Ireland* is to study the factors that facilitate or undermine the well-being of children in contemporary Irish families; and through this, contribute to effective and responsive policies relating to children and to the design of services for children and families.

The study focuses on a broad range of internationally recognised child outcomes with a view to documenting how well children in Ireland are developing. In so doing, it will facilitate comparison with findings from similar studies of children in other countries, as well as establishing typical patterns for children within Ireland. Being longitudinal in nature, the study also clearly addresses developmental trajectories over time and explores the factors which most impact on those trajectories and on the life chances of children in Ireland today. By providing comprehensive data on a representative national sample of Irish children, the study informs and contributes to the setting of responsive policies and the design of services for children and their families.

The study focuses on two cohorts of children. The younger cohort (the Infant cohort based on 11,134 children and their parents and other main caregivers) was recruited when the children were nine months of age. The second cohort is based on 8,568 children and their main caregivers, which was recruited when the children were nine years of age.

The older cohort was interviewed when the children were 9 and, subsequently, 13 years of age. The younger cohort was interviewed when the children were 9 months old and, subsequently, at 3 and 5 years of age. This report focuses exclusively on the design, instrumentation and procedures developed for the third round of data collection with the Infant Cohort when the children were 5 years of age. The first round of data collection with the Infant Cohort ran from December 2008 to June 2009 and the second round between December 2010 and June 2011. The third wave of data collection with the Infant Cohort at 5 years of age took place between March and September 2013.

The current report focuses specifically on this third wave with the Infant Cohort and describes the design, instruments and procedures used with this cohort when they were 5 years of age. The focus is on the nature and content of the questionnaires and other instrumentation used, along with a general consideration of operational procedures. Much of the information relevant to this report has already been documented in detail elsewhere; therefore cross-referencing will be used throughout to guide the reader to the relevant publication.

The current chapter provides the context for the rest of the document, beginning with a description of the background and objectives of the study, and an interpretation of its requirements and how these have been met by the Study Team. This will be followed by a brief summary of the conceptual framework underlying *Growing Up in Ireland* to provide a context for interpreting the development of the questionnaires and other instruments which were ultimately used in the study.



1.2 BACKGROUND AND OBJECTIVES

As well as the overarching purpose of the study, as noted at the beginning of this chapter, the study has nine specific objectives:¹

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

The study was established in 2006, funded by the Department of Children and Youth Affairs (DCYA), in association with the Department of Employment Affairs and Social Protection and managed by DCYA in association with the Central Statistics Office (CSO). It is being carried out by a group of researchers 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 and to understand the factors associated with children's wellbeing, including those impacting on their physical health and development, social/emotional/behavioural wellbeing, and educational achievement/intellectual capacity. While children's current wellbeing is of immense importance, researchers are also concerned with their future outcomes, as they grow and develop. Because the study is longitudinal in nature, it facilitates the recording of current and contemporaneous information which may be used at a future date to assist analysts in interpreting developmental trajectories and

¹ *Request for Tenders (RFT) 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.



outcomes. By gathering comprehensive data on childhood development, the project is providing a strong statistical evidence base for policy formation and applied research across all aspects of a child's development – currently and into the future.

1.3 CONCEPTUAL FRAMEWORK

A detailed description and discussion of the conceptual framework underlying *Growing Up in Ireland* is available in Greene et al. (2010). In brief, the conceptual framework draws heavily from Bronfenbrenner's work on the bio-ecological model (e.g. 1979, 1993). It offers a framework for interpreting the child's world as a multi-layered set of nested and interconnecting environmental systems, all of which influence the developing child, but with varying degrees of directness (Greene, 1994). The individual child is influenced not only by the face-to-face interactions with individuals in his/her most immediate environment (termed the 'microsystem'), but by the wider community and circumstances ('exosystem' and 'macrosystem') that affect the child directly or through effects on the microsystem ('mesosystem').

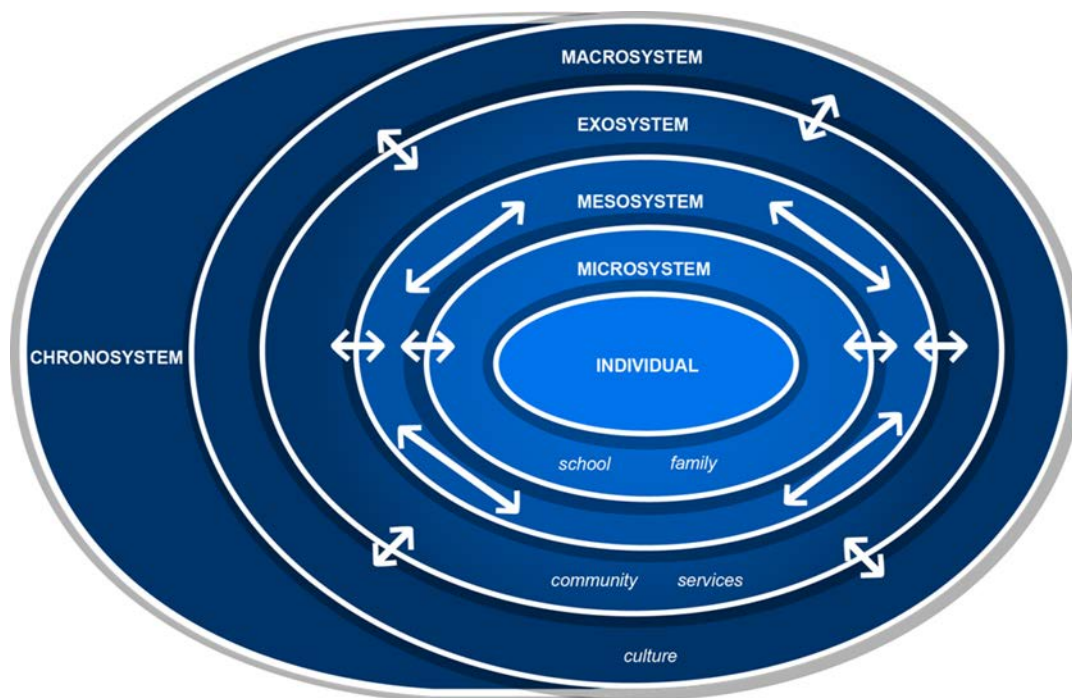
The structure of the bio-ecological framework is illustrated in Figure 1.1. At the core of the framework is the child and his/her individual characteristics. The child is seen as an active agent in the interactions that shape their development, for example, through their own personality, health status, gender etc. Relationships between the child and people in their microsystem, particularly parents, are critical but Bronfenbrenner's conceptualisation recognises that such dyads are enmeshed within other relationships not only within the household (e.g. the relationship between parents), but also relationships outside the household like the school and the workplace. To Bronfenbrenner this illustrates the intimate relationship between the microsystem, the face-to-face interactions which the child or young person experiences, and the mesosystem, which encompasses the links between the different actors in the micro-system. At age 5 years a potentially important aspect of the mesosystem will be the interactions between the child's parents and his or her school. For example, details will be recorded on parental engagement with what is happening at school, and communication from the teacher about the child's progress (or lack thereof).

Outside the mesosystem in Bronfenbrenner's model sits the exosystem. In Bronfenbrenner's schema this comprises the structures, institutions and settings that have the potential to influence the child's life, even if not in direct contact with him or her. Examples include play spaces available in the neighbourhood, air pollution from industry, and the health and education services. The outer layer of Bronfenbrenner's schema is the macrosystem, which consists of the cultural norms, attitudes and prevailing circumstances that shape the wider society. For example, a major national event such as the recent economic recession could affect an individual child through multiple routes: a reduction in the income available to parents and their subsequent ability to purchase goods or services for the child; a disruption to parent-child relationships because of stress in the family; a restriction to resources available in the child's school; or a more negative societal attitude towards children of immigrants. From a policy perspective, the Bronfenbrenner model highlights the many ways changes



in policy can affect children indirectly as well as directly, and the importance of considering the wider repercussions of changes that may eventually extend to children.

Figure 1.1: Bronfenbrenner’s ecological perspective on child development



Source: Adapted from Garbarino (1982)

An event such as a national recession could also be considered as a part of Bronfenbrenner’s concept of the ‘chronosystem’ or ‘time and timing’. The children of the Infant Cohort were born just as the recession was starting to take effect and hence their development from infancy into early childhood will be inextricably linked with the dramatic change in the economic climate. In contrast, the children of the Child Cohort spent their early childhood in a ‘boom’, and the recession affected their middle childhood and early adolescence. The recession is an example of the influence of time in terms of ‘period effects’ but time also matters with regard to ‘timing’ in critical or sensitive periods of development, or the mistiming of events (relative to what is typical) such as the early death of a parent.

For children at 5 years of age, the family clearly remains key in their micro-system. For a substantial proportion of the children, the school has joined the micro-system and largely replaced formal care settings, although some may still be taking part in formal after-school care. The school, and particularly relationships with teachers and peers, will bring with it a range of new interactions, some of which will be positive, others more negative. The nature of children’s leisure activities will also start to change from this age, with greater involvement in structured activities (such as sports and music clubs) and potentially more say in which friends they interact with. Various outputs from the first phase of the Infant Cohort in *Growing Up in Ireland* (e.g. Williams et al., 2013) have indicated that changes in



the economic context over recent years have impacted on children through reduced income (and higher stress) for parents due to cuts in both wages and social welfare payments, higher unemployment and greater difficulties in making ends meet.

1.4 STAKEHOLDER CONSULTATION

As at previous waves of the study, intensive consultation took place with various stakeholder groups, experts and others in the development of the instruments and procedures used at Wave 3 of the Infant Cohort. These included, in particular, policy and practitioner stakeholders. The policy input came from the funding Departments - the Department of Children & Youth Affairs (DCYA) and the Department of Employment Affairs and Social Protection (DEASP) - along with the Central Statistics Office (CSO) and the Department of Education & Skills (DoES). Inputs were also made by the following groups:

- The Health Services Executive (HSE)
- Childminding Ireland
- Irish Preschool and Playgroups Association (IPPA)
- National Children's Nurseries Association (NCNA)
- Institute of Community Health Nursing (ICHN)

All stakeholder groups were asked to provide insights into the key policy-relevant issues affecting the development and wellbeing of young children of five years of age and how best to record information to address these issues.

In addition, substantial input to instrument development was contributed by a panel of experts from the third-level and research sectors. The research experts formed four thematic panels, each headed by members of the Study Team Management Group. The four main thematic panels were:

- Health & Health Policy
- Child Development and Education
- Social Context & Social Institutions
- Methodology & Design

The panels of experts were made up of specialists drawn from a wide range of research and related backgrounds, including: youth and research policy; early childhood development; educational development; paediatrics; child psychiatry; family; gender and the labour market; and health psychology.



1.5 HARMONISATION WITH OTHER LONGITUDINAL STUDIES

In developing the instrumentation, the Study Team tried to synchronise with contemporary longitudinal child cohort studies carried out in other countries, both to enable later comparison and to draw on the benefits of including items previously used in other studies. Where items for *Growing Up in Ireland* were based on questions used in other studies, sources have been indicated in the text.² The main studies referred to include the Millennium Cohort Study (MCS) in Britain; the Growing Up in Australia (LSAC) study; the Early Childhood Longitudinal Study (ECLS) in the United States; the Avon Longitudinal Study of Parents and Children based in the Bristol area of Britain; and the Canadian National Longitudinal Study of Children and Youth.

1.6 ETHICAL CONSIDERATIONS

Growing Up in Ireland involves largescale primary data collection using interviewer-administered and self-completed questionnaires. This mostly involves field interviewers conducting interviews with children and their main caregivers in their homes. A key feature of research with children is rigorous, independent ethical review of all aspects of survey design, protocols, procedures and questionnaires. The main ethical issues include child welfare and protection, avoidance of distress, fatigue or embarrassment (on the part of both child and adult participants), informed consent and protection of privacy. Guidance on these matters is provided for *Growing Up in Ireland* by an independent Research Ethics Committee (REC) which provides ethical review of all phases of the project.³ The following subsections detail the practical implementation of these principles.

1.6.1 CHILD WELFARE AND PROTECTION

The Study Team has developed a very robust Child Welfare and Protection Policy (CWAP policy) to ensure that the rights and welfare of the children and young people involved in the study are fully respected and that adequate support is provided to all participants as appropriate, in the course of these interview surveys. The study's Child Welfare and Protection Policy develops and evolves on an on-going basis to reflect best practice recommendations and the relevant legislative requirements in this area. The CWAP policy includes very detailed procedures for investigating and reporting issues around suspected protection or welfare if they arise in the course of interview fieldwork. The model used for assessing any child welfare or protection concern is based on taking the onus of decision-making regarding reporting to appropriate authorities off the individual interviewer who is working

² We would point out that many items and questions have been adapted by numerous child cohort studies. Throughout Chapters 6 and 7, we generally cite the main source of each item. 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 The ESRI/TCD Study Team gratefully acknowledges the very dedicated work undertaken by the Research Ethics Committee in reviewing extremely voluminous submissions in respect of each phase of the project.



alone in the field, and transferring it to Head Office. The exception to this, of course, is in circumstances in which an issue arising in which a child or other vulnerable person is thought to be potentially in immediate risk. In such circumstances, the field interviewer is instructed to take immediate action, including immediate reporting to An Garda Síochána (the police).

All codes of practice and protocols for survey interviewing and for the Child Welfare and Protection Policy were developed in line with the main guidelines and principles set out in best practice documents, including the following:

- Children First: national guidelines for the protection and welfare of children, Department of Children and Youth Affairs, 2011
- Child Protection and Welfare Practice Handbook, HSE, 2011
- Guidance for developing ethical research projects involving children, Department of Children and Youth Affairs, April 2012
- Our Duty of Care, Department of Health and Children, 2004
- National Standards for the Protection and Welfare of Children, HIQA, July 2012
- A guide to Complaint Handling by the Ombudsman for the Children's Office, OCO ⁴

Some of the key practical considerations in implementing a robust ethical code and standards for the project are considered in the following sub-sections.

1.6.1.1 Reporting Child Protection Concerns

Interviewers were instructed to report to the Study Team all events or observations (outside of any information gathered in the course of the administration of the survey itself) which caused them concern during the course of their work, especially in regard to the protection of children or other vulnerable persons.⁵ All reported incidents were investigated and acted upon as necessary, through the study's Child Welfare and Protection (CWAP) Policy. The CWAP team was headed by the study's Designated Liaison Person (DLP). Interviewers were provided with an out-of-hours emergency phone-

⁴ <http://www.dcy.gov.ie/documents/Publications/ChildrenFirst.pdf>
<http://www.hse.ie/eng/services/Publications/services/Children/WelfarePractice.pdf>
http://www.dcy.gov.ie/documents/Publications/Ethics_Growing Up In Irelanddance.pdf
<http://www.dohc.ie/publications/pdf/our-duty.pdf?direct=1>
<http://www.hiqa.ie/publications/national-standards-protection-and-welfare-children>
http://www.oco.ie/assets/files/publications/complaints_and_investigations/AguidetoInvestigations.pdf

⁵ As noted in Section 1.7 below, information recorded in the course of administration of questionnaires was covered by the confidentiality and limitation on use clauses in the Statistics Act 1993.



number to contact a member of the project's Study Team in the event of them having serious concerns in the course of fieldwork which took place outside office hours.⁶

1.6.1.2 Interviewers Being Alone With Children

To address relevant Child Protection issues it was stressed to interviewers during training that they should never be alone with the Study Child or any other child while conducting the fieldwork, even for a few minutes. This policy was also clearly stated on the Information Sheet provided to parents in advance of their signing consent to the Study. Interviewers were instructed that they should suspend an interview and return at a later date or time if a parent/guardian or other adult would find it necessary to leave an interviewer with a child – even for a short period.

1.6.2 AVOIDANCE OF EMBARRASSMENT, DISTRESS OR FATIGUE

Pro-actively avoiding the possibility of causing embarrassment, distress or fatigue to participants in GUI was a major focus of ethical procedures. Within the home, sensitive questions concerning issues such as the marital/parental relationship, alcohol use or feelings of depression, were answered on a self-completion basis by the respondents on computer, rather than being asked aloud by an interviewer (unless requested). Interviewers were prohibited from getting involved in any family issues or giving advice, regardless of any qualifications or experience they had in such matters.⁷ Interviewers were, however, provided with a list of helpline numbers for a variety of support agencies, which they could pass on to respondents if asked.

1.6.3 INFORMED CONSENT

Detailed Information Sheets were prepared for all participants in the Study including parents, non-resident parents, and teachers. The Information Sheets described: the background to the study; its funders; the type of information which was being recorded; what participation in the study involved for respondents; the longitudinal nature of the study and the possibility of being re-interviewed in a few years' time; details on the researchers (including contact details for more information on the project or verification of identity of interviewers). The purpose of the study was described as providing information on the lives of children in Ireland to enable the government to make future choices about policies and services that will be most beneficial for children and their families. It was also noted that the data, with identifying information removed, would be made available to researchers. All participants were informed of the voluntary nature of the Study and of their right of refusal to answer

⁶ Much of the fieldwork on the project took place outside office hours. Much of it took place in the evenings and at weekends to facilitate respondents.

⁷ Many field interviewers, for instance, have qualifications in counselling or related areas.



any questions that they did not wish to answer or to withdraw from the study. Signed consent was obtained from a parent/guardian at the beginning of the household interview.⁸

1.6.4 CONFIDENTIALITY

All interviewers and other staff working on the project were appointed as Officers of Statistics by the Central Statistics Office. This imposed a legal obligation on the staff working on the study to maintain the confidentiality of all information which is recorded in the course of the Study. Under the Statistics Act (1993) (referred to above), a breach of confidentiality is a criminal offence.

Access to the non-anonymised datasets is severely restricted and great care is taken to remove any identifying information from the anonymised dataset. Nobody, including any Government department or agency, will have access to identifiable information, and the Central Statistics Office will be the only body (other than the ESRI which collects the data) 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 (rather than names) on all electronic and paper questionnaires
- Use of passwords and usernames on laptops
- Electronic lock-down of laptops to prevent inadvertent connection to a wireless network
- Sending forward feed information⁹ which is necessary to conduct the interview to interviewers' laptops on a monthly basis and automatic deletion of this information from the interviewer's laptop upon transfer to the ESRI
- Encryption of all electronic information transferred by interviewers to a dedicated secure server in the ESRI
- Separate mailings of paper questionnaires and Work Assignment Sheets – the latter containing contact information

⁸ Child assent was sought in rounds of the study where older children were being interviewed, but was not implemented at age 5 because of the young age of the children. However, interviewers were advised during training to be sensitive to children's well-being and not pressure them into participating in cognitive tests or physical measurements if the child was tired, ill, uncomfortable or indicated that they did not want to take part.

⁹ The information which is fed forward from Head Office to the field laptop includes the composition of the household as recorded at the previous interview. This is displayed on the interviewer's laptop at the current interview and is verified and updated by the interviewer. This information is fed forward in such a way as to reside on the interviewers' laptops for the minimum amount of time. No contact information is ever recorded on an interviewer's laptop.



- Conduct of the survey under The Statistics Act (1993), which ensures that the information obtained can only be used for purposes of statistical compilation and analysis
- Respondents only being able to access the information that they themselves have provided – no individual will be 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 would not be able to access what the other parent had recorded in their interview, and neither would be able to access what a Carer has recorded, even about the child. This particularly important point was explicitly included in the consent form signed by all families prior to their participation in the study.

1.7 THE STATISTICS ACT, 1993

The ESRI/TCD Study Team also developed the design and protocols for the study (including the CWAP procedures) within the appropriate legislative framework. Of particular importance in this context was the Statistics Act, 1993. *Growing Up in Ireland* is being conducted under this legislation, which underpins the work of the Central Statistics Office (CSO) in Ireland. The most important implication which the Statistics Act has for the project is the strong legal basis which it provides for the protection of all information collected against unlawful disclosure or misuse. Under the Statistics Act all information collected must be treated as strictly confidential and used only for ‘...statistical compilation or research purposes...’ (para. 32, Statistics Act, 1993).¹⁰ All persons working on the Study are appointed as ‘Officers of Statistics’. As such, they are legally obliged not to disclose, except for the purposes of the Study, any matter which comes to their knowledge relating to any person, family, household or undertaking in the course of their statistical work.

1.8 DATA PROTECTION ACT 1988, 2003

Data protection concerns the integrity, protection, storage and use of information collected from and about individuals. The Data Protection Acts 1988 and 2003 placed the following obligations on the Study Team in the execution of the study:

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. These issues are fully discussed in the Information Sheet and Consent Forms used in the study.
2. Specifying the purpose: One may not keep information about people unless it is held for a specific, lawful and clearly stated purpose.

¹⁰ <http://www.irishstatutebook.ie/eli/1993/act/21/enacted/en/html>



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 which 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. See Section 4.2.4 on confidentiality for further discussion.
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. See Section 4.2.4 on confidentiality for further information.

1.9 RECRUITMENT AND TRAINING OF INTERVIEWERS

As far as possible, interviewers who had approached the families in the previous wave, when the children were 3 years old, were recruited again to interview the same families in the current wave. A targeted, area-specific recruitment of new interviewers was undertaken, where needed, to increase the field force capacity due to some interviewers no longer being available. Potential candidates were brought to the ESRI for an information day, where their duties and responsibilities were explained in detail and they were interviewed by Human Resources Staff and the Study Team. Suitable candidates were then invited to training for the study.

Interviewer Training took place over four days at the ESRI premises and covered the following topics:

1. General introduction to the responsibilities of the Interviewer
2. The main questionnaires
3. Postal self-complete questionnaires
4. Types of questions
5. Training in Computer Assisted Personal Interviewing (CAPI)
6. Conducting Physical Measurements
7. Role-play and practice at CAPI



8. Introduction to cognitive tests
9. Data Transfer
10. E-diary (recording of contact with family)
11. Practice at completing paperwork
12. Paperwork assessment
13. CAPI assessment
14. Ethics (Ethical principles, Data Protection, responsibility as Officer of Statistics)
15. Child Protection

For interviewers who had worked on the study previously (at age 3), a shorter training session was used since less time was required for training and practice at CAPI, in particular.

1.10 STRUCTURE OF REPORT

This report on instrumentation and design in the survey of five-year-olds should be read in conjunction with the report on the pilot for this phase of the project (see, for example, Thornton and Williams, 2016). The remainder of the current report has six subsequent chapters.

Chapter Two summarises sample design, response and the statistical adjustment or re-weighting of the data from the surveys with the five-year-olds and their caregivers.

Chapter Three provides an overview of the instruments and procedures used in the home-based phase of interviewing with the five-year-olds.

Chapter Four provides details on the contents of the Primary and Secondary Caregiver Questionnaires used in the home.

Chapter Five focuses on the cognitive assessment and physical measurements of the Study Child.

Chapter Six summarises the procedures and questionnaires completed in the school-based phase of the project.

Finally, Chapter Seven presents a brief summary and overview of procedures and processes used with the five-year-olds at each wave of the survey.





Chapter 2

SAMPLE DESIGN





2. SAMPLE DESIGN

2.1 INTRODUCTION

To provide an overview of the sampling procedures used in Wave 3, this chapter begins with a brief outline of the sample designs at the first and second waves of data collection in the Infant Cohort. The sample design at Wave 3, along with response and attrition rates, is then discussed in detail. The process of statistically reweighting the data to ensure that they are fully representative of the population is also outlined.

2.2 SAMPLE DESIGN AT WAVE 1

Full details on the population, sampling frame and sample design for the Infant Cohort are given in Sample Design and Response in Wave 1 of the Infant Cohort (at 9 months) of *Growing Up in Ireland*; <https://www.ucd.ie/t4cms/GUI-SampleDesignResponseInfants.pdf>. This subsection provides a brief outline of the sampling at Wave 1, to provide the reader with a background to the sampling procedures used in GUI.

There were just over 70,000 births in Ireland in 2007; this figure represented a growth of nearly 20,000 in the number of annual births between 1989 and 2007. As well as an increase in the overall number of births, there were other notable socio-demographic changes in the Irish infant population over the previous 20 years. The number of non-marital births had more than tripled, for example, increasing from an average of 5,643 births per year in the period 1981-1990 (i.e. 9% of annual births) to over 23,640 in 2007 (i.e. 33% of annual births). Additionally, the average age of mothers increased from a mean age of 29.6 years in 1989 to 31.1 years in 2007. Furthermore, inward immigration during the early 2000s meant that the infant (as well as the adult) population in 2007 was probably more ethnically diverse than ever before in Ireland's history: nearly 20% of births in that year were to mothers of non-Irish nationality.

The Child Benefit register ¹¹was used as the sampling frame to select potential respondents into the project at Wave 1. This administrative database had some important advantages as a sampling frame. It contained a comprehensive up-to-date listing of eligible members of the relevant population; had a wide range of relevant characteristic variables and was already in an electronic form which could be technically accessed for sampling purposes with relative ease.¹²

¹¹ Child Benefit is a universal regular social welfare payment to families with children. Children should be registered with the appropriate authorities within 6 months of birth or becoming part of the family (e.g. through adoption), or of the family coming to reside in the State.

¹² Special permission was required to access the Child Benefit Register for sampling purposes and was possible only as the overall study is being conducted under the Statistics Act, 1993 which provides a legal guarantee of confidentiality.



There were 41,185 infants registered on the Child Benefit Register as having been born between 1st December 2007 and 30th June 2008. Children for inclusion in the Study were sampled over this seven-month reference period, with a view to carrying out fieldwork for Wave 1 when they were 9 months of age, between September 2008 and March/April 2009. The sample was selected on a systematic basis, pre-stratifying by marital status, county of residence and nationality of payee as well as number of children in the payment or 'claim' - all variables which were available from the information recorded on the Benefit Register. A simple systematic selection procedure based on a random start and constant sampling fraction was used.

2.3 SAMPLE DESIGN AT WAVE 2

The Wave 2 target sample comprised 11,134 Study Children who participated in the first round of interviewing.¹³ No additions¹⁴ were made to the sample, with the only loss being through inter-wave non-response or attrition (including moving outside the jurisdiction) and death. The longitudinal population at Wave 2, therefore, is the population of nine-month olds (and their families) who were resident in Ireland at Wave 1 and who continued to be resident in Ireland at Wave 2.

Table 2.1 summarises the response at Wave 2 (3 years of age). This shows that by the time fieldwork had begun at Wave 2, the Study Team had identified that 408 of the families who had participated at Wave 1 (9 months) had emigrated. As these families no longer lived in Ireland they were not included in the Wave 2 sample. Thus, the Wave 2 valid sample (which was issued to field interviewers and which was used to calculate response rates) therefore contained 10,726 families.

¹³ This represented a response rate of 65 per cent of all families approached and 69 per cent of valid contacts made in the course of fieldwork.

¹⁴ Additions to membership of the Study Child's household between waves (in the form of new members residing in the household or being born into the household) are, of course, recorded on the household register in the relevant wave.



Table 2.1 Outline of samples issued and summary response at Wave 2

Outcome in Wave 2 (3 years)	No. of cases	Per cent
Completed	9,793	91.3%
No contact, despite repeated call-backs	284	2.6%
Refused	492	4.6%
Moved, no forwarding address	62	0.6%
Unavailable during fieldwork	42	0.4%
Other	43	0.4%
Cannot locate address, address derelict	10	0.1%
TOTAL ABOVE	10,726	100.0%
Emigrated (not incl. in Wave 2 sample)	408	-

From Table 2.1 one can see that 9,793 families participated at Wave 2, giving a response rate of 91.3 per cent. The refusal rate was 4.6 per cent (492 families). A total of 62 families were recorded as ‘Moved, no forwarding address’. This group was made up of families who were identified as having moved from their address at Wave 2, and for whom the Study Team could not find an alternative or new address. Many of these families may actually have moved outside the country, but were included in the target sample for calculation of response rates as it had not been definitively ascertained that they were no longer resident in Ireland. The same may apply to the 284 families with whom no contact could be made throughout fieldwork, despite repeated call-backs. The interviewer could not secure any information on these families, even to establish definitively that they had moved from their address at the time of the Wave 2 interview (at 3 years of age). Outcomes of ‘Unavailable during fieldwork’, ‘Other’ or ‘Can’t locate/address derelict’ were assigned to 42, 43, and 10 families, respectively.

2.4 SAMPLE DESIGN AT WAVE 3

The target population for sampling at Wave 3 was made up of the 9,793 children and families who participated in Wave 2, as well as most of those who participated at Wave 1 but refused or otherwise did not participate at Wave 2 due to special family circumstances at that time, for example, due to the birth of a new baby, or temporary absence from the country during the fieldwork period. Families who had moved abroad, moved within Ireland with no forwarding address, or had given a ‘hard refusal’ at Wave 2 were not issued to field interviewers at Wave 3. Thus, the Wave 3 sample had two components: those



children and families who participated in the two earlier waves of the study, as well as those who had participated in the first wave but who had not participated in the second.¹⁵

Table 2.2 Breakdown of the sample issued at Wave 3, 5 years of age.

Outcome in Wave 2 (3 years)	No. of Of which:		
	cases in Wave 2	issued in Wave 3, (5-year)	Not issued in Wave 3, (5-year)
Completed	9,793	9,793	0
No contact, despite repeated call-backs	284	284	0
Refused	492	439	53
Moved, no forwarding address	62	*	*
Unavailable during fieldwork	42	42	0
Other	43	*	*
Cannot locate address, address derelict	*	0	*
TOTAL ABOVE	10,726	10,587	139
Emigrated (not incl. in Wave 2 sample)	408	0	408
GRAND TOTAL OF WAVE 1 (9 MONTHS)	11,134		

Note: * indicates fewer than 30 cases.

Table 2.2 summarises the sample issued at Wave 3. It shows that all of the families (9,793) who participated at Wave 2 were issued to field interviewers at Wave 3, as well as 439 of the 492 refusals at Wave 2; the remaining 53 were not issued as they had previously (when approached for the three-year interview) made it clear that they did not wish to participate at Wave 2 or subsequent rounds of the study (referred to as ‘hard refusals’). Most of the 62 families who were classified as ‘Moved, no forwarding address’ were not issued at Wave 3, as addresses had not been found between Waves 2 and 3. The 42 families who were classified as ‘unavailable during fieldwork’ at Wave 2 were issued, along with over half of the 43 who were assigned to the ‘other’ outcome category at Wave 2.¹⁶ The very small number of families who could not be located or whose address was identified as derelict were not issued at Wave

¹⁵ A small number of families who made it clear that they did not wish to participate at Wave 2 or subsequent waves in the study were excluded from the target sample for Wave 3.

¹⁶ Note that principles of non-disclosure prevent the reporting of exact numbers where there are fewer than 30 cases.



3. Therefore, the total valid sample at Wave 3 was made up of 10,587 cases. This figure was used for the calculation of Wave 3 response rates, which are outlined in Table 2.3.

Table 2.3 summarises the response outcomes at Wave 3, classified by response outcome at Wave 2 (3 years old). This shows that of the 10,587 families issued at Wave 3 (5 years), 227 were identified as having emigrated, and were not included in the valid sample. Therefore the valid sample, used for the calculation of Wave 3 response rates, was 10,360. Of these families, a total of 87 per cent of the valid sample (i.e. excluding those who had emigrated) participated in the survey.

Table 2.3 Outcome of the Survey at Wave 3, 5 years of age.

	All cases		Cases responding in Waves 1 and 2	
	Number	% of valid sample	Number	% of valid sample
Completed	9,001	87%	8,712	91
No contact despite call-backs	317	3%	211	2.2
Refused	781	8%	469	4.9
Moved in Ireland, no address	143	1%	86	0.9
Unavailable during fieldwork	58	1%	48	0.5
Other	---*	<1%	---*	<1%
Can't locate/Address derelict	---*	<1%	---*	<1%
Total valid sample	10,360	100%	9,578	100
Emigrated (not incl. in sample)	227		215	
Grand Total	10,587		9,793	

* Too few cases to report exact number.

The response rate is higher for those families who had participated in the survey at the previous wave, when the Study Children were 3 years old. Of the 9,793 families who participated at Wave 2 (3 years of age), shown in the last two columns of the table, the response rate was 91 per cent (8,712 families). This is the response rate that is relevant when tracing changes in the circumstances of the children and their families between the ages of 3 years and 5 years of age.

The response rate in Wave 3 expressed as a percentage of those responding in Wave 1, but still in scope in Wave 3 (i.e. the 10,499 families still living in Ireland), is 81 per cent. These 8,712 cases are relevant



when comparing the situation of the Study Children at 9 months old to their situation at 3 years and 5 years of age.¹⁷

In the first and second data sweeps with the Infant Cohort (at 9 months and, subsequently, 3 years of age), almost all of the fieldwork took place in the home.¹⁸ At Wave 3, some fieldwork took place in the Study Child's school, for those who had already started school at the time of interview or who were starting school in September 2013. The Primary Caregiver was asked to clarify in the course of the household interview whether or not the Study Child had started Primary School in September 2012 or was intending to start in September 2013,¹⁹ as well as the name of the school in question. Signed consent was secured from the Primary Caregiver to approach the Study Child's school, with a view to asking the school to complete three paper questionnaires for postal return – Principal, Teacher-on-Self and Teacher-on-Pupil (Child). The identified schools were then contacted using a multi-mode approach. In the first instance, postal contact was made, followed by a phone-call, and finally a personal visit to the school by a survey interviewer. School-based fieldwork is discussed in full in Chapter Six above.

2.5 ATTRITION

Interwave non-response and attrition are unavoidable in voluntary longitudinal surveys, regardless of tracking and conversion procedures employed (Schoeni et al., 2013). Attrition becomes a particular problem where it is systematically related to family or other characteristics. Watson and Wooden (2009), for example, note that it may be systematically associated with respondents' sex; age; race/ethnicity; marital status; household composition and size; educational attainment; labour force status; and family income. They find that, on average, attrition is higher among males; younger respondents; minority groups; one-parent and non-marital households; less educated families; economically active; and low income families. It is important to understand the levels and correlates of attrition and non-response to inform re-weighting procedures for statistically adjusting the data prior to analysis.

¹⁷ This is based on expressing the 8,712 families responding at all three waves as a percentage of the 11,134 families responding at Wave 1, minus those identified as having emigrated during the fieldwork at Wave 2 (408 families) or Wave 3 (227 families).

¹⁸ A very small amount of fieldwork took place outside the Study Child's home. This involved postal surveys of (a) non-resident parents (for whom we were able to secure contact details from the resident Primary Caregiver in the course of the home-based interview) and (b) from principals and teachers where the child had already started primary school.

¹⁹ In general, September is the only point of intake in each academic year in Ireland.



To assess the extent and correlates of differential attrition in Wave 3 of the Infant Cohort, Table 2.4 outlines response rates in Wave 3 classified according to family characteristics in Wave 2. This table is based only on those who were interviewed at Wave 2²⁰ and included in the valid sample for Wave 3.

Table 2.4 Response outcomes at Wave 3 (5 years of age) classified by family characteristics at Wave 2 (3 years of age).

Characteristics at Wave 2	Completed	No contact	Refused	Moved, no forwarding address	Unavailable during fieldwork	Other	Cannot locate/address derelict	Total
	Per cent							
Primary Caregivers Education								
Degree or higher	93.6	1.5	3.5	0.6	0.5	0.2	0.2	100
Non-Degree	92.2	2.0	4.6	0.5	0.4	0.1	0.1	100
Leaving Certificate	89.0	2.3	6.0	1.3	0.6	0.4	0.5	100
Lower Secondary or less	83.3	5.9	8.1	1.9	0.5	0.0	0.3	100
Missing	84.2	0.0	10.5	5.3	0.0	0.0	0.0	100
Household Class								
Professional workers	93.7	1.5	3.9	0.4	0.1	0.1	0.3	100
Managerial & technical	93.4	1.4	3.5	0.5	0.6	0.3	0.2	100
Non-manual	90.4	2.5	5.7	0.5	0.3	0.2	0.4	100
Skilled manual	90.1	2.0	5.6	1.1	0.7	0.1	0.3	100
Semi-skilled	88.9	2.4	5.9	1.6	0.8	0.3	0.1	100
Unskilled	81.8	2.8	7.0	5.6	1.4	1.4	0.0	100
All others	89.3	1.3	8.0	1.3	0.0	0.0	0.0	100
No social class	83.1	6.0	7.3	2.4	0.3	0.3	0.5	100
Equiv. Household Income								
Quintile 5 (high)	94.3	1.1	3.3	0.2	0.6	0.3	0.2	100
Quintile 4	93.2	1.6	4.1	0.4	0.3	0.3	0.1	100
Quintile 3	91.9	2.1	4.3	0.6	0.6	0.2	0.3	100
Quintile 2	89.5	2.6	5.0	1.6	0.6	0.3	0.4	100
Quintile 1 (low)	87.0	3.6	6.8	1.8	0.3	0.2	0.4	100
Missing	85.7	3.2	8.6	1.3	0.6	0.2	0.4	100

The table indicates that attrition was higher among those from more disadvantaged backgrounds. This is driven by a combination of higher direct refusal rates as well as lower achieved contact levels and higher interwave residential mobility ('cannot contact').

²⁰ By definition there are no 'Wave 2' characteristics available for non-responders at that round of the study.



For example, the figures in the table show that attrition is negatively related to Primary Caregiver education, i.e. the higher the level of the Primary Caregiver's education at Wave 2, the lower attrition is likely to be at Wave 3. Among families with a Primary Caregiver with a third-level degree, the response rate was almost 94 per cent, compared to just over 83 per cent for those with a Primary Caregiver with lower secondary education or less.

The table indicates that Primary Caregivers whose education was 'missing' also had lower response rates. This reflects a tendency, common in surveys, for those whose socio-demographic characteristics are 'missing' to come from disadvantaged backgrounds.

A similar pattern is seen for household social class: professional workers had the highest level of response at Wave 3 (93.7 per cent), with unskilled workers having a much lower response rate (81.8 per cent). Finally, the table shows a strong relationship between participation at Wave 3 and equivalised household income; the highest response rates are among families in the highest income quintile, and the lowest rates are among those in the lowest quintile (and those with missing income values).

Table 2.5 summarises the association between attrition at Wave 3 and background demographics as they were recorded in Wave 2, in the form of odds ratios. It presents the odds of completing the survey at Wave 3 compared to not completing it for the valid sample (those who were no longer resident in Ireland or had deceased between waves were excluded from the analysis).²¹ The table presents both bivariate and multivariate Odds Ratios. The bivariate ratios clearly reflect the broad trends illustrated in Table 2.4 above. The inclusion of the multivariate odds ratios illustrate the changes in odds ratios when other variables are included in the analysis, in a multivariate framework, and so highlight the residual significant correlates of participation in Wave 3 of the study, taking account of background characteristics.

Column A of the table presents the bivariate odds ratios²² of participating in Wave 2. The characteristics (in circumstances where these could change between Waves 2 and 3) are those of the family or Primary Caregiver at Wave 2.²³ The figures show, for example, that the chances of participating increase with equivalised family income. For example, a family in the highest income group is 2.48 times more likely to participate at Wave 3 than a family in the lowest income quintile (at Wave 2). The table shows that the

²¹ Dummies for missing values were also included in the analysis.

²² Broadly interpreted as 'the chances' of participating in Wave 3 of the survey.

²³ For example, whether or not the PCG was born in Ireland or whether or not the Study Child was breastfed will not change between Waves 1 and 2. Other characteristics such as equivalised family income, PCG's weight (BMI) status, family structure etc. may change between Waves 1 and 2. Where the characteristics could change, the Wave 2 characteristics were used in the analysis.



chances of participating increase progressively and significantly with income.²⁴ The odds of participating are also higher among older parents and in couple families.

The odds of participating also increased with educational attainment (another measure of social advantage/disadvantage). Participation in the most recent round of the study was significantly (and negatively) related to maternal characteristics such as depression and smoking on a bivariate basis – i.e. mothers who were experiencing depression or who smoked in the previous round of the study were less likely than others to participate in the current round. Mothers who breastfed were 1.86 times more likely to have participated in the study than those who did not.

Table 2.5 Association between completing the survey at Wave 3 and background demographics in Wave 2.

Family characteristics (Wave 2)	Category	(A) Predicted bivariate assoc. OR–	(B) Predicted multivariate assoc. OR–
Age of Primary Caregiver (PCG)	Less than 25	0.36**	0.63**
	26 – 30	0.58**	0.77*
	31 - 35	0.93	0.99
	36- 40	1 (Ref)	1 (Ref)
	41 or more	0.98	1.03
Weight of PCG	Not overweight	1 (Ref)	1 (Ref)
	Overweight	1.01	1.04
	Missing	0.58**	0.68**
PCG Depression status	Not depressed	1 (Ref)	1 (Ref)
	Depressed	0.63**	0.81
	Missing	0.30**	0.51
PCG Smoking	Never smokes	1 (Ref)	1 (Ref)
	Smokes occasionally	0.56**	0.70**
	Smokes daily	0.55**	0.86
	Missing	0.26**	0.81
Mother ever breastfed	No	1 (Ref)	1 (Ref)
	Yes	1.86**	1.56**
PCG born in Ireland	Yes	1 (Ref)	1 (Ref)
	No	0.95	0.85
Family structure	Lone parent	1 (Ref)	1 (Ref)
	Cohabiting	1.68**	1.35*
	Married	2.38**	1.34**

²⁴ Families for whom there is no valid value for equivalised household income have an odds ratio of 0.90 of participating at Wave 3 (these families are likely to be among the most disadvantaged).



Family characteristics (Wave 2)	Category	(A) Predicted OR– bivariate assoc.	(B) Predicted OR– multivariate assoc.
Region (Girls)	Dublin	1 (Ref)	1 (Ref)
	Border	1.20	1.32
	Mid-East	0.74	0.75
	Midlands	0.58**	0.67
	Mid-West	0.64*	0.67*
	South East	0.78	0.88
	South West	0.84	0.85
	West	0.90	0.95
Region (Boys)	Dublin	0.75	0.83
	Border	0.75	0.77
	Mid-East	0.67*	0.68*
	Midlands	0.54**	0.63*
	Mid-West	1.03	1.09
	South East	0.90	1.07
	South West	0.82	0.84
	West	1.41	1.53
Equivalent Household Income	First Quintile (Lowest)	1 (Ref)	1 (Ref)
	Second Quintile	1.28*	1.12
	Third Quintile	1.71**	1.25
	Fourth Quintile	2.06**	1.29*
	Fifth Quintile (Highest)	2.48**	1.38*
	Missing	0.90	0.70*
PCG Educational Attainment	Lower Secondary or less	1 (Ref)	1 (Ref)
	Leaving Certificate	1.61**	1.30*
	Non-Degree	2.37**	1.47**
	Degree	2.91**	1.49**
	Missing	1.0	1.16

**significant at $p < 0.01$ *significant at $p < 0.05$

In Column B of Table 2.5 the same set of odds ratios are presented, now controlling for other Wave 2 characteristics. The important point to note is that in a multivariate framework not all variables maintain their significant relationship with participation; for example, while daily smoking behaviour had a significant association with attrition in the bivariate analysis, this association was substantially mitigated in the multivariate analysis. One of the clear messages from the table is the very strong and systematic significance of maternal education and family structure in the chances of participating in the study in Wave 3. Many of the bivariate relationships (such as maternal smoking) are attenuated or become non-significant when, in particular, mother’s educational attainment is included. For example, although there remains a significant relationship with income for families in the top two income quintiles, the size of the effect (the Odds Ratio) is substantially attenuated (to 1.38 for the top income quintile from 2.48 in the bivariate relationship).



2.6 REWEIGHTING THE DATA

As noted in Section 2.4 above, the longitudinal sample at Wave 3 is made up of children and their families who participated in the study at 9 months of age and who continued to live in Ireland when they were 5 years old. Given the fixed sample design, children who were living in Ireland at 5 years of age but who were not resident in the country at 9 months were not included in this population. Equally, it does not include children who were resident in Ireland at 9 months of age but who had emigrated out of the country by 5 years and who, accordingly, were no longer growing up in Ireland.

With three waves of data now available, analysts can focus on children and families who participated at 9 months, 3 years and 5 years of age or, alternatively, the subset who participated at various combinations of these ages. The full sample of 11,134 Wave 1 participants breaks down in terms of participation at Waves 2 and 3 as set out in Table 2.6 below.

Table 2.6 Breakdown of cases according to participation at 9 months, 3 years and 5 years of age

File Option	Participated at:	No. of families
	9 months only	1,052
	9 months and 3 years only	1,081
A	9 months, 3 years and 5 years	8,712
B	9 months and 5 years only	289
	TOTAL	11,134

These response patterns mean that there are 11,134 cases available for analysis of 9-month-olds in cross-section. If one is interested in transitions from 9 months to 5 years of age, one can use 9,001 cases for analysis (the combination of subgroups A and B above). If one is investigating child development at each observation from 9 months, 3 years and 5 years of age, 8,712 cases are available for analysis (sub-group A in Table 2.6).

In preparing the Wave 3 dataset of 5-year-olds, two sets of weights and grossing factors were calculated. The first set was generated for use in analysis based on the 9,001 families for whom there is a valid observation at 9 months and 5 years of age. The second set of weights and grossing factors was generated for use in analysis of 5-year-olds based on the slightly smaller set of 8,712 families who participated at all three rounds of interview.

A standard iterative procedure (known as the GROSS system) was used to generate both sets of weights (i.e. those based on the 8,712 families who participated in all three waves of the study as well as the 9,001 families who participated only at 9 months and 5 years). This is the system used in previous rounds of *Growing Up in Ireland* and has been used extensively by the Economic and Social Research Institute



(ESRI) since 1996.²⁵ The GROSS system is based on a minimum information loss algorithm which fits population marginals within a regression framework and adjusts the sample according to pre-specified characteristics to ensure that it produces estimates which match population totals.

The sample weights for Wave 3 of the Infant Cohort were constructed by first generating an inter-wave attrition weight to adjust the composition of the completed Wave 3 sample to the Wave 2 sample by taking account of: (a) children who lived in Ireland at Wave 2 but who had been definitively identified as having moved out of the country by Wave 3 or who had deceased between Waves 2 and 3 and (b) variations in Wave 3 response and attrition. The former adjustment accounts for changes in the longitudinal population by excluding children who no longer live in Ireland or who have deceased since the previous round of interviewing. The latter adjusts for differential attrition rates between Waves 2 and 3. The variables used to adjust for Wave 2 to Wave 3 attrition and so generate the inter-wave attrition weights were as follows:

- Educational attainment of Study Child's mother in previous wave
- Family structure / Mother's marital status (married and living with spouse; cohabiting; one-parent family) in previous wave
- Mother's age in previous wave
- Regional distribution of children by gender in previous wave
- Whether or not child was ever breastfed
- Mother's depression status in previous wave
- Mother's BMI status in previous wave
- Mother's smoking status in previous wave
- Whether or not mother was born in Ireland
- Family income quintile in previous wave

When the Wave 3 sample was adjusted in line with both changes in the population and differential interwave attrition, a new Wave 3 weighting/grossing factor was generated by taking the product of the

²⁵ 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. 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.



attrition weight and the Wave 2 weighting/grossing factor. The Wave 2 weight incorporated the original design and differential response at Wave 1 as well as attrition between Waves 1 and 2.²⁶

In generating the two sets of weights/grossing factors, the characteristics of the family or child at the previous round of interviewing were used. This means that when generating the adjustment factors for use with the 8,712 families who had participated at Wave 2 (i.e. in all three rounds of interviewing to date), the Wave 2 characteristics were used. When generating the weights/grossing factors for use with the larger set of 9,001 families who participated at 9 months and 5 years of age (Waves 1 and 3), but not necessarily at Wave 2, the characteristics at Wave 1 were used (as the Wave 2 characteristics were not, by definition, recorded in respect of all participants at Wave 2).²⁷

²⁶ For a discussion of Wave 2 (3 year) weighting see, for example, Murray A., Quail A., McCrory C., and Williams J., 2013, *A Summary Guide to Wave 2 of the Infant Cohort (at 3 years) of Growing up in Ireland*. Irish Social Science Data Archive website; <http://www.ucd.ie/t4cms/SUMMARY%20GUIDE%20-%20INFANT%20-%20WAVE%202.pdf>. For a discussion of sample selection and Wave 1 weighting see Quail A., Williams J., McCrory C., Murray A. and Thornton M. *Sample Design and Response in Wave 1 of the Infant Cohort (at 9 months) of Growing Up in Ireland*, Irish Social Science Data Archive website; (<http://www.ucd.ie/t4cms/GUI-SampleDesignResponseInfants.pdf>).

²⁷ These two set of weights are also made available with the dataset prepared for use by researchers outside the GUI Study Team.



Chapter 3

INFORMANTS, INSTRUMENTS AND PROCEDURES IN THE HOME





3. INFORMANTS, INSTRUMENTS AND PROCEDURES IN THE HOME

3.1 INTRODUCTION

This chapter provides an overview of general procedures, instruments and respondents included in the Infant Cohort at five years of age. Fieldwork in the home is summarised in Section 5.1. Procedures for the use of the laptop are described in Sections 5.2 and 5.3, while special procedures, for example when dealing with adult literacy issues, are described in Sections 5.4 and 5.5. Minimal details on questionnaires are provided in this chapter, as its purpose is to provide a broad overview of the various types of instrumentation used and their administration, before giving details on their substantive content in subsequent chapters.

3.2 INFORMANTS AND QUESTIONNAIRES ADMINISTERED IN THE HOME

As was the case in the first and second rounds of interviews with the Infant Cohort at 9 months and also 3 years of age, the principal informants in the home were the Study Child's main caregivers – the Primary and Secondary Caregivers. The Study Child was also directly involved (as was the case at 3 years of age) by his/her completion of a cognitive test (the British Ability Scales).

The Primary Caregiver was defined as the person who provided most care to the Study Child and who was most knowledgeable about the detailed information being recorded about him/her. The Secondary Caregiver was the resident spouse/partner of the Primary Caregiver. The Primary and Secondary Caregivers were nominated by the family (based on these definitions). In practice, almost all (over 99.5 per cent) of Primary Caregivers were the Study Child's mother. Changes in Primary and Secondary caregivers between rounds of the study were accommodated within the procedures and questionnaires developed for the study.

The Primary and Secondary Caregivers were included as the principal informants as they are best placed to provide information on the Study Child and, at this stage in the child's life, form the main elements in their lives. Within the Study's underlying bio-ecological framework, they are the main elements in the child's micro-system.

In summary, the main home-based informants and the questionnaires/instruments which they were asked to complete are as follows:

The Primary Caregiver:

- Administered 'Main' questionnaire. This is discussed in full in Section 4.1 below and includes detailed information on the Study Child as well as information on the Primary Caregiver.



- Self-completed 'Sensitive' questionnaire. This is discussed in full in Section 4.3 below.
- Where the Study Child was a non-singleton (e.g. a twin or triplet), administered questionnaire module for twin or triplet siblings of Study Child.²⁸ This was a much-abbreviated form of the 'Main' questionnaire administered in respect of the twins or triplets of the Study Child.
- Weight and height (latter if not previously available from an earlier round of data collection)

The Secondary Caregiver:

- Administered 'Main' questionnaire. This questionnaire is an abbreviated form of the 'Main' questionnaire administered to the Primary Caregiver. It recorded information only on the relationship between the Secondary Caregiver and the Study Child, as well as the characteristics of the Secondary Caregiver him/herself. It did not record any of the descriptive information on the Study Child himself or herself. This is discussed in full in Section 4.2 below.
- Self-completed 'Sensitive' questionnaire. This was largely the same questionnaire as was self-completed by the Primary Caregiver and is discussed in full in Section 4.3 below.
- Administered questionnaire module for non-singleton siblings of Study Child (i.e. twins or triplets). This was a very short module and largely recorded details only of the relationship between the Secondary Caregiver and the non-singleton sibling.
- Weight and height (latter if not previously available from an earlier round of data collection)

The Study Child:

At 5 years of age, the Study Child's motor and cognitive development was assessed as follows:

- Assessment of gross motor and fine motor skills
- Naming Vocabulary subtest of the BAS
- Picture Similarities subtest of the BAS

²⁸A singleton is a child resulting from a single foetus, as opposed to twins or multiples.



These are discussed in full in Chapter 5 below.

In addition to the above informant-specific questionnaires and assessments, the interviewer recorded the GPS co-ordinates of the family's home (in situations in which the family had moved to a new address since the previous interview or where co-ordinates were missing from earlier Waves). Where permission was given by the Primary Caregiver to contact a non-resident biological parent, contact details were also recorded by the interviewer. This information was subsequently used by the Study Team to administer a postal questionnaire to the non-resident biological parent.

3.3 HOUSEHOLD-BASED FIELDWORK AND PARTICIPATION OF THE FAMILY

3.3.1 INITIAL CONTACT

As in other sweeps of the study, the initial contact with the family at the third wave of the Infant Cohort was via a letter from the Study Team (Appendix A). The interviewer subsequently made a personal visit to each household to arrange an interview. At that first visit, interviewers asked to speak to the person listed as the Primary Caregiver of the Study Child at Wave 2. If the person was still resident in the household, then s/he was asked to confirm that s/he was still the Primary Caregiver. Having reminded the parent/guardian of the letter and information sheet which had already been posted to the family, and answering any queries the parent had, the interviewer asked the Primary Caregiver to sign two copies of the consent form (see Appendix A). The interviewer returned their signed copy to the field office and the Primary Caregiver retained the other for his/her own records. Only after securing signed consent did the interviewer undertake any work with the family (interviews, tests or measurements).

If the interviewer was unable to make contact with a parent/guardian on the first visit, he/she left a 'called-while-you-were-out' card with his/her contact number. Where phone numbers had been collected at Wave 2, interviewers were permitted to attempt further contact by phone. Interviewers made repeat personal visits to the household until a definitive consent or refusal was obtained; or if it could be confirmed that the family had moved address. A minimum of four repeat visits to the respondent's home (five personal visits in total) were made at different times of the day and days of the week before a non-response outcome was assigned to the family. In situations in which the interviewer identified that a family had moved from the address at which they were interviewed at Wave 2, the field office checked to see if the family had granted permission to use the Child Benefit Register (CBR) for tracking purposes. If parental permission had been previously secured to track through the CBR, details on the family were passed to the Department of Employment Affairs and Social Protection with a view to securing a current address. The new address was then passed to the interviewer



(or an alternative interviewer in cases where the family had changed location to another part of the country).

3.3.2 IDENTIFYING PRIMARY AND SECONDARY CAREGIVERS AND CONDUCTING THE INTERVIEWS

Having contacted the family, the interviewer's first task was to secure signed Informed Consent and to interview the Study Child's Primary and Secondary Caregivers (as defined above).

The main interviews with each adult were administered by the interviewer using a laptop (Computer Assisted Personal Interviewing -- CAPI). As each interview questionnaire was completed, it was "locked down" so that the questionnaire could not be re-opened in the field, by the respondent, interviewer or other third party.

The more sensitive questions were included in a separate module and were self-completed by the respondent on a Computer Assisted Self-completion Interview (CASI) basis. Respondents could, however, request that the sensitive questions be administered to them by the interviewer in the same way as the main questionnaire (provided no one else was present) or to self-complete it on paper if they did not wish to use the laptop for any reason.

At the start of the self-completion section, the interviewer gave the laptop to the respondent and assisted him/her in completing a number of sample questions which were designed to familiarise the respondent with various types of response format (e.g. discrete, Likert/Likert, open-ended, date format). When the interviewer was satisfied that the respondent could cope with the demands of the CASI procedure, the respondent self-completed the questionnaire on the laptop. On completion, the questionnaire was closed down and locked so that neither the respondent nor the interviewer could have access to it. Respondents were alerted to this via a prompt on screen. The interviewer remained available at all times throughout the self-completion part of the survey to provide assistance if required.²⁹

Self-administered questionnaires (or components of questionnaires) are 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 improve the accuracy and efficiency of data collection as automatic routing ensures that the respondent navigates the questionnaire in the intended manner, while internal consistency and range checks reduce the potential for rogue values. In addition to the

²⁹ 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



huge efficiency savings afforded by using direct capture as opposed to paper-based data entry, the use of CASI questionnaires can enhance the perception that information remains confidential, because individual responses are not easily viewed by interviewers (see Brown, Vanable & Eriksen, 2008 for a review). As a result, CASI generally helps to reduce participants' embarrassment and increase their willingness to disclose sensitive information. Electronic surveying also decreases the number of hours needed for data entry and verification.

Questionnaires (both administered and self-completed) were programmed using BLAISE 4.8 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 or conflicts between answers in various parts of the questionnaire. The process also included some so-called 'forward feed' of information which had been collected in the previous rounds of interviews, to facilitate cross-wave checking and accuracy of the data. The information which was 'fed forward' in this way included details on dates of birth and gender of household members from the previous round of the study; educational qualifications of the Primary Caregiver; nationality, citizenship etc. All the information which was fed forward was verified (and, where necessary, amended) by the interviewer in the course of the current interview.

Over the course of the interview, respondents were shown an extensive range of prompt cards with the available answer options for specific questions. These were particularly important for longer lists of options or items in a scale.

Interviews could be suspended and resumed at a later time according to the requirements of the respondent. Completed interviews were encrypted and uploaded to a dedicated server in the ESRI by the interviewers via phone line. They were then decrypted and rebuilt to produce an SPSS file. As well as encryption of the data in transfer, all laptops were protected with 256-bit hard-drive encryption.

The Study Child's motor skills and cognitive tests (including those administered to twins and triplets – see Section 3.5.4 below) were administered in CAPI format by the interviewer. This facilitated the implementation of complex decision rules concerning the point at which the child had reached their ability threshold, based on their pattern of responses (see section 5.1.4 below).

3.4 SPECIAL PROCEDURES

Growing Up in Ireland aims to be as inclusive as possible. Putting special procedures in place to achieve a high level of inclusion was important to achieve the main objectives for the Study outlined in Chapter 1, such as those relating to the description of the lives of Irish children



(objective #1), mapping variation in children's lives (objective number #5) and providing an evidence base for the creation of policies and services (objective number #9).

3.4.1 DISABILITY

Adults with vision problems were interviewed using administered CAPI (computer assisted personal interview) for the main interview and for the sensitive supplement, subject to their agreement. Deaf adults self-completed all questionnaires on a pen-and-paper basis. Every effort was made to maximise the participation of families with learning disabled or special needs children, including facilitating participation of respondents with literacy or language difficulties, as outlined below.

3.4.2 ADULT LITERACY

Adults with literacy problems were given the option of having 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 interviews. These questions were asked only of those respondents who indicated that literacy was a problem at a previous wave. Interviewers were advised that this may serve as an indicator to the interviewer of the need to administer the sensitive questionnaire, but that the final decision rested with the respondent.

3.4.3 OTHER LANGUAGES

Information sheets and questionnaires were advance-translated into Irish, Romanian, Latvian, Lithuanian, Chinese, French and Polish, which were then self-completed by respondents on pen-and-paper during a home visit. A translator was provided to households on request.

In relation to the cognitive tests, interviewers were instructed to allow the respondent to decide whether their child would have sufficient competency in the English language to comprehend the demands of the task and to respond in English (in the case of the Naming Vocabulary test). If the respondent indicated that the child did not have sufficient competency in the English language to undertake the tests, then the test was not done and the interviewer noted this on the CAPI interview form.

3.4.4 TWINS AND TRIPLETS

In families in which there was a non-singleton in the sample (i.e. the Study Child was a twin or a triplet), the adult respondents completed the Primary and Secondary Caregiver interview on a CAPI basis in respect of the Study Child, and an abbreviated version (covering only the child-specific material) on paper in respect of the twin and triplets.





Chapter 4

PRIMARY & SECONDARY CAREGIVER QUESTIONNAIRES





4. PRIMARY & SECONDARY CAREGIVER QUESTIONNAIRES

4.1. PRINCIPLES IN DEVELOPING THE QUESTIONNAIRE

One of the major principles adopted in developing the questionnaires used with all participants was longitudinal consistency in measurement from one round of the project to the next. Only by ensuring age-appropriate longitudinal consistency within the cohort can one meaningfully investigate developmental paths and change over time. Changes to scales, the wording of questions or to the way in which questionnaires are administered will all make the task of comparing change and developmental pathways much more difficult. Changes in the wording of questions, for example, from one wave to the next will mean that there will be some uncertainty as to whether or not measured change is real or an artefact related to changes in the questionnaire.

Accordingly, in developing the questionnaires and related instruments proposed for the data sweep with the 5-year-olds, the Study Team attempted, as far as possible, to ensure that the information recorded in that round of the project was consistent with that recorded in interviews when the children were 9 months and 3 years of age. This longitudinal consistency is reflected in the measures included in the questionnaires and other instruments, adjusted (as relevant) with due regard to age-appropriateness of concepts and language.

Clearly, a further key consideration in developing the questionnaires used with all participants was the extent to which the information recorded reflected the bio-ecological conceptual framework underlying the project, as well as the three main substantive domains which it encompasses. Accordingly, all information included in the questionnaires and other instruments used in the study reflect the key issues arising in the nested layers of the child's ecology in the key areas of: physical health and development; socio-emotional development and behaviour; and cognitive development. In addition, the instruments were developed with a view to recording sufficient background and characteristic information as to allow appropriate analysis of direct child outcomes and a full understanding of the main correlates and drivers of those outcomes. In this regard, one could consider the characteristic variables recorded as a 'fourth domain', focusing on the characteristics which are essential to the teasing out and understanding of outcomes. In this context, it is important to point out that some of the information recorded may, in some circumstances, be regarded as a direct outcome measure, in others as an explanatory characteristic of other outcomes. For example, child health outcomes may be the dependent focus of some analyses, whereas in others the child's health may be part of the explanatory set – perhaps, for example, in examining cognitive development.



In addition to the two over-arching principles above, in developing the questionnaires and instruments at each stage of *Growing Up in Ireland*, a number of further important considerations were taken into account, as set out in summary form below:

- Importance: whether or not there are scientific grounds for believing that the issue, measure or question under consideration is sufficiently important along one or more of the dimensions of the Study Child's development or well-being at the appropriate age of development or is likely to be of sufficient importance as an antecedent of future outcomes as to merit recording in the current phase of the study.
- Measurability: can the characteristic can be validly, reliably and ethically measured using the methods of large-scale survey research adopted in *Growing Up in Ireland*, in a manner which will be acceptable to respondents and not adversely impact on response in the current wave or attrition in subsequent waves?
- Longitudinal relevance and consistency: does the measure have a longitudinal or dynamic character which can be consistently measured over time, in the context of the comments above on both inter- and intra- cohort consistency?
- Policy relevance: is the measure susceptible to or actionable through public policy?
- Prevalence and variance: is the measure sufficiently prevalent in the population as to yield an analyzable level of variance in the available samples?
- Added value: does the measure relate to influences on the well-being of the 5-year-old that are inadequately covered by other research?
- Robustness: is there a measure of the construct/variable of interest which is proven to be valid and reliable?
- Time efficiency: does the measure take as little interview time as possible, taking account of its relative importance and requirement for robust measurement?
- International use: has the measure been successfully used in research in other countries, particularly in comparable studies such as the UK Millennium Cohort Study and the Longitudinal Study of Australian Children?
- Use in Ireland: has the measure been successfully used in previous research in Ireland?

4.2 PRIMARY CAREGIVER QUESTIONNAIRE

The home component of the Study principally involved personally administered interviews with the parent(s)/guardian(s) of the Study Child, as well as cognitive and developmental assessments with the Study Child. A detailed discussion of the issues included in the various modules of the Primary Caregiver interview is considered below. In doing this, a rationale for



inclusion of the topics, issues and questions included in the questionnaires is provided. This focuses on examples from previous studies which have identified the importance of the issues in question in early childhood, either on a contemporary basis or as likely antecedents of future outcomes. Not all of the studies cited are based exclusively on 5-year-olds, but all are relevant to children at this stage in their development. In interpreting the rationales provided, it is, of course, essential to remember the strength of the longitudinal approach being adopted in *Growing Up in Ireland*, the inclusion of longitudinal consistency in the measure used and in their role not only as prevalence measures at 5 years of age but, equally importantly, as antecedents of likely future outcomes.

As the Secondary Caregiver Questionnaire largely contained a subset of the questions used with the Primary Caregiver, a simple referencing system has been provided which uses the Primary Caregiver Questionnaire as the base. The Primary Caregiver questionnaire comprised 10 modules. Each section covered a broad domain of interest. The questionnaire is provided in Appendix B.

4.2.1 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 are essential for examining structural and relationship issues that affect the child (e.g. one- versus two- parent status).

To save time in administering the interview at Wave 3, some information which was captured at Wave 2 was fed forward. This meant that information relating to, for example, household composition could be pre-fed into the third wave of questionnaires so that the information did not have to be asked of the respondent again. Instead, the respondent was asked to review the pre-fed information and correct any inaccuracies and amend it in the light of changes which had taken place since the previous interview. Furthermore, to ensure the confidentiality of information collected at Wave 2, it was asked that this section be reviewed by the person who identified themselves as the Primary Caregiver at that round of the survey and who gave the pre-fed information in the first instance and to whom guarantees of confidentiality were given in regard to the data, specifically on the information not being shared with a third party, within or outside the household. If the Primary Caregiver who provided the pre-fed information at the previous round of the study was not resident in the household at the third wave, the person who identified themselves at the time of the third wave as the Study Child's Primary Caregiver was asked to complete a new household grid (A7a – A8c).



A3a – A3b: New Entrants to the Household

All new entrants to the household (e.g. births), as well as any persons inadvertently omitted from the household grid at Wave 2, could be added at A3b. Again, this section captured the name, gender, date of birth, economic status, and relationship of each new entrant to the Primary Caregiver and the Study Child, and the date when s/he joined the household.

A4: Number of People Living in the Household at Wave 3

This was a derived variable which was simply the number of people resident in the household at Wave 2 (minus departures from the household) plus any new entrants to the household. Respondents were asked to verify that the number of persons now resident was correct.

A5 – A6b: Identity of the Primary Caregiver at Wave 3

Question A5 asked whether the person who identified themselves as the Primary Caregiver at Wave 2 was still the Primary Caregiver at Wave 3.³⁰

If the Primary Caregiver at Wave 2 was no longer the Primary Caregiver at Wave 3, 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 2 would now complete the Secondary Caregiver at Wave 3. However, if there was a new Primary Caregiver at Wave 3, for example a step parent, s/he was asked to confirm that s/he was the Study Child's legal parent/guardian and was in a position to complete the interview at this time. If they said 'yes' the interview could go ahead, but if the respondent said 'no', the interview was postponed until contact could be made with a legal parent/guardian, e.g., the Secondary Caregiver at Wave 2.

A9a – A9c: Other biological children living outside the household

Question A9a records 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.

³⁰ The reader is reminded that 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.



4.2.2 SECTION B – CHILD'S HABITS AND ROUTINES

B1 – B3: Child sleeping patterns

Rationale

Sleep is essential for children's growth and optimal functioning. Indeed, a number of longitudinal studies have documented an association between poor sleep quality in pre-school children and behavioural and emotional problems later in life. For example, one prospective study reported that sleep problems at the age of 4 years predicted anxiety/depression, attention problems, and aggression in mid-adolescence (Gregory & O'Connor, 2002). Koulouglioti et al. (2008) in a moderately sized longitudinal study (n = 278) found that inadequate sleep was related to the number of medically attended injuries that children sustained between the ages of 18 months and 4 years of age after controlling for SES and child temperament. A cross-sectional study of 422 Canadian children aged 5-10 found that compared with children sleeping 12-13 hours, those who slept 8-10 hours were at increased risk for obesity (OR = 3.45) with sleep mediated curtailment of leptin proposed as a potential biological mechanism (Chaput, Brunet & Tremblay, 2006).

Measure

Questions B1-B2 were standard questions designed to collect information relating to the time the child goes to bed and wakes, as well as the number of hours the child sleeps during the day. Question B3, which was adapted from LSAC at Wave 2, asks whether the child's sleeping pattern or habits present a problem for the parents.

B4 - B6: Comforting behaviours

Rationale

Research is inconclusive but pacifier (i.e. 'soother') use has been linked with higher incidence of ear infections and other types of infection (e.g. Hanafin & Griffiths, 2002), early childhood caries, dental malocclusion and delayed speech and language development (McNally, 1997). The ALSPAC study has previously asked about sucking behaviours (dummy and/or digits) and use of a special comfort object at age 5 years. A small Australian study of sucking behaviours in pre-schoolers with possible phonological impairment found that over half had ever used a pacifier with a quarter of those (14% of total) using it for 36 months or more – although the assumed relationship between impairment and non-nutritive sucking was non-significant (Baker, Masso, McLeod & Wren, 2018). Although the use of pacifiers is likely to be low at age 5, documenting this fact and the substitution of other forms of comforting behaviour (such as holding a special blanket or toy) is of interest. In the pilot, these questions appeared to work well; in general, there was good variance in the response categories.



Measures

Three questions (B4 – B6) which assess the frequency with which the child uses a soother, a blanket or sucks his/her thumb or fingers, and also how often they do any of these during the day and/or during the night. These will allow analysts to explore, in the first instance, the prevalence of comforting behaviours at this age in the child's development and their association with outcomes in various domains of the child's life, including those from the literature referred to above.

B7: Quality of the Parent-child relationship (Child Parent Relationship Scale – Short Form, Pianta, 1992)

Rationale

The importance of parent-child relationship has been highlighted by researchers as among the most important factors in the development of the child in early childhood, including in 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 raise school grades and decrease externalising behaviours (O'Connor, Hetherington & Clingempeel, 1997; Mosely & Thompson, 1995), with chronic discord being identified as a marker for maladjustment. As in previous phases of the GUI, the 15-item Pianta Parent-Child Relationship scale was used to record this relationship from the parent's perspective at five years of age.

Measure

The Pianta scale is very widely used internationally and taps into both positive and negative aspects of the parent-child relationship (Pianta, 1992). A full description of the measure is outlined in the Design, Instrumentation and Procedures for the Infant Cohort at Wave 2 (3 years). There has been little psychometric work undertaken with the Pianta short form, but analysis of the 3 year *Growing Up in Ireland* data (Wave 2) yielded alpha coefficients of 0.72 and 0.58 for the Conflicts and Positive Aspects of the scale respectively.

B8: Parental discipline practices

Rationale

Discipline methods are seen as an important aspect of parenting and have 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 more effective at helping the child to internalise moral rules (Kerr, Lopez, Olson et al, 2004). There has been increasing debate in the media and in the academic literature about the effects of smacking, with most, but not all, studies reporting negative effects of using smacking as a discipline strategy (e.g.



Gershoff, 2002). These types of questions will allow analysts to investigate, for example, the relationship between harsher discipline practices and later behavioural problems, attachment and peer relationships and development of internalizing or externalizing problems.

Measure

A full description of the rationale and measure of parental discipline is outlined in Section 6.1.2 (p.36) of the Design, Instrumentation and Procedures for the Infant Cohort at Wave 2 (3 years). The question collects information on the frequency with which the respondent used particular discipline strategies. A five-point Likert-type scale, ranging from never to always, is used. The items in question were:

- a. Discuss/Explain why behaviour was wrong.
- b. Ignore him/her
- c. Smack him/her
- d. Shout or yell at him/her
- e. Send him/her out of the room or to his/her bedroom or naughty step
- f. Take away treats
- g. Tell him/her off
- h. Bribe him/her.

Results from the pilot indicated good variance (and corresponding age-appropriateness) of the items in question.³¹

4.2.3 SECTION C – CHILD'S HEALTH AND DEVELOPMENT

C1: General health status

Rationale

Many national health surveys use a general health-related quality of life measure because they are quick to administer and have been found to be valid and reliable indicators of other objectively obtained measures of health status (Bowling, 2005). Haas (2007) has

³¹ The 2015 Children First Act abolished 'reasonable chastisement' as a defence for hitting a child. This was after the fieldwork in 2013, although the issue of 'smacking' was receiving media attention at the time of fieldwork.



demonstrated the predictive validity of this type of question as a longitudinal indicator of health outcomes later in the life course, including later childhood and into adulthood.

Measure

The same measure as that used at Waves One and Two was used again at Wave 3, and asked the respondent 'In general, how would you describe the child's health?' with response options ranging from Very healthy to Almost always unwell.

C2 – C4: Chronic illness, disability and functional limitations

Rationale

Although prevalence estimates vary substantially depending on the operational definition employed (van der Lee, Mokkink, Grootenhuis et al, 2007), epidemiological studies typically indicate that chronic illness affects between 10-20 per cent of the childhood population (Northam, 1997; Geist, Grdisa & Otley, 2003). The experience of childhood chronic illness can impose significant burdens on both the family unit and the child (Eiser, 1997). Indeed, numerous studies have found that children with a chronic illness or disability are at increased risk for poor psychosocial outcomes (Cadman, Boyle, Szatmari et al, 1987; Gortmaker; Walker, Weitzman et al, 1990).

Measure

Question C2-C4 asked whether the child has any longstanding illness, condition or disability, the nature of this condition, illness or disability (a list of 20 conditions was offered based on previous responses), whether it had been diagnosed by a medical professional, the timing of onset and the extent to which the child is hampered in their daily activities by the condition. This set of questions has been included since the first round of the study to maintain longitudinal consistency in the measure in question.

C3f – C3f_4: Food allergies and intolerance

A subset of questions was included on food allergies/intolerance among the 5-year-olds to gain insight into their prevalence at this age and also to allow analysts to ultimately assess their development over time and their importance as predictors of later outcomes. Based on an affirmative response to question C3f, parents were asked about the types of food that the child had allergies or intolerance to (up to three food types) and what age the child was when the parent first realised that he/she had this allergy.

C5 – C6: Respiratory Illness and Atopic Manifestations

Rationale

Respiratory illness is the most common illness of early childhood and Ireland consistently ranks amongst the highest in the world in terms of asthma prevalence (Masoli, Fabian, Holt et



al, 2004; World Health Organisation, 2007). Furthermore, the available evidence would seem to indicate that rates of asthma have increased over time, particularly in children (Braman, 2006). Data from Wave 2 of the Infant Cohort at three years of age in *Growing Up in Ireland* showed that about 6 per cent of three-year-olds had asthma. Therefore, asking these questions is important for investigating the correlates of such illnesses at an early age, while at the same time possibly providing an opportunity to explore the antecedents of asthma and atopic conditions that may develop in time, and be picked up in future waves of the study.

Measure

Parents were asked a set of three questions adapted from the Avon Longitudinal Study of Children and Parents (ALSPAC) which asked whether the child had any periods of wheezing/whistling on his/her chest in the past 12 months, the number of episodes/bouts, and whether they had received medication for this condition.

C7: Vaccinations

Rationale

In 2007, Ireland was highlighted by the WHO as having one of the poorer vaccination uptake rates in the European Union (87% nationally), although the Measles, Mumps and Rubella (MMR) vaccination is administered free of charge to children. However figures from 2012 indicate that the national figure has risen to around 92%, and while that figure has passed the 95% mark (as recommended by the WHO) in some areas, it is still as low as 83% in others (Irish Medical Times, 2013), giving rise to some concern. Identifying variations according to family background and other characteristics is extremely important from immediate and longer term perspectives and will be particularly important in informing policy in this, as in most other, policy areas. It will be possible to explore these differences with the 5-year data.

Measures

Wave 1 captured information in respect of vaccinations administered at 2, 4 and 6 months. At Wave 2, respondents were asked whether the child received the MMR vaccine at 12-15 months. To ensure a complete vaccination record, at Wave 3 two questions asked about vaccination. The first was whether or not the child had received the '4-in-1' vaccination for diphtheria, tetanus, pertussis and polio. The second asked about the MMR vaccination and whether the child had received it after he/she started school at age 4-5.

C8: Frequency of contact with healthcare professionals

Rationale

The importance of private care and the extent of fee-paying in Irish healthcare have 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 utilisation [for a given level of need] among children across different social groups (see e.g. Layte & Nolan, 2004). This is very important in substantive and policy terms - the former regarding immediate and longer term health outcomes for the children and the latter regarding issues around equity of access to and utilisation of healthcare services.

Measure

Question C8 asks about use of healthcare services initiated by the mother on behalf of the Study Child, including GP and other professional specialists (e.g. psychologist).

C9a – C9b: Child’s exposure to antibiotics

Rationale

A meta-analysis of 8 studies (four prospective and four retrospective) which involved a total sample size of 27,167 children found that antibiotic exposure during the first 12 months of life was associated with increased risk of developing asthma in early childhood, that the effect was dose-related, and remained after applying controls for a range of covariates. Given that Ireland is one of only three countries in the EU where outpatient antibiotic prescribing is increasing (Report of the RCPI Policy Group on Healthcare-Associated Infection, 2009), this represents a plausible and testable causal pathway for higher asthma prevalence among the Irish childhood population, given the relatively high figures outlined above.

Furthermore, antimicrobial resistance is recognised as a significant threat to public health by compromising the ability to treat infections effectively. It is widely acknowledged that antibiotic resistance is driven by high rates of antibiotic prescribing (HPSE, 2012). Emerging antibiotic resistance among certain bacteria is now frequently observed, and once these micro-organisms become resistant to one or more antibiotics, they do not respond to therapy (Safefood, 2010).

Findings from the Infant Cohort of *Growing Up in Ireland* at 3 years of age indicated that two-thirds of three-year-olds had received at least one course of antibiotics in the 12 months preceding the interview. Children with a full medical card (35% of all children in the sample) or a GP-only medical card (5% of the sample) were more likely to have received a course of antibiotics than those without a medical card. Children with a full medical card received a higher number of antibiotic courses on average (2.6) compared with those without a medical



card (2.1). This relationship still held even after accounting for differences in overall health among those with and without a medical card.³²

Data collected in respect of the 5-year-olds will provide both current estimates of antibiotic exposure among this age group in Ireland and the extent to which the differences identified above continued between 3 and 5 years of age. In the longer term, the data on antibiotic use at 5 years of age will facilitate an analysis of the antibiotic resistance in children in Ireland and its effects on their health outcomes.

Measure

As in Wave 2, question C9a asked whether the Study Child has received a course of antibiotics in the past 12 months, while question C9b recorded the number (if any).

C10: Number of inpatient nights (C10)

Rationale

The number of nights spent in hospital serves as an objective indicator of children's health, in contrast to question C1 which is a more subjective parent-report measure. Higher utilisation of secondary healthcare, particularly the number of nights spent in hospital, is a marker for ill-health. As a measure of healthcare utilisation it will also allow analysts to relate underlying conditions to utilisation rates and to consider the extent to which utilisation varies with characteristics such as cover under the General Medical Card scheme. A particularly important question in this context would be the extent to which some children accessing healthcare such as in-patient care and the degree this varies (if at all) with medical card coverage.

Measure

A simple one item question which recorded the number of nights the Study Child has spent in hospital since the time of the last interview.

C11 – C16: Child's history of accidents

Rationale

Injuries in childhood represent a major public health concern and 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 & Powers, 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). Many social correlates of income poverty are

³² See, for example, <http://www.esri.ie/pubs/OPEA122.pdf>



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 2 parent families (13 per cent vs. 7 per cent) (Roberts & Pless, 1995). However, other factors have been linked to childhood accidents, among others, area level effects (Haynes, Reading & Gale, 2003), family size (Schwartz et al., 2005), and the child's temperament (e.g., Plumert & Schwebel, 1997).

Measure

Questions C11-16 asked about the occurrence of accidents that required hospital treatment or admission, and the total number of accidents that required hospital treatment or admission (C12). C13 asked about the nature of the most recent of these accidents, to include item such as 'loss of consciousness / knocked out', 'bang on the head', broken bone or fracture', 'near drowning', among others. Parents were also asked the age at which this most recent accident happened, whether the child was hospitalised, and where the particular accident happened.

C17 – C18: Visual and auditory problems

Rationale

Early manifesting sight or hearing problems which are left untreated are associated with impaired reading progress (Williams, Latif, Hannington & Watkins, 2005). Research highlighted by the American Speech-Language-Hearing Association indicates that children with hearing loss who begin intervention earlier have significantly better developmental outcomes than similar children who begin intervention later (Holt & Svirsky, 2008; Moeller, 2000; Nicholas & Geers, 2006) and most children with hearing loss who receive appropriate services from trained staff are able to progress at age-appropriate rates (Geers et al., 2009). The medium to longer term developmental implications for the child of not benefitting from early interventions are clear.

Measure

Two questions, which were adapted from the Millennium Cohort Study, recorded whether the child currently has, or at any time in the past had, any sight or hearing problem requiring correction. Three response categories were used: yes currently, yes, in the past and no.

C19 – C20: Access to Healthcare

Rationale

This 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 of, illness (Starfield & Budetti, 1985). As at Wave 2, this can be explored further at Wave 3 in terms of identifying increasing or



worsening health conditions where there have been delays in seeking or obtaining healthcare for the child.

Measure

Question C19 asked whether the child needed medical care in the preceding 12 months along with perceived barriers to access, while question C20 asked whether the child was on a waiting list for assessment or treatment.

C21 – C23: Speech and language development

Rationale

The most intensive period of speech and language development is during the first three years of life and it has been estimated that speech and language problems affect 5-8 percent of pre-school children (Nelson, Nygren, Walker et al, 2006). These are important from a developmental perspective because they are associated with considerable morbidity. Speech and language difficulties often persist into the school years and prospective studies have shown that speech and language impairments (SLI) are associated with poorer behavioural, socio-emotional and academic outcomes (Beitchman, Brownlie, Inglis et al, 1996; Silva, Williams & McGee, 1987).

Measure

At five years the adapted question from the Parents Evaluation of Developmental Status (PEDS, Glascoe, 2006) was used, to ask whether the respondent had any concerns about how the child talks and makes speech sounds. Question C22 explored the nature of speech or communication difficulty, while C23 asked whether the child had received any treatment for their speech or language problem.

C24 – C25: Dental Health

Rationale

Dental caries is the single most prevalent chronic disease condition of childhood (c.f. Edelstein, 2002) and there is evidence from the UK and Ireland that decay experience is on the increase in children under 5 years of age, and that it is more heavily concentrated among socially disadvantaged children (Nunn, 2006).

Measure

Parents were asked whether the child had been to see a dentist because of a problem with his/her teeth, in order to get at chronicity. They were also asked if there was a time during the last 12 months when the child really needed to consult a dentist but did not; if the response to this was affirmative, this was supplemented by a further question which asked



whether this was because they could not afford it, or some other reason. The latter question also forms part of the child deprivation measure discussed later in this chapter.

C26: Dietary Intake over the last year

Rationale

To date there has been very limited data on the food intake patterns of pre-schoolers in Ireland. Numerous studies in Ireland indicate that social status is a strong determinant of diet quality (Kelleher, Lotya, O'Hara et al, 2008). Differences in diet quality may partially explain the higher obesity risk among lower social class groups. Other studies have reported that dietary intake among young children has implications for academic attainment in later years independent of other covariates (Feinstein, Sabates, Sorhaindo et al, 2008). Overweight and obesity (particularly among children) is a major and increasing policy focus in Ireland. Data from earlier rounds of *Growing Up in Ireland* (for example, Layte and McCrory, 2011) have highlighted the issues associated with childhood overweight and obesity using data from the Child Cohort at 9 years of age. The addition of detailed data on the nature of dietary intake among children will substantially enhance our understanding of the issues involved.

Measure

An expanded diet and nutrition food frequency module was used at age five to allow more in-depth analysis of dietary patterns and to enable researchers to provide sound advice to policymakers in this area. The module was developed by Dr Celine Murrin for use in the LifeWays Study currently being carried out by University College Dublin and so has previously been used in an Irish context. The instrument has 53 items requesting the average frequency with which the child consumed different types of foods and drinks in the last year. Outcome codes include: Never, Less than once per month, At least once per month, At least once per week, Most days, Once a day, 2-3 per day, 4-5 per day, 6+ per day.

The resulting in-depth data indicate total consumption of different foods plus the nutrient intake consumed as part of each class of food. Information on the following eight food classes is outputted: cereals, breads and potatoes, dairy products and fats, drinks, fruit, meat, fish and poultry, milk, sweets, snacks and pastry, vegetables. For each food class, detailed macro and micro nutrient information were recorded along with calorific content.

The information in question provides unprecedented potential for policy and research analysis in this area among children in Ireland.



C27: Parental Perception of study child's weight status

Rationale

Parents often fail to recognise that their child's weight status is problematic (e.g. Huang et al 2007) and support for this position has been provided by studies that typically indicate poor correspondence between measured weight and parental perceptions of child weight status for those at the higher end of the BMI distribution (e.g. Maynard, Maluska, Blanck et al, 2003). Etelson and colleagues (2003) also noted that parents surveyed who had overweight children were no more concerned than other parents about excess weight as a health risk.

Measure

A single question asked the respondent how they would describe the Study Child's weight on a four-point rating scale ranging from 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.

C28: Handedness

Rationale

A potentially important determinant of a child's cognitive development is the preference for using the left or right hand. Left- or mixed-handedness has been associated with atypical cognitive abilities, which can have both disadvantageous and advantageous outcomes (Heilman 2005). This is an important issue, given that approximately 10 per cent of the world's population is left-handed.

Measure

A one-item question asked the parent whether the study child was right- or left-handed.

C29: Social Skills Improvement System Rating Skills (SSIS_RS: Gresham & Elliot, 2008)

Rationale

Positive interaction skills are a learned process, shaped in part by the child's temperament, and also significantly affected by the adults and peers with whom the child relates. Children need to be able to relate to adults and other children as well as being able to follow rules related to groups and interacting with others. Children and young people who lack social skill are more likely to experience teacher and peer rejection (Ialongo, Vaden- Kiernan, & Kellam, 1998; Vitaro, Brendgren, Larose, & Tremblay, 2005), and are more at risk for negative life outcomes, such as gang involvement, juvenile delinquency, and long-term incarceration (Eddy, Reid, & Curry, 2002).



Measure

The SSIS_RS has a total of seven subscales and can be used to identify specific social behaviour acquisition and performance deficits that can then be addressed with skill-building exercises in both school and home interventions. Subscales within the Social Skills measure include Communication, Cooperation, Assertion, Responsibility, Empathy, Engagement and Self-control. In the third Wave of *Growing Up in Ireland*, four of these subscales were included in the main questionnaire, namely the Assertion, Responsibility, Empathy and Self-control subscales. As related aspects of social skills competence are captured elsewhere in the instrumentation, the other subscales were excluded from the data sweep at 5 years of age. In particular, the child's dispositions/attitudes (e.g. 'shows a high level of involvement in self-chosen activities') and language for communication and thinking (e.g. 'initiates communication with others') are reported by the child's teachers as part of the school survey.

Internal reliability for the SSIS_RS as reported by the authors was moderate to high and validity has also been demonstrated by correlational studies with other widely used instruments such as the Behavioral Assessment System (2nd ed.; BASC-2; Reynolds & Kamphaus, 2004), the SSRS (Gresham & Elliott, 1990), and the Vineland Adaptive Behavior Scale (2nd ed.; Vineland II; Sparrow et al., 2005).

4.2.4 SECTION D – PARENTAL HEALTH

D1: General health status of respondent

Rationale

Parental ill-health has implications for the health and well-being of children, particularly if it compromises the ability of the parent to care for the child (see questions D2 – D5 below).

Measure

Item D1 was derived from the Short Form 12 Health Survey which measured generic health concepts and health related quality of life. The item tapped the general health status of the parent on a 5-point rating scale ranging from 'excellent' through 'poor' and there is good evidence summarised in Blaxter (1989) that such measures are close analogues of clinically assessed health status.

D2 – D5: Chronic physical or mental health problem, illness or disability

Rationale

Armistead et al (1995) have proposed a number of pathways through which the experience of parental chronic illness can impact on child functioning. Thus, parental illness may disrupt aspects of parenting (e.g. support, reinforcement, discipline) by reducing 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 impacts upon child outcomes remains an under-researched phenomenon relative to the extensive literature which addresses families' adjustment to child illness (Pedersen & Revenson, 2005). These questions were also included in the questionnaires completed by the Primary and Secondary Caregiver at 9 months and 3 years of age. The association of parental chronic health problems with child outcomes at 5 years may therefore be investigated in terms of its persistence (or otherwise) over the child's life.

Measure

Questions D2 – D5 were derived from the European Community Household Panel survey (ECHP – also known as the Living in Ireland survey 1994-2001) and explored the nature, duration and impact of the illness/disability on the respondent. These questions were also asked of the Secondary Caregiver, where appropriate.

D6 – D8: Healthcare Insurance

Rationale

Children are some of the heaviest users of both primary and hospital health care services and 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 health care 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 visitation is 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, and sequelae to illness (Starfield & Budetti, 1985). This information will also be valuable in looking at changes in health care cover status through the public and private systems over the three waves of the study, and whether or not these changes have any impact on health outcomes for the child or on healthcare utilization rates – for example, as a child goes from private to public cover or vice versa. This is particularly important in Ireland when fieldwork for the 5-year-olds took place in 2013, a few years into the deep recession which started in 2008. One of the implications of the recession was an increase in the proportion of children covered for medical care by the medical card scheme – with a lower



level of cover under private health insurance scheme (Department of Health, 2015, Section 4).³³

Measure

Questions D6–D8 recorded information in respect of the family’s medical insurance cover, including the provision of private healthcare insurance, as well as asking specifically whether the child is covered by health insurance. These will provide information on access to, and utilisation of health services, as well as variation in health status.

D9 – D10: Chronic physical or mental health problem, illness or disability of anyone living in the house with the child

Rationale

As with parental ill-health, having another person in the household with a chronic illness may also impact on parents’ ability to care for the child, and may have implications for the health and wellbeing of children.

Measure

Questions D9 – D10 asked if anyone in the household currently has a chronic illness, disability or special need which adversely affects the study child in any way or the care that the caregivers are able to give to the child. If the respondent answers yes to this question, they are asked what the relationship of that person is to the study child, i.e., parent, sibling, other relative, or a non-relative.

D11: Parent’s physical activity

Rationale

It is widely believed that exercise habits established in early childhood persist into adulthood (e.g. Rimal, 2003) and research has demonstrated that physical exercise serves an important function in preventing the development of cardiac disease and other related vascular disorder in later life. Possible mechanisms for the relationship between parents' and child's activity levels include the parents' serving as role models, sharing of activities by family members, enhancement and support by active parents of their child's participation in physical activity, and genetically transmitted factors that predispose the child to increased levels of physical activity (Moore et al., 1991).

³³ http://health.gov.ie/wp-content/uploads/2015/12/Health_in_Ireland_KeyTrends2015.pdf



Measure

Question D11 asked the respondent to rate themselves as: Very physically active, Fairly physically active, Not very physically active, Not at all physically active.

D12: Parent's perception of their own weight and frequency of dieting

Rationale

Children model themselves on their parents' eating behaviours, lifestyles, eating-related attitudes, and dissatisfaction regarding body image. Informed and motivated parents can become a model for children by offering a healthy diet and promoting self-regulation from the first years of life. Accordingly, it is instructive to compare the relationship between parental perceptions of their weight status and their measured weight status on the one hand, and how both relate to the child's weight status on the other.

Measure

Questions D12-D13 asked the respondent to rate themselves as: Very underweight, Moderately underweight, Slightly underweight, About the right weight, Slightly overweight, Moderately overweight, or Very overweight. This was followed by question D13 which asked about frequency of dieting with answer categories Very often, Often, Sometimes, Rarely, Never.

4.2.5 SECTION E – CHILD'S PLAY AND ACTIVITIES

E1 – E2: Short Version of Child Temperament Questionnaire, Australian Temperament Project (ATP)

Rationale

There is increasing interest in the relationship between individual differences in early emerging temperament characteristics and children's later socio-emotional and behavioural development (Henderson & Wachs, 2007). Temperament has been defined as "constitutionally based individual differences in reactivity and self-regulation in the domains of affect, activity and attention" (Rothbart & Bates, 2006; p.100) and most researchers in the field would subscribe to the idea that temperament is a predisposing set of characteristics that is moderately stable over time and across settings (Zentner & Bates, 2008), but may manifest in different ways depending on the nature of the context in which the individual is operating (Henderson & Wachs, 2007). Although early temperament research was characterised by disputes regarding the exact number and composition of temperament dimensions, there is now some consensus among leading experts in the field regarding the existence of three broad temperament traits: reactivity, approach or inhibition, and self-regulation. Reactivity refers to the onset, intensity and duration of emotional motor and orienting reactions, approach/inhibition refers to reactions towards different stimuli, while



self-regulation refers to processes that serve to modulate reactivity (Rothbart & Bates, 2006; Sanson et al, 2009). Moreover, it has been argued by Rothbart (2007) among others that these dimensions of temperament are related to the 'big five' personality factors which emerge later in life.

It is becoming increasingly clear that children's temperaments shape their outcomes, in part by influencing the manner in which they engage and evoke responses from their environments (Shiner, 2005). The goodness of fit between temperament characteristics and the social environment is being increasingly recognised in interactive models of child vulnerability and resistance. Research has shown, for example, that more emotionally negative children evoke more negative parental responses than less emotionally negative children in the same family (Jenkins, Rasbash & O'Connor, 2003).

Measure

In *Growing Up in Ireland* infant temperament was measured at Wave 1 using the Infant Characteristics Questionnaire and at age three with an abbreviated version of the Short Temperament Scale for Toddlers (STST; Prior, Sanson, Smart et al, 2000). At five years, child temperament was measured using adapted items from the Short Temperament Scale for Children (STSC) (Sanson, Smart, Prior, Oberkaid, & Pedlow, 1994). The STSC itself is a modified form of the Childhood Temperament Questionnaire (Thomas & Chess, 1977) that was developed after factor analysis of data from the Australian Temperament Project (ATP). The STSC was designed to assess temperament dimensions in children aged between three and seven. Three of the index's subscales are used, measuring: persistence (4 items), reactivity (4 items), and sociability (4 items). Responses are on a 6-point scale where 1 = almost never and 6 = almost always.

Psychometric information from the Longitudinal Study of Australian Children (LSAC) indicates that the items comprising the various scales have acceptable internal-consistency reliability and excellent model fit when subjected to confirmatory factor analyses.

Question E2 is a simple follow-up question to gauge the parent's perception of how easy or difficult the child is. The answer categories are: Easier than average, About average, or More difficult than average.

E3a: Parent's role in fostering home learning

Rationale

A review of the factors that promote children's learning in the home environment is provided by Tamis-LeMonde & Rodriguez (2009) and includes the frequency of parent-child interactions in routine learning activities (e.g. shared reading), the quality of parent-child interactions (e.g. parent's cognitive stimulation and responsiveness), and the provision of age-appropriate



learning materials such as books and toys which facilitate communicative exchanges. Shared tasks like reading from storybooks and playing board games where mathematical concepts are explored through numbers and size ratio may provide an important source of knowledge and practical learning for the young child. Furthermore, playing active games have been shown to be beneficial to other aspects of children's behavioural and social development (e.g. turn-taking in games, motor development through physical play).

Measure

Question E3a had 9 items and asked about the frequency with which anyone at home does a number of activities, most of which are broadly related to fostering the home learning environment. These include: (a) plays with the child using toys or games/puzzles, (b) plays computer games, (c) visits the library, (d) listens to the child read, (e) reads to the child, (f) uses computer with the child in educational ways, (g) play sport or physical activities, (h) goes on educational visits outside the home, (i) goes shopping.

E3b; E5: Child's play and other activities

Rationale

The time that children spend on activities is often organised, including sports, indoor lessons and other events such as music, art and dance lessons. In turn, time for unstructured play has decreased. When children are left to their own devices, they will often take initiative and create activities and stories in the world around them. Sometimes, especially with children past the toddler stage, the most creative play takes place outside of direct adult supervision. Unstructured free play can happen in many different environments; however, the outdoors may provide more opportunities for free play due to the many movable parts, such as sticks, dirt, leaves and rocks, which lend themselves to exploration and creation.

Questions E3b and E5 attempt to tap into these themes to try and explore what proportion of 5-year-olds' time is spent on unstructured play by the children in GUI.

Measures

Question E3b had 4 items and asked about the frequency with which the child did any of the following at home (a) plays on computer, tablet device (e.g., iPad) or smartphone by themselves, (b) plays 'make believe' or pretend games, (c) paints, draws or makes models, (d) enjoys dance, music, movement. Question E6 had 5 items and asked about the frequency with which the child did any of the following (a) climbs on trees/ climbing frame, wall bars etc., (b) plays with a ball, (c) plays chasing, (d) rides a bike, tricycle or scooter, (e) skates. The answer categories were: Never; Less than once a week; 1-2 times per week; 3-6 times per week; Every day.



E4: Child's activities with other family members

Rationale

Time spent with family is extremely important for the developing child, in terms of both their current well-being and happiness as well as their longer term cognitive, socio-emotional and behavioural development – including child-parent attachment, peer relationships and risk of later externalising behaviours. Measures of family cohesion and time spent with the child are important in understanding how 'family time' relates to immediate and subsequent outcomes. To this end, details are recorded on activities which the child has undertaken with the parent or any other family member in the past month.

Measures

Question E4 had 6 items and asks about the frequency with which the child did any of the following with a family member: (a) gone to a movie, (b) gone to a sporting event in which the child was not a player, (c) gone to a concert, play, museum, art gallery, community or school event, (d) attended a religious service, church, temple, synagogue or mosque, (e) visited a library, (f) gone swimming.

E5: Child's attendance at a sports club or group

Rationale

The Health Behaviours in School Children (HBSC, 2006) survey revealed that over half of primary school age children did not achieve the recommended level of physical activity. By 15 years of age, almost nine out of 10 girls and seven out of 10 boys do not achieve the recommended level. Given the benefits of regular exercise for future health outcomes, as well as rising levels of obesity in Ireland, regular physical activity is a very important concept.

Measures

Question E5 asked about structured play and specifically how often the child attended a sports club or group with answer categories: Never; Regularly, two hours per week; Twice a month; Regularly, more than two hours per week; Regularly, one hour per week.

E7: Number of children's books in the home

Rationale

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). For example, the number of books in the home has been found to vary by parental education level. Analysis of the *Growing Up in Ireland* middle childhood cohort showed that 76 per cent of children whose



mothers had a third-level education had access to 30+ books in the home compared with 41 per cent of children whose mothers had a lower secondary education (Williams, Greene, Doyle et al., 2009).

Measure

Question E7 asked how many children's books the child had access to in the home with five response categories ranging from 'none' through to 'more than 30'.

E8-E10: Children's Screen-time and supervision

Rationale

It has been reported that children aged 3-5 years watch an average of 3.3 hour of television per day (Zimmerman & Christakis, 2005). This is important from a developmental perspective because a number of studies have reported deleterious effects of children's early television exposure on outcomes such as obesity (Dennison, Erb & Jenkins, 2002), attention problems (Christakis, Zimmerman, DiGiuseppe et al, 2004), aggression (Anderson & Bushman, 2001) and sleep patterns (Thompson & Christakis, 2005).

Measure

Question E8a asked how much screen time the child spends on an average weekday, that is, looking at TV, videos, dvds, computer, Ipad, smart phones, electronic games system. Answer categories were: None; 1-less than 2 hours; 2-less than 3 hours; 3 or more hours. Parents were then asked which of the activities the child did mostly: (a) playing educational games, (b) playing other games, (c) watching movies, videos, other TV, (d) doing a mixture of all types of activities.

Questions E9/E10 asked whether the child had access to the internet, and if so, whether they were supervised by an adult during this time.

4.2.6 SECTION F – CHILD'S FUNCTIONING

F1: Study child's psychological functioning (Strengths and Difficulties Questionnaire (SDQ), Goodman, 1997)

Rationale

Children's socio-emotional development in the early years has a huge impact on their later development. However, a failure to develop appropriately in these domains has been shown to disrupt school and family functioning, and also affect growth in other developmental domains (Powell, Dunlap & Fox, 2006). Good social, emotional and psychological health can impact health (both as a child and as an adult) and can help protect children against emotional and behavioural problems, violence and crime, teenage pregnancy and the misuse of drugs and alcohol as they get older (Adi et al. 2007). In 2008 in the UK, in response to growing



recognition of this issue, the National Institute for Health and Clinical Excellence (NICE) produced formal public health guidance on promoting the social and emotional wellbeing of 4 to 11-year-old children in primary education. This guidance was developed to complement existing national initiatives promoting social and emotional wellbeing, for example, the Social and Emotional Aspects of Learning (SEAL) programme (Department for Education and Skills 2005a; 2005b), the Healthy Schools programme (Department for Education and Skills 2005c) and related community-based initiatives.

In the U.S., research on the critical role of emotional and social well-being in school readiness and the negative trajectories of early problem behaviour has led to a national focus on the importance of providing prevention and intervention services to young children with challenging behaviour and their families (New Freedom Commission on Mental Health, 2003; Shonkoff & Phillips, 2000). Research from New Zealand has shown a significant connection between difficulties in children's behavioural development at the age of 3 and problems in adulthood such as depression, anti-social behaviour and criminal activity (Caspi, Moffitt & Newman, 1996).

Social competence is another important aspect of psychosocial development and is linked to positive peer relationships (Booth-LaForce et al., 2005), with the parent-child relationship often seen as an important antecedent. Social competence has also been linked to emotional and mental health, self-esteem, school readiness and academic outcomes.

Measure

The SDQ is a brief (25 item) behavioural screening questionnaire designed to assess emotional health and problem behaviours. Age-appropriate versions of the SDQ have previously been used with the *Growing up in Ireland* 9-year cohort, and the infant cohort at 3 years. It has also been used in the MCS and Growing Up in Scotland (GUS), thus facilitating cross-cohort, longitudinal, and cross-national comparisons. The impact scale of the SDQ was also used at 5 years (it was not used at 3 years) to ascertain the parent's perception of the impact of any potential difficulties on the child.

The measure (parent report SDQ and impact supplement for the parents of 4 to 16-year-olds) is described in detail on the author's website <http://www.sdqinfo.com>.

F7-F8: Sibling relationships

Rationale

The relationship with siblings is an important one and while these relationships can be strained at times, especially during childhood, research points to the fact that sibling ties are best understood in the context of the family unit, and that efforts to improve relationships should take into account not just the siblings, but the family as a whole. In essence, sibling



relationships reflect family dynamics with changes in parent-child relationships associated with similar changes in sibling relationships (McHale, Osgood & Crouter, 2006).

Measure

Where the child has siblings, the parent is asked one question on how the Study Child gets on with them with answer categories Gets on well with his/her siblings; Mixed; Does not get on well with his/her siblings; Does not see them.

4.2.7 SECTION G – SCHOOL/CHILDCARE/PRESCHOOL

Growing Up in Ireland is based on an ‘age cohort’ rather than a ‘stage cohort’. This means it focuses on children of a common age (in the current Wave, all are 5 years of age). This contrasts with a ‘stage cohort’ which would include all children who are at a common stage in development, for example, all entering their first year in primary school. Accordingly, the 5-year-olds were in different settings and had different experiences of early childhood care and education. The main difference, of course, was that some had started primary school, others had not.

An important feature of this *Growing Up in Ireland* Cohort '08 is that they are among the first to have availed of a scheme introduced in 2010 aimed at giving all children the opportunity to experience one year in formal centre-based pre-school prior to starting Primary school (known colloquially as the ‘Free Pre-School Year’³⁴). The aim of this scheme was to improve school-readiness³⁵. At the time of the survey, this scheme was open to all children aged between three years, three months and four years, six months on September 1st of the relevant preschool year (September to June). It provided preschool sessions in approved centres for up to three hours per day, five days per week over 38 weeks, although parents could opt to pay for extra hours (where available).

The questionnaires used at this round of the study allowed for these different stages in pathways by tailoring questions to three groups: children who have already started primary school; those who have not yet started primary school but have some experience of preschool or other care settings; and those who have not started school and have not experienced non-parental care. This meant that for some children the family was still the single most important component of the child’s microsystem. For others, however, the influence of pre-school will have entered their microsystem, while for still more the school and interactions with peers

³⁴ This is formally known as the Free Pre-School Year in Early Childhood Care and Education (ECCE) scheme.

³⁵ http://www.dcy.gov.ie/viewdoc.asp?fn=/documents/childcare/ECCE_guideforparents.htm.



will have begun to play a role. Equally, in Bronfenbrenner's bio-ecological model, the mesosystem relationships between, for example, home and childcare, pre-school or school will begin to assume an importance for some children more than others. Relationships between parents and childcare provider or teacher will indirectly impact on the Study Child. Macrosystem educational and related policies will have an increasingly important bearing on the child's life. The questionnaires and the modules they contain were developed to accommodate these different stages in the child's life at 5 years of age.

SECTION G1 – CHILD HAS STARTED SCHOOL

Subsection A - School details, school choice and transition to school

G1 – G5: Information on child's school

For children who have already started primary school, a series of background questions is asked about when the child started school, address of school, gender mix, and class in which the Study Child is currently in. This information was crucial in enabling identification of appropriate school principals and classroom teachers for inclusion in the school-based phase of the study, but also provides crucial demographic information for future analysis. For example, when teachers completed the Developed Administration Teacher Survey (DATS) in the teacher-on-pupil questionnaire (discussed in Chapter 6, below) on child's achievement across several different areas, it will be very important for researchers to account for the child's level (class) of schooling.

G6 – G10 Factors influencing school choice

School choice has been a hotly debated topic in international research because of the impact of parental choices on social and ethnic segregation between schools (Ball, 2006; Gorard, Taylor & Fitz, 2003). In Ireland, parents have been found to make very active choices of second-level school, yielding important differences between schools in the social and ability profile of their students (Byrne and Smyth, 2010). However, to date little has been known about school choice at primary level. Evidence about such processes is important for policy development in a context where new forms of school governance are emerging (Coolahan, Hussey & Kilfeather, 2012) and there is on-going debate about the appropriate allocation of resources to schools.

Growing Up in Ireland collected important new data on the information used by parents in deciding between primary schools and the factors that enter into their choice of school. Parents were asked about school planning in terms of obtaining advice or information about starting primary school and the sources they might have used, such as primary school staff, pre-school staff, friends or other parents. They were also asked about the factors they consider to be important when they planned for their child to go to school. Factors include locality of school, friends or siblings attending the school, school academic reputation, and



the general ethos of the school, or perhaps that they had no real choice. They were asked to record which of these was the most important reason. They were also asked whether they registered their child with more than one school before making a final decision. These factors are relevant as predictors of parental aspirations for their child which will, in turn, impact on outcomes in many spheres of the child's life. In addition, this information is relevant in much of the policy debate around equity in school enrolment and registration. This type of information will be able to inform the policy discussion on variations in school enrolment patterns among families from different socio-economic backgrounds.

G11: Preparing for school

There has been considerable debate internationally about the appropriate age for children to commence formal schooling, with research in the UK in particular indicating long-term negative effects of starting 'too early' (Sharp, Hutchison & Whetton, 1994; Verachtert et al., 2010). The effect of starting age is likely to vary cross-nationally, depending on the type of curriculum, approach to teaching etc. Timing of enrolment was asked of parents in order to explore whether school starting age makes a difference to longer term child outcomes in the Irish context. Data on the family's preparation for primary school will allow analysts to explore the impact it has on early school starts. For example, controlling for other background characteristics, can any of the risks of early transition to school be mitigated by good preparatory work by the family, where 'successful' transition can be measured in terms of social and academic integration into the school system?

At G11 parents were asked whether they had prepared the Study Child for school by visiting the school beforehand, practicing reading writing and numbers, or talking to the Study Child about school. Preparing children adequately and giving them realistic expectations regarding the new school setting is found to smooth the transition into second-level education (Smyth et al., 2004). Little is known in Ireland about the transition from home to formal Primary School. This type of information from *Growing Up in Ireland* will help to fill that gap.

G12: Parental perception of school readiness

Parents are key informants on the school readiness of the Study Child. In addition, parental perception of the child's readiness is likely to influence the Study Child since children are likely to watch and model their parents' behaviour. Therefore, the more worries and concerns a parent has about this transition, the more likely these are to transfer to the child.

A set of seven questions was asked about parental concerns and feelings about the child's readiness to start school. For example, they were asked whether they were worried that the child would find being away from them difficult, that the child would be reluctant to go to school, that the child would be able to mix with other children well enough to get along, or worried that the child was not independent enough to cope with school. These items were



derived from the Growing Up in Scotland study, which found that children who were perceived by their parent as less 'school ready' went on to have greater adjustment difficulties on entering primary school (Bradshaw et al., 2012).

G13: Parental engagement with teacher

Home-school relations³⁶ have been found to be highly predictive of longer-term educational outcomes (Desforges, 2003). To capture the nature of these relations, parents were asked three questions: how often they speak in person to the child's teacher, whether the child is dropped to school each day by a parent or by someone else, and how often that person would speak to the child's teacher. Contact with parents was also captured from the teacher perspective in the teacher-on-child questionnaire.

G14 – G19: Child's adjustment to school

Successful adjustment to school partly depends on past experiences (including attendance at preschool) and on children possessing the skills and knowledge to respond to the demands of the school setting (Dockett, Perry & Tracey, 1997; Fabian, 2000). When children exhibit a range of positive social skills, they are more likely to adjust easily to school. Difficulties are likely to arise when children are antisocial or have difficulties interacting with others (Margetts, 2002). Adjustment to schooling, however, is influenced by a variety of personal and family characteristics, societal trends, contextual and life experiences (Reynolds, Weissberg & Kaspro, 1992). At the most extreme level, transition difficulties which involve the child's refusal to attend school will have even more serious implications in terms of loss of education, emotional distress and disruption of peer and, possibly, family relationships (for example, Last & Strauss, 1990 and Rettig & Crawford, 2000).

A set of questions were included to investigate how often the child has complained about school, said good things about school, looked forward to going or been upset or reluctant to go to school. If the child has been reluctant to go to school, then parents were asked why they thought this was (such as not wanting to leave parent, problems with other children, problems adjusting to new routine). Perceptions of how the child's schoolwork is progressing were also tapped into by asking parents how they feel about the pace of learning, the level of difficulty that the child has with school work, and whether the child has adjusted to the current style of learning in school.

³⁶ In Bronfenbrenner's terms these fall within the child's mesosystem.



Subsection B – Term-time out of school care for those who have started school

G20 – G27: Information on Childcare Arrangements

Increased female participation in the labour market have meant that more children are being placed in non-parental care during the day. McGinnity, Murray and McNally (2013), for example, note that 39 per cent of nine-month-olds from *Growing Up in Ireland* were in regular non-parental childcare, most of which was closely related to mothers' employment patterns.

These changes have provoked debate in the academic literature about the likely short-term and longer-term implications of different types of childcare for children's outcomes (e.g. Howes, 2003). Research indicates that the type, timing and duration of early childcare can have a significant impact on aspects of the child's development. A number of longitudinal studies indicate a modest long-term effect of quality early childcare on cognitive development in young school-aged children (Loeb, Bridges, Bassok et al, 2007), particularly for children from at-risk backgrounds (Peisner-Feinberg, Burchinal, Clifford et al, 2001; Hart & Risley, 1995). In contrast, other studies have reported an association between early entrance to group-care (before age 2 years) and increased problems with behaviour at ages 3 and 5 (Sylva, Melhuish, Sammons et al, 2004). The extent to which these findings apply to Irish children is unknown, however, given the high dependence on relative, particularly grandparental, care (OECD, 2004).

McCartney (2004) notes that the substantial increases in the incidence of non-parental childcare for children from birth to five years of age over the last 25 years have led to concerns in three areas: its effect on mother-child attachment; the impact of variations in the quality of care on child outcomes and the effect of length of care on the child's development.³⁷ The paper further notes that the quality of childcare moderates the link between childcare experience and good cognitive outcomes, with higher quality childcare typically associated with better outcomes (c.f., McCartney, 2004). The EPPE study in the UK further found that children who had attended high-quality settings had better academic and social-behavioural outcomes at ages 7 and 11 (Sylva, 2010). A large body of research, mainly conducted in the United States, shows that quality preschool education has significant positive effects for disadvantaged and minority groups, and emerges as the most cost-effective way of reducing educational inequality (Levin, 2009; Temple and Reynolds, 2007; Heckman et al., 2006).

Because of the importance of assessing early childhood care and education and their potential association with developmental outcomes, the questionnaire contained a series of detailed

³⁷ <http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/857/current-research-on-child-care-effects.pdf>



questions on participation in, and perceived quality of, care settings. If the child spent more than 8 hours per week in non-parental childcare, then the respondent was asked to indicate for each type of childcare utilised, the type, duration and cost of this childcare, and whether this was the main form of childcare used, and what age the child was when they first entered into the main childcare arrangement. Further to the questions asked at 3 years, at 5 years information was recorded on the main reason for using regular child care, along with a set of questions about the place where the care took place. Seven items derived from the Emlen Scales Rich Environment and Activities and the Parent Scale Measuring Quality of Child Care asked about the quality of the care, including frequency of creative activities, frequency of activities that are just right for the child, and frequency of child feeling safe, secure, and respected.

A final question tapped into affordability of the childcare currently used.

Subsection C - Attendance at preschool prior to starting primary school

G28 – G34: Government funded pre-school year

The Free Pre-School Year Scheme, as noted above, was a Government initiative under which, at the time of fieldwork, children aged between 3 years and 3 months and 4 years 6 months at September 1st each year were eligible to receive free pre-school provision of between 2 and 3 hours per day during school term time. Given the scale of investment in this scheme, it was important to ask parents about participation in this scheme and the quality of care received by their children.

The respondent was asked whether the Study Child had availed of this scheme. If the free pre-school scheme had been availed of, parents were asked if they would have been able to send their child to pre-school in the absence of the scheme, with a view to investigating if socio-economic factors were determining decisions even at this early age. Respondents were also asked to indicate the type of setting in which the free pre-school year was provided, with options including pre-school; Naíonra;³⁸ Montessori; crèche; playgroup; and other group care setting. Where relevant, the Primary Caregiver was asked to indicate the reasons for not availing of the scheme on the child's behalf.

Parents were also asked how important they thought education and learning were in the pre-school setting and the age when the child first attended pre-school and the age they finished (if appropriate).

³⁸ These are Irish-language pre-schools.



G32: Standard of pre-school

The child's enjoyment of pre-school was rated by asking how much the child enjoyed spending time there as well as asking parents about their satisfaction with the overall standard of pre-school provision. As discussed above in relation to questions G20-27 above, parent perception of the quality of the pre-school was recorded using the Emlen Scales Rich Environment and Activities 5 items & 15-Item Parent Scale Measuring Quality of Child Care.

SECTION G2 – CHILD HAS NOT STARTED SCHOOL

Subsection A – Reasons for not having yet started school

G35: Reasons for not having yet started school

A set of seven questions was asked of the parent about why they chose not to send the child to primary school yet. These included thinking that the child was too young, health reasons, problems with speech or language, or advised to defer by school/preschool or someone else.

G36 – G46: School choice and preparations

These questions mirrored those for the children who had already started primary school in terms of obtaining information on the school that the child will attend (if that decision had yet been made), including when the child would start. Questions were also asked about enrolment at this and any other schools and about planning for school in terms of getting information from teachers and other people. As was asked of those whose children who had already started school, parents were asked about factors influencing their decision to send the child to a particular school. These included locality; school reputation; good reputation and so on. Details on actions taken to prepare the child for going to school (such as visiting the school or practicing reading, writing or numbers) were also recorded.

Again, parents' own attitudes about the child starting school – such as parental worries that the child will find being away from them difficult, concerns that the child will be reluctant to go to school, and worries about the child not being independent enough to cope with school – were also asked in respect of children who had not yet started primary school.

Subsection B Attendance at pre-school – Child NOT yet started school

This section was included to record details on pre-school attendance by Study Children who had not yet started primary school at the time of their home-based interview.

G47 – G54: Government funded pre-school year

This section recorded details on the pre-school arrangements for Study Children who had not yet started school as those above (G28-G34) which were recorded in respect of Study Children who had already started school. As noted above, the questions related to uptake and



experience of the government-funded free pre-school year (including parental perception of the child's readiness for pre-school and the quality of the pre-school setting).

Subsection C – Term-time care arrangement: Additional care arrangements for children attending pre-school and alternative care for children not attending pre-school

G55 – G63: Information on Childcare Arrangements

This set of questions broadly mirrored those asked in respect of children who had already started school. They recorded details on non-parental childcare of more than 8 hours per week. The child's parent was asked to indicate the type, duration and cost of childcare, as well as the age of the child when s/he first entered the main childcare arrangement; the number of children looked after and the number of adults supervising the children in the room in which the childcare was provided. Information was also obtained on the main reason for using regular childcare, along with that provided by the Emlen Scales Rich Environment and Activities scales (as discussed above).

SECTION G3 – CHILDREN WHO HAVE NOT YET STARTED SCHOOL AND HAVE NOT ATTENDED CHILDCARE

G64: Reason for no regular childcare at present

Those parents whose child was not in school and not in regular childcare were asked for the main reason(s) for not attending either. Answer categories include parent available, other care not needed; problems with getting childcare places or childcare not available in local area; transport problems to childcare; concerns about quality or affordability; not wanting child to be cared for by strangers.

SECTION G4 – CHILDCARE ARRANGEMENT WHEN CHILD TURNED THREE YEARS OF AGE

G65 – G66: Childcare when child turned three and before starting the free preschool year

This was a supplementary question asking the parent to think back to when the Study Child was three years of age and whether or not s/he was in any form of non-parental childcare at that time and, if so, the age at which that spell of non-parental childcare had begun.³⁹

³⁹ Although it had been intended to ask this question at the 3-year interview, a problem with the CAPI programme meant that responses were not available for all cases.



4.2.8 SECTION H – PARENTING AND FAMILY CONTEXT

H1: Family Eating a Meal together

Rationale

The importance of family socialisation practices, including routines such as the family sitting down to eat a meal together, is underscored by research which shows that children (Skinner, Carruth, Moran et al, 1998) and adolescents (Neumark-Sztainer, Hannan, Story et al, 2003) who eat meals with other family members tend to have superior nutritional profiles than those who do not. It has also been suggested that eating together at family mealtimes, and the ensuing intra-familial interactions, can contribute to the psychosocial development of children (Neumark-Sztainer et al., 2003).

Measure

A simple one item measure recorded the number of times in the past week that the family had sat down to eat an evening meal together.

H2 – H3: Parenting style (LSAC Parenting Measure)

Rationale and measure

Parenting styles differ from parenting practices in that parenting styles set the tone for interactions, rather than being goal-directed attempts at socializing a child. Although parenting styles are to some extent culture-bound, research in westernised societies indicates that an authoritative parenting style is associated with optimal outcomes for the child. Parenting styles characterised by high warmth and high control have been widely associated with positive child outcomes in emotional, social, and behavioural development (e.g. Avenevoli, Sessa & Steinberg, 1999; Steinberg, Elmen & Mounts, 1989), with more recent research indicating that parenting style may be a mediator in the relationship between poverty and children's wellbeing. Scott (2008) also points to harsh and inconsistent parenting as a major risk factor for child behaviour problems, while it is believed that some of the factors that feed into this directly and indirectly include domestic violence, parental drug abuse, maternal depression, family poverty, parents with low education, stressed families and single parent status (Webster-Stratton & Reid, 2008; Bloomquist & Schnell, 2005).

Although there is considerable continuity in parents' child-rearing orientations, parents modify their behaviours in response to their children's developing abilities and needs (Gralinski and Kopp, 1993). With the current wave of data, it will be possible to look at whether parenting styles have changed since age 3.



Measure

Questions H2 and H3 (on parenting style) were taken from LSAC. They yield scores for each of three important parenting dimensions: warmth (6 items), hostility (6 items) and consistency (5 items) that have been shown to mediate child outcomes. As the measure performed well in both the Australian study and in Wave 2 of the Infant Cohort in *Growing Up in Ireland*, it was repeated with the cohort at five years of age.

H4: Parental Work-life Balance

Rationale

The issue of work-life balance is of increasing interest to researchers given the greater work demands placed on individuals and a larger number of women participating in the labour market. More recent focus has turned to the actual quality of the work experience for parents, and the bi-directional influence between this and family life, including the division of household and care-giving duties. Rather than focus on the fact that parents work, researchers have begun to focus instead on how they work (Galinsky, 1999). Some research indicates that, even when job characteristics and other factors were controlled, work-family tension was higher among those with young children and among women (O'Connell & Russell, 2005). 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.

Measure

Parental satisfaction with their current work-life balance was assessed using 4 questions adapted from LSAC and which had previously been used with the infant and middle childhood cohort at Wave 1. These questions tap not only the impact of work on family life, but also the impact of family on working life, and will offer an opportunity to explore work-life balance in the context of the child's age. This question has been used in all previous waves of the study.

H5: Parental Social Support

Rationale

A sizeable body of literature indicates that social support has powerful mediating influences on personal and familial wellbeing (Dunst, Trivette & Cross, 1986; Armstrong, Birnie-Lefcovitch and Ungar, 2005). Moreover, previous studies have shown that the quality and quantity of social supports are positively associated with physical and psychological wellbeing (Dolbier & Steinhart, 2000). Social support has been highlighted in a number of studies as impacting on mother-child interactions. For example, Cochran (1993) summarised a number of studies that reported more positive mother-child interactions for those mothers enjoying



strong social support. Hashima and Amato (1994) also found that perceived social support was negatively related to parent's reports of punitive behaviour, particularly when income was low. Good social support from friends and family has also been associated with good social and educational outcomes among children and adolescents living with adversity (Wyman et al., 1999; Masten et al., 1999). Mathiesen and Prior also found a link between children's social competence and parental social support (2006).

Measure

A simple one item question derived from LSAC which asks the respondent the extent to which they feel they get enough help or support from family or friends living outside the home, with responses rated on a four-point scale ranging from I get enough help through to I don't need any help, was included. Questions were also asked about grandparental involvement and support and are discussed in the next section.

H6 – H8: Grandparental involvement

Rationale

Researchers have found that the relationship between adult children and their parents is an important one as they can often play a strategic role in helping the individual over the life course (Eggebeen & Hogan 1990; Rossi and Rossi 1990). Furthermore, Kanaiaupuni and collaborators (2005) found important implications for child well-being, in that extended family networks are associated with better child health outcomes. Additionally, perceptions of available support have positive relationships with economic wellbeing (Henly, Danziger & Shira, 2005).

Measure

Questions H6 – H8 were a series of questions derived from the Growing Up in Scotland which were designed to ascertain the degree and extent of grandparental involvement in the Study Child's life. Respondents were asked whether the Study Child was in regular contact with his/her grandparents (H6), how many grandparents were still alive (H7), and the number of grandparents the Study Child had a close or very close relationship with (H8).

H9: Child deprivation

Rationale

Recent research on childhood deprivation in Ireland has shown that even when resources are limited, the level of child-specific deprivation is lower than the overall level of basic deprivation in the household. In the 5 year pilot, a small group of children was identified as being exposed to child-specific deprivation (see Thornton and Williams, 2016). This pattern was associated with the household having lower income, mother's age and education, and with the number of parents in the household.



Measure

This measure looks specifically at goods and services which children lack because the household cannot afford them, such as properly fitting shoes, having books at home, having indoor games, affording to go on school trips, and having a suitable place to study or do homework.

H10: Stressful life events

Rationale

The nature and number of stressful life 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). Previous and current research has also shown that the number of adverse life events experienced by a child tends to be socially driven with those in lower social classes tending to experience a higher number of life events.

Measure

This question has previously been asked at both waves of the child cohort and provides a list of potentially disturbing and/or traumatic events, including moving house, experience of parental conflict, mental disorder in immediate family, drug taking/ alcoholism in immediate family, and death of a parent. The respondent also had the opportunity to describe a disturbing event not covered in the list. This is the first time the question has been used with the infant cohort.

4.2.9 SECTION J – SOCIO-DEMOGRAPHICS

J1 – J6: Dwelling Type and Housing Conditions

Rationale

Good housing quality that is suitable to the needs of the child and the family is important for children's wellbeing. Poor or inadequate housing is known to increase children's risks for illness and injury (Canadian Institute of Child Health, 2000).

Measure

Questions J1 – J5 captured basic descriptive information concerning the type of dwelling, and whether the accommodation had access to a garden or common space where the child could play, and whether the child was supervised in this space when playing there. Question J4 asked about housing tenure and how many bedrooms the property had, while questions J5-J6 asked about the respondent's satisfaction with their accommodation and whether it was sufficient to meet their family's needs. If not, the respondent was presented with a multi-response list allowing them to indicate how the accommodation is insufficient for their needs.



J7 – J25: Occupational Status of the Primary Caregiver

Rationale

This information was principally required to derive a social class classification for each household participating in the Study. Socio-economic indicators such as household social class, household income and parental education level are used for quantifying and exploring socio-economic variations in child outcomes.

Measure

Question J7-J15 asked about current employment status, the number of hours worked per week, occupational status, and whether they supervised any personnel in their job. Questions J16-J20 were a set of routed questions asked only of those who indicated they were not in full-time employment at J7 and were designed to obtain historic occupational status. Questions J21-J24 were asked only of those respondents who indicated that they had never had a full-time job or were currently unemployed. Finally, question J25 asked the Primary Caregiver for the occupation of the Secondary Caregiver in case the Secondary caregiver did not complete the SCG questionnaire.

J26 – J30: Household income

Measure

Questions J24-25 recorded information in respect of the main sources of income received by the household (e.g. salaries, welfare benefits, income from farming etc.) while questions J26-28 were designed to ascertain net household income net of statutory deductions for income tax, social insurance contributions and other non-discretionary deductions (e.g. public-sector pension levy). This set of questions was adapted from the Household Questionnaire of the Living in Ireland survey, which was the Irish component of the European Household Panel Survey (EHP).

J31 – J35: Receipt of Social Welfare payments in the household

Rationale

A high level of welfare dependency is usually considered a marker of socio-economic disadvantage. Longitudinal data will also enable researchers to investigate the direct and indirect effects of transitions in welfare dependence on child outcomes and other aspects of family life. For example, Watson et al. (2014) examined the consequences of poverty and poverty transitions for Study Children's socio-emotional development. Social Welfare transitions and changes in welfare dependencies play an important role in this type of analysis.



Measure

Question J31 was a routed question asking whether the household was currently in receipt of any Social Welfare payments, while J32 provided a complete listing of social welfare benefits currently available in Ireland which could be endorsed on a multiple response basis. Questions J33-J34 asked whether the household was currently in receipt of rent or mortgage supplement and, if yes, how much the household received per week in rent or mortgage supplement. J35 asks what proportion of the household's total income comes from social welfare payments of any kind.

J36a – J40: Deprivation and Economic Strain

Rationale

A substantial amount of research into poverty and deprivation, as well as their influence on outcomes across a very wide range of research areas, has been undertaken in Ireland in recent years (for an overview see, for example, Maitre et al, 2006). Fundamental to much of this work has been the development and implementation of a Basic Deprivation scale. This measure has been developed by the ESRI and has been used to assess the incidence, correlates and drivers of poverty and deprivation both in Ireland and, increasingly, internationally. 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. Having longitudinal data on deprivation will also afford researchers the opportunity to explore patterns of poverty in terms of how it changes, or remains stable, as well as the characteristics of those who are most likely to remain in poverty over time, or experience recurrent poverty spells. Much of the work on poverty and the effects of growing up in poverty has stemmed from the early work by, for example, Brooks-Gunn & Duncan (1997). As noted above, previous work by Watson et al. (2014), using data from the first two waves of both Cohort '98 and Cohort '08 in *Growing Up in Ireland*, has investigated the consequences of poverty, broadly defined, and (perhaps more importantly) poverty persistence for children's socio-emotional development. Other important work in this area includes Duncan, Ludwig & Magnusson, 2007; Holzer, Duncan & Ludwig, 2007; Bolger et al. 1995; McLeod & Shanahan, 1996; and Duncan et al., 2012.

Traditional family stress models also suggest that financial strain mediates the relationship between income and psychological distress. In other words, the subjective experience of economic disadvantage is proposed to have a greater influence on parenting and child outcomes than the objective experience of being poor (Conger and Donellan 2007; McLoyd et al. 1994; Mistry et al. 2004). This subjective measure takes account of the demands on the household income, such as debt or medical expenses. It would be expected that there would be considerable individual variability of financial strain levels even within a single income bracket, due to such factors. Furthermore, differences in resources, as well as perceptions of



economic loss or disadvantage, may influence the impact of financial strain on parental functioning and parenting behaviours (Beiser et al. 2002; Elder et al. 1995; McLoyd 1990). In the context of poverty, however, it may be that experiencing economic pressure is an expected way of life that is not captured by measures of behavioural or cognitive adaptations to financial pressure (McLoyd and Ceballo 1998; McLoyd et al. 2006).

Measure

The Basic Deprivation scale (J36, J38 and J39a) is one of the core indicators used in the Irish national poverty monitoring system, based on the Survey of Income and Living Conditions (SILC).⁴⁰ 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 very widely combined with thresholds of relative income poverty to provide a measure of 'consistent' poverty status and changes therein over time.

The scale has been developed through work stretching back to 1987 (see Callan, Nolan & Whelan 1993; Layte, Nolan & Whelan, 2001; Nolan, Gannon, Layte et al, 2002; Maitre, Nolan & Whelan, 2006). 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 is also excellent with the scale exhibiting high correlations with others in this area including the ECHP 8-item Basic Deprivation index.

Economic strain refers to the difficulty the household faces in meeting expenses (J37). This item has been used extensively in studies of social exclusion alongside the basic deprivation indicator. It has been shown to be particularly powerful in capturing the impact of the recession on families whose income and resources place them above the poverty threshold (Watson et al., 2016, 2017; Whelan et al., 2016).

J41 – J42: Impact of the Recession on the household

Rationale

Between the first and second waves of the infant study which began in September 2008, Ireland experienced both a boom and a recession. During this period unemployment increased from 6.6 per cent in September 2008 to 13.6 percent in November 2011. This figure remained high at 12.5 percent as of November 2013. During the recession, a large proportion

⁴⁰ Carried out and prepared by the Central Statistics Office (CSO) in Ireland.



of workers have suffered pay-related deductions/cuts and Government initiatives to address the structural deficit resulted in reductions in social welfare payments and Child Benefit.

While the link between economic hardship and child outcomes has been well established, the relationship between recession and child outcomes is considerably more complicated. There are a number of important factors to be considered when looking at the impact of recession, including pre-recession circumstances, individual responses to, and perceptions of financial hardship, and even the way in which the government of the day manages an economic crisis, have all been shown to impact the health and well-being of individuals of all ages (Bezruchka, 2009). The specific features of and context within which a recession occurs play a major role in determining who will be most affected, and how. An important precursor to exploring the effects of recession on child well-being therefore is to understand what is already known about the association between poverty and child well-being.

The recession in Ireland pushed many families deeper into poverty with many falling below the poverty line as a result of continued job losses, falling wages and cuts to take-home pay through tax and welfare changes. As noted above, the longitudinal nature of *Growing up in Ireland* will allow analysts to investigate how changes in family circumstances, timing and durations of those changes are related to child outcomes.

Measure

These questions were developed by the Study Team to gauge the impact of the recession on households. Question J41 was a routed question which asked the extent to which the recession was impacting on 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 J42, which was a 10-item multi-response listing to ascertain how the recession had impacted upon the family, such as respondent or their partner being made redundant, or being behind with rent/mortgage or utility bills.

4.2.10 SECTION K – ABOUT THE RESPONDENT

K1a-d: Parental Education Level

Rationale

Parental education level is an important explanatory variable in the analysis of socio-economic variation in children's outcomes (Davis-Kean, 2005). For example, higher levels of parental education are positively associated with school readiness (Seefeldt et al, 1999), with an enriched home learning environment (Christian, Morrison & Bryant, 1998), with parental expectations of how far the child will go in school (Williams, Greene, Doyle et al, 2009), and with 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).

Measure

Question K1a was taken from the Irish Census of Population with parental education disaggregated into a 12-level discrete variable representing gradations within primary, secondary and third level education. Questions K1b, c and d asked what year they completed this qualification, the actual name of the qualification, and whether they completed upper secondary education before they gained the qualification. The information provided will also help us examine whether increases in maternal education that occur after the birth of the child will affect their academic outcomes (e.g. Magnuson, 2007).

K2-K3: Study Child's First Language and language spoken to the child in the home

Rationale

Questions on the child's first language and the language usually spoken to them in the home were asked because of their potential relevance to the child's ability to interact with peers and others, adjustment to so and so on. For example, Grunigen et al. (2010) found that local language competency was positively associated with peer acceptance for children of an immigrant background. Using *Growing Up in Ireland* data, the integration of immigrant children in the education system was examined by, for example, Darmody, McGinnity & Kingston (2016) and by McGinnity, Quinn et al. (2011).

This item was also used to help contextualise the child's performance on the cognitive tests, specifically the naming vocabulary component of the BAS which was a measure of expressive English vocabulary. Finally, proficiency in the local language is also likely to be a predictor of future school involvement as well as academic achievement.

K4 – K7: Parental Literacy and Numeracy

Rationale

Parental literacy can affect child outcomes directly through its influence on the home literacy environment (Burgess, Hecht & Lonigan, 2002). Studies on the relationship between story-book exposure and children's language skills 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. Senechal, LeFevre, Thomas et al, 1998).



Measure

This set of questions was adapted from the Millennium Cohort Study and was asked at Wave 3 of the Infant Study only of new respondents or those who indicated that literacy or numeracy was a problem at the second wave. K4 asked whether the respondent could read aloud to a child from a children's book written in their native language, while K5 asked whether they could read aloud from a story book written in English. K6 asked whether the respondent could comprehend and complete forms in English. K7 asked whether respondents could usually tell if they have the correct change in shops from a five or ten euro note.

K8 – K15: Basic Demographic details

Rationale

Basic demographic information in respect of the Primary Caregiver, including religion, citizenship, nationality and ethnicity, was obtained from respondents as it has been found to have a bearing on many aspects of child outcomes. For example, data from the Canadian National Longitudinal Survey of Children and Youth (NLSCY) were used to examine the relationship between ethnicity, children's aggression and emotional problems. The impact of parental harshness and child aggression was found to differ between ethnic groups (Ho, Bluestein & Jenkins, 2008).

Measure

Questions K8 – K14 were only asked of new respondents as this information was captured at Wave 1, while the question relating to ethnicity (K15) was taken from the Irish Census of Population and was asked of all respondents. It is also one of the parameters employed in weighting the data.

4.2.11 SECTION L – NEIGHBOURHOOD/COMMUNITY

L1 – L6: Satisfaction with and Perception of the Local Area/ Neighbourhood

Rationale

There is increasing recognition that the social ecology and structure of neighbourhood environment matters for children's health and wellbeing (Roux, 2007). Neighbourhoods possess a range of social and physical characteristics which are likely to be important for child outcomes such as the perceived safety of the neighbourhood. Neighbourhood context has been linked to a variety of child outcomes, including birth-weight, behavioural problems, risk for injury and child maltreatment.

Measure

Question L1 asks the respondent how long they have lived in the area and questions L2a - L2m asked about the extent to which the respondents agreed with a series of statements about



their local area. These included items such as ‘this is a safe neighbourhood’; ‘there is access to basic shopping facilities’; ‘it is safe for kids to play outside during the day’; and ‘you are well informed about local affairs’. They were answered on a four-point Likert scale ranging from strongly agree through strongly disagree. These questions were supplemented with four further questions (L4) asking about how common the following were in the local neighbourhood: ‘rubbish and litter lying about’, ‘homes and gardens in bad condition’, ‘vandalism and deliberate damage to property’, and ‘people being drunk or taking drugs in public’. With the potential to link to other sources of administrative data about the neighbourhood environs such as the Small Area of Population Statistics (SAPS), the empirical value of the data may be enhanced.

Respondents were also asked about participation in any ongoing community service activity with a simple yes/no response option, and also how they felt about the neighbourhood as a place for bringing up children (L6). Specific items at L5 asked about neighbourhood cohesion and how often people do favours for each other, share information on schools and activities, and visit each other’s houses.

L7: Urban/rural situation of household

Rationale

Some studies carried out in Ireland suggest that the relationship between pupil achievement and socioeconomic factors differs in urban and rural areas. For example, relationships between socioeconomic variables (e.g., unemployment, medical card possession, residence in Local Authority housing, lone-parenthood), have been found to be weaker in rural than in urban schools (Weir, 1999). A stronger relationship between pupil achievement and home background factors was also found in urban than in rural areas. Findings from the National Educational Welfare Board (NEWB) statistics (2005) also showed that 14.9% of the primary school children in urban schools were absent from school for 20 days or more, compared with 7.8 per cent of the primary school children in rural schools.

Measure

The respondent was asked to describe the place where the household was situated, with a range of answer options to delineate whether the household was in an urban or rural area. This will allow for comparisons on issues such as those discussed above as well as a wide range of other issues.

4.3 SECONDARY CAREGIVER QUESTIONNAIRE

The Secondary Caregiver Questionnaire was administered to the resident spouse/partner of the Primary Caregiver. The Secondary Caregiver was usually the male parental figure in the household (generally, though not exclusively, the father of the Study Child).



The Secondary Caregiver Questionnaire contained a subset of items from the Primary Caregiver Questionnaire, so cross-referencing is used below to refer the reader to the relevant sections of the Primary Caregiver questionnaire (all of which were discussed in detail in Section 4.1 above. The Secondary Caregiver questionnaire is enclosed in Appendix B.

4.3.1 SECTION A – INTRODUCTION

X1 – Respondent’s date of birth

A1: Relationship of respondent to the Study Child

This question was only asked of new respondents or those who did not complete the Secondary Caregiver interview at Wave 1 or 2.

4.3.2 SECTION B – PARENT-CHILD RELATIONSHIPS

B1: Quality of the Parent-child relationship (Child Parent Relationship Scale – Short Form, Pianta, 1992)

See Section 4.1.2, Question B7.

B2: Parental discipline practices

See Section 4.1.2, Question B8.

4.3.3 SECTION C – CHILD’S PHYSICAL HEALTH AND DEVELOPMENT

C1: Child’s general health status

See Section 4.1.3, Question C1.

4.3.4 SECTION D – PARENTAL HEALTH

D1: Current health status of respondent

See Section 4.1.4, Question D1.

D2 – D5: Chronic physical or mental health problems, illness or disability – including nature, duration and constraints of current problem(s).

See Section 4.1.4, Questions D2-D5.

D6: Parent’s physical activity

See Section 4.1.4, Questions D11.

D7 – D8: Parent’s perception of their own weight and frequency of dieting

See Section 4.1.4, Questions D7-D8.



4.3.5 SECTION E – CHILD'S PLAY AND ACTIVITIES

E1: Child's temperament

See Section 4.1.5, Question E2.

E2: Parent's role in fostering home learning

See Section 4.1.5, Question E3a.

4.3.6 SECTION H – PARENTING AND FAMILY CONTEXT

H1 – H2: Parenting style (GUIA Parenting Measure).

See Section 4.1.8 – Questions H2 – H3.

C3: Parental Work-Life Balance

See Section 4.1.8 – Question H4.

4.3.7 SECTION J – SOCIO-DEMOGRAPHICS

J1 – J19: Principal Economic Status and related variables

See Section 4.1.9 – questions J7 – J24.

4.3.8 SECTION K – ABOUT YOU

K1a – d: Parental Education Level

See Section 4.1.10, Questions K1a-d.

K2 – K5: Parental Literacy and Numeracy

See Section 4.1.10, Questions K2 – K5.

K6 – E13: Basic Demographic details

See Section 4.1.10, Questions K8 – K15.

4.3.9 SECTION L – NEIGHBOURHOOD/ COMMUNITY

L1: Participation in community service activity

See Section 4.1.11, Question L3.

L2: Perception of neighbourhood as a place for bringing up children

See Section 4.1.11, Question L6.

4.4 PRIMARY/SECONDARY CAREGIVER SENSITIVE QUESTIONNAIRE

A common “sensitive” questionnaire was completed by both the Primary and Secondary Caregivers in the home. The questions in the supplementary section were considered to be



more sensitive than those in the main questionnaire and were included in a separate module for the respondent to self-complete on a computer-assisted self-interviewing (CASI) basis. The sensitive questionnaires completed by the Primary and Secondary Caregivers were identical, with the exception of items AS1 – AS3. These questions dealt with the reasons for departures from the household since the time of their previous interview. These questions were asked only of the Primary Caregiver, as it was s/he who provided the information on the household composition (including arrivals and departures in previous interview). The content of the questionnaires, their rationale and the measures used are detailed below. The Primary Caregiver Sensitive Questionnaire and Secondary Caregiver Sensitive Questionnaire are listed as Appendix B.

AS1 – AS3: Household Transitions

This set of questions was designed to capture information relating to transitions into and out of the household since the interview at Wave 2, when the Study Child was 3 years of age. If the respondent indicated on the household grid that a member of the household at Wave 2 was no longer resident at Wave 3, questions AS1-AS3 recorded details on the reasons for and timing of the departure from the household.

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

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

S12 – S16: Current and previous marital status

Rationale

Research has repeatedly highlighted the link between family structure, changes in structure, and child outcomes. However, relatively little work to date has investigated the home life of divorced families. Children from divorced families often face a variety of personal and familial challenges (Amato, 2004), added to which divorce has been linked to with many negative outcomes such as a poor self-concept and poor academic achievement (Amato, 2001). Other work has found a link between parental separation and a significant increase in emotional/behavioural problems for the child even when demographic and other variables, such as marital quality, maternal depression, and socioeconomic circumstances were accounted for (Cheng, Dunn & Golding, 2006).

Furthermore, where a parent has re-partnered, research shows that educational outcomes for both types of children in blended families, i.e., stepchildren and half-siblings, are similar to each other and substantially worse than outcomes for children reared in traditional nuclear families (Ginther & Pollak, 2004). The number of family transitions experienced by a child over time has been posited as a reason for poor outcomes. Ginther and Pollak (2004) refute this,



highlighting that biological children in stable blended families grew up with both biological parents and experienced no family structure transitions, yet their educational outcomes are similar to those experienced by stepchildren and by children in single parent families, and much worse than those experienced by children in traditional nuclear families.

Data from the current study will enable us to explore factors related to family structure, (including changes in structure and age at change), as well as links with others, such as family resources, parenting stress, as possible mediators of adjustment (Bernardini & Jenkins, 2002).

Measure

Questions S12-S16 recorded details on current/previous marital status of parent(s).

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

Rationale

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 impacting the child's wellbeing, but also that of the parents, as it is 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 4-item form of the Dyadic Adjustment Scale (DAS-4) (c.f. Sabourin, Valois & Lussier, 2005). It provides an assessment of dyadic satisfaction based on participants' self-report, such as how well they think things are going between themselves and their partner, and is used as a means of categorising marriages as either distressed or adjusted. It has also been shown to discriminate between couples in the community and those seeking marital therapy services. 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 maintaining good psychometric properties (Sabourin et al, 2005). A version of the Dyadic Adjustment Scale has been used in all previous rounds of *Growing Up in Ireland*.

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

Rationale

Parenting stress is associated with negative parenting attitudes, negative parenting behaviours, and parental well-being (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 & Erikson, 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 is associated with a range of adverse child outcomes including insecure attachment and behavioural problems (Crnic & Low, 2002).

Measure

The Parental Stress Scale (Berry and Jones, 1995) is an 18-item self-report scale which is designed to assess both positive and negative aspects of parenthood. It comprises four subscales: 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.

Berry and Jones (1995) report reliability and validity data for a sample of 1,276 parents of both typically developing children and those with developmental and behavioural problems. The Parental Stress Scale demonstrated satisfactory levels of internal reliability (0.83), and test-retest reliability (0.81). It also demonstrated satisfactory convergent validity with various measures of stress, emotion, and role satisfaction, including perceived stress, work/family stress, loneliness, anxiety, guilt, marital satisfaction, marital commitment, job satisfaction, and social support.

Due to time pressures in *Growing Up in Ireland*, only the six-item Parental Stressors sub-scale (question S21) and the three-item Parental Satisfaction sub-scale (question S21) were used in Wave 3 of the study (as was the case in first two waves). These two subscales in particular were chosen as they provide details on core aspects of both positive and negative aspects of parenthood.

S22: Parental Self-Efficacy

Rationale

Parenting self-efficacy can be broadly defined as an individual's estimation of their own competence in the parenting role and encompasses both level of knowledge about child-rearing tasks and the degree of confidence in one's ability to perform these tasks (Coleman & Karraker, 2003). Recent research suggests that parenting efficacy may mediate the effects of several parent and child variables on the quality of parenting (Jones & Prinz, 2005). For example, high parenting efficacy has been associated with more responsive caregiving practices, while low levels of efficacy are associated with more dysfunctional types of parenting (Morawska, Winter & Sanders, 2009). However, longitudinal studies are required to determine whether parenting efficacy is causally related to outcome measures, and whether child characteristics attenuate parenting efficacy (Jones & Prinz, 2005).



Measure

A one-item question (S22), which was used at Wave 2 and worked well, was used again at Wave 3. The question asked parents to rate how good they felt they were as a parent on a five-point scale ranging from not very good at being a parent to a very good parent.

S24 – S25c: Respondent’s weekly alcohol consumption

Rationale

Consumption of alcohol is common in Ireland and is integrated into the culture through wide acceptance from an early age. The legality of alcohol makes it readily available, and there is now recognition that a certain proportion of the population consumes quantities considered harmful to their health. Heavy drinking, however, does not necessarily mean that alcohol abuse or alcoholism is present, but those who binge drink are at a higher risk for alcohol-related disorders than those who do not binge drink (National Center for Health Statistics, 2001). Furthermore, heavy drinking usually results in intoxication, which can lead to an array of problematic outcomes, including, among others, traffic injuries, domestic violence, and self-injury. When the heavy drinker is a parent, these problems become more pertinent because children are unable to protect themselves from the direct or indirect consequences of parental drinking (Klingemann, 2001).

Measure

Questions S24 to S25d measured the frequency and quantity of consumption of wine, beer, spirits and alcopops in “an average week”. Self-reports of drinking quantity and frequency have shown good concordance with other methods (e.g. timeline follow back procedures) (e.g., Gruenewald and Johnson, 2006), while test-retest reliabilities for wine, beer and spirit consumption ranged from 0.59 to 0.99 one year after initial assessment.

S26: Hazardous Drinking

Rationale

A considerable amount of research has examined the relationship between parental alcohol misuse and children’s development, much of which is summarised in a review of the literature (Burke, Schmied, & Montrose, 2006). While studies tend to document 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. In addition, 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. This issue is of particular interest in the Irish context because Ireland has a relatively high per capita intake of alcohol compared to other EU countries (OECD, 2012).



Measure (FAST Alcohol Screening Test)

The FAST alcohol screening test (Hodgson, Alwyn, Hodgson et al, 2002) was developed in the UK as a short screening tool for alcohol misuse. This measure was also used at Wave 2 of the study and is described in detail in Instrumentation and Procedures for the Infant Cohort at Wave 2 (3 years).

S27- S29: Parental smoking habits and Study Child's exposure to Environmental Tobacco Smoke (ETS)

Rationale

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, and there are also implications for modelling effects as the child gets older.

Measure

Questions S27 to S29 asked about current smoking and daily habits, as well as how many people smoke in the house. This question was designed as a broad crude measure to gauge the child's exposure to ETS. These questions were also used at the second wave when the child was 3 years.

S30: Parental drug use

Rationale

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

Measure

S30 was a brief one-item question which asked whether the respondent had taken any illicit drugs such as cannabis, marijuana, ecstasy, speed, heroin, methadone, crack or cocaine with response categories ranging from 'yes, regularly' through 'yes, occasionally' to 'no, not at all'.

S31 - S33 Parental Depression

Rationale

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 with, 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). Even when a parent shows signs of clinical depression, the family may display healthy functioning to the extent that family members compensate for the diminished capacities of the ill individual, for example, by shifting roles and responsibilities as developmentally and pragmatically feasible; by facilitating the individual's access to appropriate mental health services; and/or by infusing the family with additional support (e.g., have grandmother come for a visit) in order to provide affective and pragmatic assistance. This may serve to interrupt the negative consequences of maternal depression for early childhood outcomes (Dickstein, 2006).

Measure (Centre for Epidemiological Studies Depression Scale, CESD-8)

In addition to questions S31-S32 which ask 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 (8-item) (CESD-8) which is a short self-report screening instrument for depression in the general population. This measure has been used at all previous waves of the *Growing Up in Ireland*.

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 categorized according to the recommended criterion for depression, with composite scores of seven or more classified as depressed and scores less than seven as not depressed. However, 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. In a general population, about 20 per cent would be expected to score in this range.

The CES-D has good internal reliability consistency ($\alpha = 0.86$) and the scale correlates 0.93 with the original 20-item version of the instrument (Melchior, Huba, Brown & Reback, 1993). 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).

S34 – S35: Parental contact with the Criminal Justice System

Rationale

Findings from the Head Start programme in the US have found that 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 were also likely to score lower on assessed vocabulary. 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. While the overriding problem in some households may be extreme poverty, for others there may be a multitude of problems (Phillips & Gleeson, 2007), all of which need to be considered within the boundaries of the current study.

Measure

Questions S34 to S35 asked whether parents had been in trouble with the Gardaí (the Irish police service) and if they had ever been to prison.

S36 – S37: Sharing domestic tasks and child-rearing duties

Rationale

While much of the research on gender inequality focuses on paid work, some research has highlighted that the distribution of unpaid work in Ireland is also very different for men and women. McGinnity and Russell (2008) distinguish between physical care/supervision on one hand and social care/play (which also includes talk and homework) on the other. While women spend more time than men in both kinds of childcare, a bigger fraction of the time men spend with children is taken up with social care/playing. The bulk of the physical care/supervision is carried out by women. In terms of housework, women spend a far greater amount of time on housework than men. There are also differences by type of task, with women doing the bulk of core domestic tasks like cleaning, cooking and shopping, while men do more of the home maintenance and gardening. These findings are consistent with the results of other international studies (McGinnity and Russell, 2008).

Measure

Two questions were asked about fairness of division of labour within the household (where there was a spouse or partner), and asked whether they thought they did their fair share of the domestic tasks (e.g., housework, home maintenance, shopping and cooking), while the second question asked about child-rearing tasks (both physical and emotional care). There were five answer categories for these questions ranging from: I do much less than my fair share to I do much more than my fair share.

S38 – S58: Non-Resident Parent Information (S36-S47)

Rationale

Research has shown that the inter-personal climate between the Primary Caregiver and the non-resident parent post-separation has important implications for children's health and



wellbeing (Amato & Gilbreth, 1999; Dunn, 2004, Wilson, 2006). Justification for asking the Primary Caregiver these questions is to enable comparisons in the information provided by both parents and to ensure that the information is obtained from at least one source in those instances where contact details are not available for, or it is not possible to contact, a non-resident parent.

Measure

This series of questions was asked only of those respondents who indicated that the child's biological father/mother was not resident in the household. Given somewhat poor response rates⁴¹ to non-resident parent questionnaires at 9 months and 3 years of age, further questions were added to this section at Wave 3, to enhance the amount of information on families with a non-resident parent. These questions addressed issues such as frequency of contact with non-resident parent. At age 3 details on frequency of contact with their parent were recorded, while at age 5 this was split into 2 questions asking how often they have face-to-face contact (S46a) and how often they have other contact (S46b). Questions S47-S49 asked how often the child stayed over with their non-resident parent, and, if so, whether there were any adjustment problems moving from one parent to another, either when they were leaving to spend time with him/her or returning from a visit. S54 taps into the level of involvement the Primary Caregiver believes is appropriate from the other parent in terms of thinking they should be a lot more involved to much less involved. Question S55 asked about additional things that the other biological parent may do for their child, including buy clothes, toys or presents for child, or pay for child's medical or dental bills, health insurance or medicines, and whether they do these things often, sometimes, rarely, or never. Finally, details were also recorded on whether the non-resident parent had any other children currently living with them, and how many were full brothers/sisters of the study child, half-brothers/sisters of the study child and other children (not related to the study child).

4.5 NON-RESIDENT PARENT QUESTIONNAIRE

At 5 years of age, where the Study Child has a non-resident biological parent, the Study Team sought to have this parent complete a questionnaire focused on their relationship with the child. Approximately 12% of Study Children (nearly 1,100) had a non-resident biological parent. In 361 cases (34%), the Primary Caregiver was willing and able to provide contact details for the non-resident parent, a roughly similar proportion to those responding when the Study Child was 9 months and 3 years of age. The response rate among the non-resident parents was disappointing, however. Responses were received from only 63 non-resident

⁴¹ Response rates were in the order of 40 per cent of non-resident parents.



parents (18% of those contacted or 6% of the potential pool of non-resident parents). Unfortunately, this low response rate severely limits the usefulness of these data.

A summary of the questions asked in this questionnaire can be found below. The questions repeat those asked at 3 years of age and the rationale for the items is detailed there. Given the small sample size at age 5, the rationale will not be repeated here. Instead, the reader is referred to the design and instrumentation report for that wave of the study (McCrary et al., 2013).

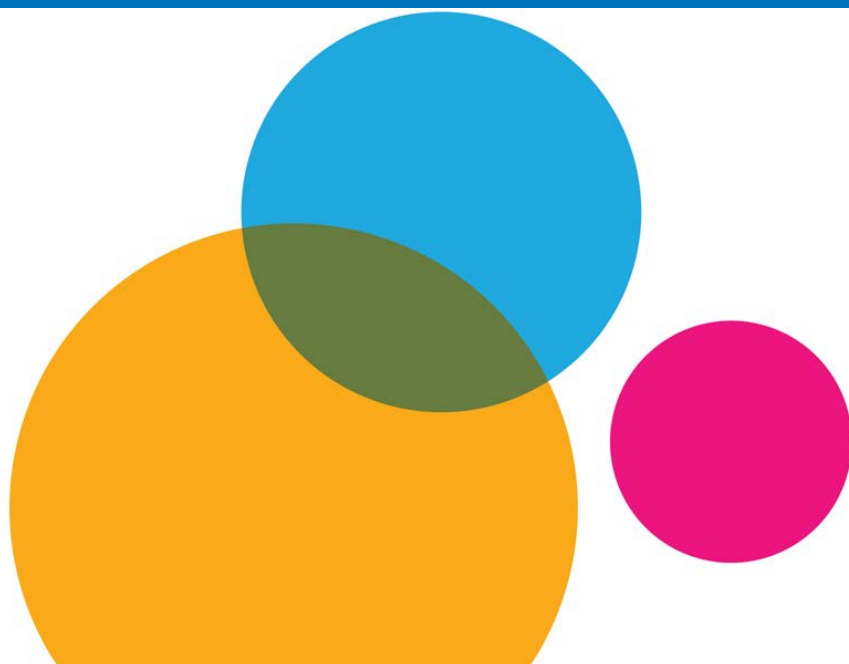
- Q1 – Q8: Contact with the Study Child
- Q9: Perception of Parental Role
- Q10: Rating of Quality of Time Spent with the Study Child
- Q11: Non-Resident Parent's Performance of Routine Caring Tasks
- Q12 – Q16: Amount of Financial and Other Support Provided to the Study Child
- Q17: Status of Relationship with Study Child's Mother / Father at Pregnancy
- Q18: Age of Study Child at Time of Parental Separation
- Q19: Non-resident Parent's Name on Birth Certificate (asked of non-resident fathers only)
- Q20 – 21: Application for Guardianship Status (asked of non-resident fathers only)
- Q22 – 24: Quality of the Relationship with the Primary Caregiver
- Q25: Desire for Future Involvement
- Q26: Indicators of Taking Delight in Child
- Q27 – 28: Socio-demographic characteristics of the non-resident parent.





Chapter 5

DIRECT ASSESSMENT OF THE CHILD





5. DIRECT ASSESSMENT OF THE CHILD

5.1 INTRODUCTION

Children's cognitive abilities in early life have been shown to be a good indicator of their later educational development (Feinstein, 2003). Although research suggests that cognitive ability is one of the most heritable of traits (Plomin, DeFries, McClearn & Rutter, 1997), longitudinal studies like *Growing Up in Ireland* facilitate an exploration of how cognitive abilities develop over time and how they affect, and are affected by, other factors that influence children's opportunities and outcomes.

At 5 years old, children have not yet taken part in any national tests of cognitive ability in school or preschool. In the absence of such test results, a direct measure of cognitive ability administered during the course of the study was deemed to be the best way to obtain an objective and standardised measurement of this important area of children's development.

Although a number of instruments for measuring cognitive ability in children exist (see Lichtenberg, 2005 for a review), the challenge faced by the Study Team at Wave 2 (when the children were age 3) was to find an instrument which possessed strong measurement properties and could be adapted for use in a large social research survey such as *Growing Up in Ireland*. After consultation and piloting, it was decided to use the British Ability Scales with the Infant Cohort at 3 years of age. This was continued with the 5-year-olds for longitudinal consistency.

5.2 THE BRITISH ABILITY SCALES

5.2.1 THE NATURE OF THE TEST AND SUBSCALES USED

The BAS is organised into two batteries: an Early Years Battery which can be used with children aged 2 years and 6 months to 5 years and 11 months of age, and a School Aged Battery covering the ages 6 to 17 years and 11 months of age. The former was used in the current study.

Given the time constraints under which the study team was operating (90 minutes contact time in the home), it was not feasible to administer the full Early Years Battery. Instead, the study team chose two of the core scales (Naming Vocabulary and Picture Similarities) to derive a measure of children's verbal and non-verbal ability – suitable for children at ages three and five years old.

The Naming Vocabulary test serves as a measure of children's expressive English language vocabulary. It consists of 36 items ordered in terms of increasing difficulty and children are required to name the item displayed from a picture book. The Picture Similarities test comprises 33 items and measures children's reasoning capacity and problem-solving skills. In



this test, children are given a picture card and are required to choose from four stimulus alternatives, the element or concept which they share (e.g. they are both cuddly toys, they both fly etc.).

The British Ability Scales (BAS) was ultimately selected for use with the 3-year-olds in the Infant Cohort for a number of reasons. It facilitates direct participation by the Study Child him/herself. It provides different subscales, thus allowing the researcher to choose which to administer, thus reducing respondent burden on the child. It is also used in studies such as Growing Up in Scotland and the Millennium Cohort Study, thus allowing an international comparison of how children in Ireland are faring and developing compared with their counterparts abroad. The scale can be used with children up to 17 years and 11 months. This is very important in a longitudinal study like *Growing Up in Ireland*.

The experience of fieldwork with the 3-year-olds (as well as the pilot work undertaken with the 5-year-olds)⁴² established the feasibility of the test being administered by general purpose social science interviewers, largely with the assistance of a CAPI program which was developed to implement the complex decision rules determining which items should be presented to the child, based on their response patterns of prior questions in the test. The CAPI program also helped to standardise the administration of tests in terms of prompting the interviewer when teaching is required and when they should query an answer.

5.2.2 PSYCHOMETRIC INFORMATION

Reliability

Standardisation for children aged 5 was carried out on 124 children.⁴³ Elliot et al (1997) report co-efficient alphas of 0.65 for the Naming Vocabulary test for children aged 5:0 – 5:11. The corresponding alpha for the Picture Similarities test is 0.81. The test constructors do not report test-retest reliability estimates for the BAS Early Year scales. However, test-retest correlations for the American version of the BAS (the DAS) are estimated at 0.89 for the Naming Vocabulary and 0.63 for the Picture Similarities test for the age band 5:0 – 6:3 years of age.

Validity

Elliot et al (1997) report that the BAS composite verbal, non-verbal and GCA scores are substantially correlated with the verbal, performance and full-scale IQ scores on both the WPPSI-R and the WISC. The Naming Vocabulary and Picture Similarities subtests of the BAS

⁴² See Thornton and Williams, 2016.

⁴³ The reader should note that the analysis provided here from the pilot survey at 5 years is based on a larger sample (albeit still relatively small) than the norming sample used by the test developers.



correlated 0.68 and 0.47 with the verbal and performance IQ components of the WPPSI-R respectively.

5.3 ANTHROPOMETRIC MEASUREMENT

Height and weight have long served as leading indicators of children's physical health and development, and it is becoming increasingly apparent that the period from infancy through early childhood is a critical one for growth and development (Cameron, 2007). An emerging body of research suggests that early growth patterns may have implications for health and development over the life-course (Singhal, Fewtrell, Cole et al, 2003).

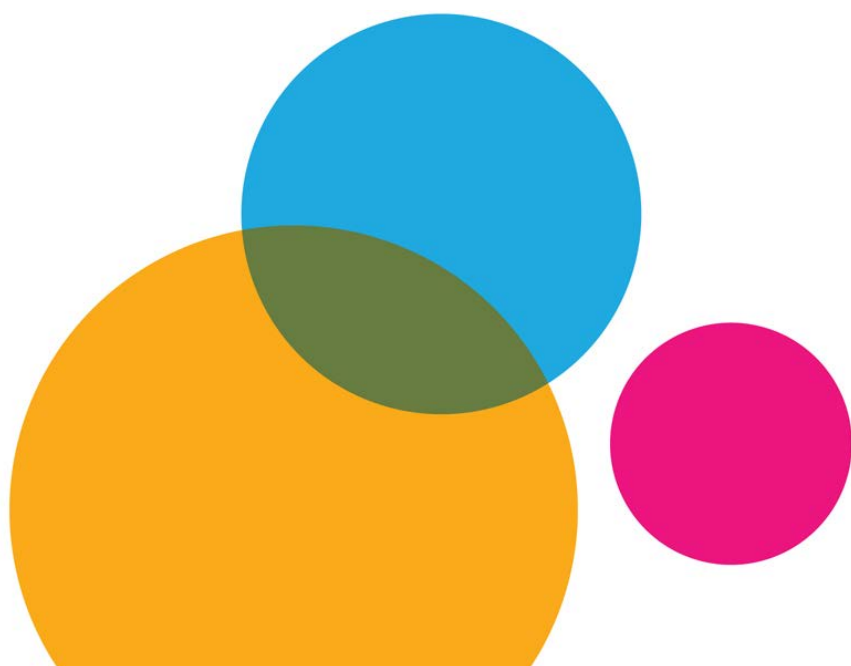
Data captured at 5 years of age can be compared to data collected at Waves 1 and 2 and allow for modelling of growth trajectories and how these are affected by a range of other variables including breastfeeding, child health status, parental height and weight, diet and social characteristics.

Children's height was measured by trained interviewers using a Leicester portable height stick and a SECA 761 flat mechanical weighing scales.



Chapter 6

PROCEDURES & QUESTIONNAIRES USED IN THE SCHOOL





6. PROCEDURES & QUESTIONNAIRES USED IN THE SCHOOL

6.1 INTRODUCTION

Starting formal primary school is a key transition for children. Although the family still remains the critical influence on their lives, the transition to school represents a major change in their microsystem (in Bronfenbrenner's bio-ecological view of the world).⁴⁴ It brings a huge range of new experiences and people to their lives, not least their peers and, of course, their teacher. This key period in the children's lives is critical for their cognitive, social and socio-emotional development, as well as subsequent success in the education system.

The importance of the period for the child's long-term development made it essential to record as much information as possible on their transition to school and to record it not only from the perspective of their main caregivers in the home but also from their teacher and school principal – both of whom begin to assume an important role in their lives from this time. Accordingly, the study design involved completion of three types of questionnaires in the Study Child's school:

- the Principal Questionnaire – this recorded details on the characteristics of the school Principal him/herself and the resources, management, practices and ethos of the school attended by the Study Child
- the 'teacher-on-self' questionnaire – this recorded details on the Study Child's teacher and his/her teaching style and methods
- the 'teacher-on-pupil' questionnaire – this recorded details from the Study Child's teacher on the Study Child, including information on their social and academic integration and performance in the early transition period.

This chapter focuses on the school-based component of the fieldwork with the Infant Cohort at five years of age. The procedures used in the schools around recruitment, completion and return of the questionnaires are considered. This is followed by a detailed discussion of the questionnaires and their content.

6.2 SCHOOL RECRUITMENT AND SURVEY IMPLEMENTATION

Two of the most important issues to be clarified in the course of the household interview were whether or not the Study Child had started Primary School in September 2012 or was

⁴⁴ See Chapter 1 and also Greene et al., 2010 for a consideration of Bronfenbrenner's bio-ecological model and its role as an underlying conceptual framework for *Growing Up in Ireland*.



intending to start in September 2013⁴⁵, as well as the name of the school in question. Signed consent was secured from the Primary Caregiver to approach the Study Child's teacher, with a view to asking him/her to complete a detailed questionnaire about the child's engagement and performance in school.

The school-based component of the five year sweep adopted a multi-mode methodology based, in the first instance, on a postal approach to the school; in the second, on intensive telephone follow-up and in the third, on a personal visit to the school by a survey interviewer.

School-based fieldwork began with a postal phase in September 2013 when school Principals were sent an introductory letter and information leaflet about the study, along with a poster for display in the Staff Room. The purpose of this initial contact was to inform the school that the study was taking place and that the Study Team would be contacting it again immediately after the Halloween mid-term break (first week in November 2013) to begin the process of completing the questionnaires. The purpose of the initial contact was to raise the profile of the study within the schools which had a *Growing Up in Ireland* Study Child and to begin the recruitment process. The Information Leaflet and poster briefly summarised the objectives of this phase of the study and outlined the three different types of questionnaires (Principal; Teacher-on-Self and Teacher-on-Pupil) which the school would be requested to complete. It was decided to wait until early November to ask Principals and Teachers to complete the questionnaires to allow the pupils to settle into the new school year and to give the teachers maximum opportunity to get to know the pupils as fully as possible before completing the detailed teacher-on-pupil questionnaire.

Following the introductory letter, information leaflet and poster sent in the post to the schools in September, a further letter containing the information leaflet was forwarded to the schools in the first week of November. This later letter included more detailed information on the following items:

1. Information leaflet for Principals and Teachers
2. A list of the children in the school who were included in *Growing Up in Ireland*
3. The Principal questionnaire
4. The Teacher-on-Self questionnaire
5. The Teacher-on-Pupil questionnaires.

⁴⁵ In general, September is the only point of intake in each academic year.



The postal approach in November was followed within 3-4 days by the start of an intensive telephone follow-up phase, carried out by survey interviewers. This verified that the material was received in the post and that the school was willing to participate in this phase of the study. The interviewers explained what was involved in the process, going through all of the procedures and questionnaires on the phone with the Principal. The interviewer also explained that the list of Study Children who were identified in the course of the home-based interview as attending the school would be sent to the Principal in the post and that this would be followed by a phone call to ensure it was successfully delivered.⁴⁶ Co-operation by the schools was very high, with all questionnaires completed by almost 95 per cent of those schools which had *Growing Up in Ireland* children.

When the Principal was recruited into the Study, the list of *Growing Up in Ireland* study children who were attending that school was then issued in the post. All questionnaires (Principal and Teacher questionnaires) were sent to the Principal, who distributed them to relevant teachers of Study Children for completion. The Principal was requested to ask each teacher to complete the Teacher-on-Self and Teacher-on-Pupil questionnaires, to seal them in an envelope provided by the Study Team and to return the sealed envelopes to the Principal for postal return to the Study Team.

Following the mailing of the questionnaires to the schools, repeated phone call-backs were made over a period of 6-8 weeks to remind and encourage schools and their teachers to complete and return them, or to secure a definitive outcome on non-completions. In some instances, some of the questionnaires from a school or teacher were completed and returned to the Study Team, others were not. Part of the follow-up process involved ensuring that the non-completions were not inadvertent oversights so that a definitive outcome code could be assigned to each type of questionnaire in respect of each Study Child. Following six weeks of the intensive phone follow-up phase, an interviewer was assigned to schools in which there were outstanding questionnaires. This phase of school-based fieldwork continued from January-April 2014, with a response rate of approximately 92 per cent of children.

⁴⁶ All correspondence in the school phase which included named children was by registered post.



6.2.1 ENDORSEMENT FROM TEACHER'S UNION AND PRINCIPAL'S REPRESENTATIVE BODY

The Study Team secured endorsement and support for this phase of the project from both the Irish National Teacher's Organisation (INTO) and the Irish Primary Principals' Network (IPPN) for this phase of the study (as had been done at the 9-year phase of the study).⁴⁷

6.3 THE PRINCIPAL'S QUESTIONNAIRE

Glewwe, Hanushek, Humpage, Renato and Ravina (2011)⁴⁸ provide a review of studies published between 1990 and 2010 on school and teacher characteristics which are associated with positive educational outcomes for children. The information recorded in the school-based questionnaires - starting with the Principal's - provide the information necessary to allow analysts to investigate how child outcomes are related to school and teacher characteristics from the child's first experience in a formal school setting.

As noted above, the Principal's Questionnaire recorded details on the characteristics of the school Principal him/herself and the resources, management, practices and ethos of the school attended by the Study Child. In addition to capturing basic information on the characteristics of the Principal and the school (such as the number of pupils and number of staff), the questionnaire also recorded details on a variety of important school-level characteristics 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 is of value in exploring comparisons of educational outcomes between schools.

Q1 – Q3: Personal information – These items captured basic descriptive information about the principal such as age, gender, the number of years he/she has been principal at the current school, and the number of years as principal in other primary schools.

Q4 – Q8: School size and staffing resources – The questions on staffing resources included the DEIS status of the school, the number of teaching and administrative staff employed in the school on a full-time and a part-time basis, and whether the school had additional learning supports such as resource teachers and special needs assistants.

Q9 – Q12: Classroom provision – This included information on the number of permanent and temporary classrooms in the school, the number of classes across all year groups, and the

⁴⁷ As noted in Chapter Two of this report, the response rate at the school level was very high, of the order of 98 per cent. The Study Team would like to express its appreciation to the Principals, Teachers and other school staff involved for their extremely positive response to the project and for undertaking the substantial work involved in completing the various questionnaires.

⁴⁸ <http://www.nber.org/papers/w17554>



number of children the school was designed to accommodate. There is continuing dispute in the literature concerning the impact of educational inputs (such as staffing levels and class size) to educational outcomes at the school level. While 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.

Q13: Year in which school was built and also year most recently refurbished.

Q14 – Q15: Adequacy of school facilities and resources – These questions, largely adapted from the Early Childhood Longitudinal Study (ECLS), were designed to assess the adequacy of the school's facilities and resources across 17 areas (e.g. number of teachers, number of classrooms) with responses indicated on a four-point Likert scale ranging from poor to excellent. Seven of the original ECLS items were retained, and supplemented with 10 additional items provided by the education panel of experts. There is evidence summarised in Schneider (2002) that student achievement is correlated with better school facilities, such as newer school buildings and more modern libraries.

Q16: Free school meal provision – This question related to whether the school provides a breakfast club or free meals at lunchtime. This is frequently used as a proxy for disadvantage.

Q17 – Q20: Computer resources in the school – Details collected included the total number of computers available in the school, the number of these that can be used by the pupils, and whether there is a dedicated computer room in the school. The issue of whether the provision of computers in a school has any positive effects on school-level educational attainment, independent of other socio-economic covariates, is under-researched and warrants further investigation.

Q21: School-community relationships – This is a question on whether the school buildings and facilities were open to the local community outside of school hours.

Q22 – Q23: Ethos of the school – This question measured the importance of different activities (e.g. Irish language and culture, sports) to the prevailing ethos of the school and was designed to explore variation across different types of school and by gender.

Q24: Classroom composition – This question recorded information in respect of the number of children who were foreign nationals or were from Traveller families, 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 influence pupil progress and achievement (Rutter & Maughan, 2002).



Q25 – Q26: School attendance levels – The school returns these figures to the Department of Education and Skills on an annual basis. They consist of the average daily attendance for the school year, and the proportion of pupils who missed 20 days or more. Research points to the strong link between attendance and educational outcomes (Lamdin, 1996). Studies have found that schools with higher rates of daily attendance tend to out-perform schools with lower attendance on achievement tests (Roby, 2004).

Q27: School catchment area – This question asked about the proportion of students who lived within a 20-minute walk from the school. The extent to which students are drawn from a local catchment area gives an indication of the accuracy of using the District Electoral Division for small-area population analyses.

Q28 – Q29: Emotional/behavioural problems and school supports – Question 28 concerned the level of interpersonal supports in the school for children with emotional/behavioural problems and the extent to which a whole-school approach was adopted. Question 29, previously used by the ESRI, recorded details on the proportion of students who had such literacy, numeracy or behavioural problems as to adversely impact on their educational development. A higher prevalence within the school of children with these types of problems may indicate a challenging teaching and learning environment.

Q30 – Q33: Admission and streaming criteria – This set of questions was designed to assess the degree to which the school was selective in its admission criteria. The increasing pressure on school places in large urban areas has prompted interest in the extent to which there is selection in the primary school sector, and whether this is differentially related to educational outcomes at the school level.

Q34 – Q35: Engagement with parents – information was collected on whether the school holds a formal parent-teacher meeting at least once a year and the proportion of parents in attendance. Parental involvement is often considered a measure of school climate (Ma, 1999) and high parental involvement is considered a correlate of school effectiveness (Marzano, 2002).

Q36 – Q37: Pupil engagement with school – these questions are related to how much pupils: enjoy being at school; are well behaved; and show respect for peers and teachers. A wealth of international literature highlights the association of school engagement with a range of social, behavioural, and academic outcomes (Fredericks, Blumenfeld, & Paris, 2004; Jimerson, Campos & Greif, 2003).

Q37–Q39: Disciplinary policy in the school – Question 38, adapted from the British Cohort Study (1970), asks about the frequency with which various forms of discipline were applied in the school. Question 39 asks whether the school had a formal policy on discipline. Question



39 asks to what extent teachers, parents and pupils were involved in developing the policy. Previous research in Ireland with secondary-level students has shown that a strict but fair and consistent disciplinary policy is associated with better school results and higher levels of pupil retention. More effective schools have been found to involve parents early in the disciplinary process and to adopt a whole-school approach to it (Smyth, 1999). Moreover, 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).

Q40: Bullying in the school – these items ask the principal to what extent bullying was a problem in the school and whether the school had an explicit anti-bullying policy, or a written policy on bullying. School bullying has become a topic of public concern and considerable research in various countries around the world in the last two decades (Smith & Ananiadou, 2003). Research indicates that schools which employ a formal anti-bullying strategy tend to have lower rates of bullying (Fekkes, Piipers, & Verloove-Vanhorick, 2006).

Q41 – Q45: These questions asked about the scale of day-to-day problems and general environment in the school compares with other primary schools in the country. Question 44, adapted from the teacher schedule used in ‘Do Schools Differ’ (Smyth, 1999), concerned the principal’s general perception of teachers in the school. Q45 records the level of satisfaction which the Principal derives 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).

6.4 THE TEACHER-ON-SELF QUESTIONNAIRE

The effectiveness of teaching and the relationship between teacher characteristics and child educational outcomes and performance is variously reviewed in the literature including in, for example, Stronge, Ward and Grant (2011). The purpose of this questionnaire was to record background details on the teacher himself/herself, such as age, gender, qualifications, teaching methods adopted in class, etc. In addition, the proposed teacher-on-self questionnaire recorded information at classroom level on topics such as curriculum, teaching methods and class composition. This questionnaire was filled out on a self-completion basis by the teachers of the study children. It provided the information necessary to allow analysts to investigate how child outcomes are related to classroom-level features such as the socio-demographic and other characteristics of the teacher; the size and composition of the class; and the teacher’s classroom management and teaching style, controlling for other background characteristics at various levels – these latter including, for example, characteristics of the home, the neighbourhood or the school.



Q1 – Q5: Background characteristics of the teacher – recorded personal information on the teacher including gender, age, qualifications and continuing professional development.

Q6a – Q10: Basic characteristics of the class – these questions recorded information on the Study Child's school class, including size, year group and number of children with special needs. This information relates to the type of teaching challenges that the teacher may have had to deal with in the classroom and the level of support he/she received from special-needs assistants.

Q11: Subjects undertaken – details were recorded on the range of subjects undertaken by the pupils in the Study Child's class and the time spent on each subject in a week. This information is related to the breadth of the curriculum.

Q12 – Q15b: Teaching methods – teachers were asked to record details on his/her teaching methods, including aspects of interactive and passive teaching techniques such as play. Planning of teaching and the extent to which it is tailored to the needs of the pupils may be significant in pupil achievement.

Q16: Teacher control and input to decision-making in the classroom – This question recorded details about perceived control over various aspects of teaching, including selection of subjects and year group, teaching methods and discipline. Previous research in Ireland has found that greater teacher involvement in decision-making in the classroom leads to benefits in terms of satisfaction and student achievement (Smyth, McCoy & Darmody, 2004; Smyth, Byrne & Hannan, 2004).

Q17 – Q18: Teacher's perception of the characteristics of a child which indicated that s/he was ready for school and his/her perception of what was important in terms of preparing a child for school.

Q19: Teacher's perception of school – These items recorded details on the teacher's perception of how happy the school environment was for pupils and for the teacher himself/herself. The rationale was that school climate will be linked to educational performance. These questions were adapted from Smyth (1999) and the Early Childhood Longitudinal Study (2000). School organisation and ethos can make a difference to student attendance. Students appear to respond to positive interaction with teachers and to teacher expectations in terms of their attendance levels (McCoy, Darmody, Smyth & Dunne, 2007). The questions were used in the 9-year study.

Q20: Teacher's satisfaction with the amount of information s/he receives on the pupils coming into their class each year.



Q21 – Q22: Parental attendance at parent-teacher or school meetings – These items recorded details on the level of involvement of parents in the school and their interest in the child’s education. Little research has been done on parent involvement at primary school level. These questions complemented Question 11 in the teacher-on-pupil questionnaire (see Section 6.4). Pupil and parental involvement in schools in the UK has been associated with school effectiveness, particularly for schools in disadvantaged areas (National Commission on Education, 1996) and with higher performance and lower absenteeism (Mortimer et al, 1988).

Q23 – Q24: Teacher’s perception of the general environment in the school (in terms of how happy or otherwise teachers and pupils are) and (a) how stressed and (b) how satisfied teachers are in the school.

6.5 THE TEACHER-ON-CHILD QUESTIONNAIRE

The teacher-on-pupil questionnaire focused on the individual child, including his/her behaviour, and the teacher’s assessment of school preparedness, engagement and ability. Much of the information relates to how the child initially settled into school and so, in longitudinal terms, is extremely important in subsequent analysis of their educational and related outcomes. In addition, the teacher-on-child questionnaire provides an input which can often be compared with that provided by the Primary Caregiver on the settling in process and how well the child is doing in school – both socially and educationally. One of the many strengths of the design implemented in this phase of the study is this type of cross-situational measurement from both parent and teacher.

Q1 – Q4: Characteristics of the Study Child – Basic information was recorded on the child including gender, date of birth, school grade / year (Junior or Senior Infants) and how long the teacher had known the child. As the sample was split across grades, this latter information will be particularly important for analysis.

Q5: Attending school in an appropriate state – These questions recorded the frequency of the Study Child arriving at school in an appropriate state for school, including being adequately dressed for weather conditions, being hungry, lacking cleanliness, etc. Attending in an inappropriate state may be associated with misbehaviour, low achievement and performance, and may also be an indicator of neglect. This question has been adapted from the Early Childhood Longitudinal Study. A recent study of four Dublin primary schools designated with disadvantaged status found that almost one in five pupils (18%) said they were often “too hungry to do their work in school” (Downes, Maunsell & Ivers, 2006).

Q6: Achievement – This question is made up of 5 subscales each containing nine items. The subscales record details on:

- The child’s disposition and attitudes



- The child's language for communications and thinking
- The child's ability to link sounds and letters
- The child's reading ability
- The child's numeracy and ability with numbers.

This question was used in the Millennium Cohort Study, Age 5 survey. It is based on the Foundation Stage Profile in England (called the Developed Administration Teacher Survey in Wales, Scotland and Northern Ireland) which is a record of the child's achievement as reported by their teacher at the end of their first year in school. The data were collected by the Department of Education and Skills and were matched onto the MCS data. To reduce the response burden on the teachers in *Growing Up in Ireland*, only five subscales from the MCS question were used. Each subscale is made up of nine items with scores ranging from 1 to 9. If a child achieves a '9', this means that s/he is significantly above what is expected at this stage (see Hansen & Joshi, 2008)

Q7: This set of items recorded details on the child's abilities in a number of areas such as speaking and listening, reading, writing, science, maths and numeracy, physical education and art. The question was adapted from the MCS Age 7 survey - teacher questionnaire. These questions were asked of the teachers about the study child's ability and attainment. For *Growing Up in Ireland* the questions on "speaking and listening" and "reading" have been split into ability in English and Irish.

Q8: This question recorded details on within-class grouping on the basis of reading/literacy and also maths. If relevant, it records which group the child is placed in within the class.

Q9: Strengths and Difficulties Questionnaire (SDQ) – The SDQ was completed by the teacher to measure the Study Child's behaviours in the classroom. The SDQ was chosen because of its single short form, which is suitable for both parents and teachers. It was also completed by the Primary Caregiver in the course of the main home-based survey, as discussed above. Recording the Strengths and Difficulties Questionnaire independently from both the teacher and the Primary Caregiver is an excellent example of the strength of the study design at this stage in the project, allowing a comparison of the child's score on the same measure from two different sources.

Q10: This question recorded details on parental engagement with the school and teacher. Q10a recorded details on the teacher's perception of the parents' interest in the Study Child's education. It included 'Can't Say' among the response categories. Q10b recorded details on parental engagement with the school and their contact in relation to behavioural issues and schoolwork. A recurrent concern for teachers and home-school community liaison coordinators is the non-involvement of marginalised parents in their child's education



(Mulkerrins, 2007). O'Neill (1992) found that working-class parents may be reluctant to get involved in their child's education because they do not feel confident in dealing with teachers.

Q11: The Pianta Student-Teacher Relationship Scale (STRS) – The STRS recorded details on both positive and negative aspects of the teacher-child relationship. As discussed in the context of parent-child relationship in Chapter Four above (Section 4.1.2), the student-teacher relationship is highly salient, both independently and in terms of mediating the effects of a multitude of other factors (both family- and school-based) on child outcomes. It will be used to measure the extent of positive and supportive interactions between teacher and child and to relate this to school and other outcomes. The nature of the relationship has been shown to be related to social behaviour, school grades and certain externalising behaviours (O'Connor, Hetherington & Clingempeel, 1997; Mosely & Thompson, 1995).

Q12 – Q14: Conditions that limit activities – These items recorded whether or not the Study Child had any disability (physical, sensory or learning) problem or other characteristic that limited his/her participation in school, and the associated supports which he/she received from the school. This is a measure of the supportiveness or otherwise of the structures within the school for those who need them. The National Council for Special Education was set up in 2003 to facilitate the inclusion of the child with special education needs in the school system. Guidelines on the Individual Education Plan Process have been published by the NCSE (2006), and research is ongoing on the preparation of teachers with regard to inclusive pedagogy. The quality of support teachers obtained in the primary school classroom is, however, unknown.



Chapter 7

SUMMARY AND CONCLUSIONS





7. SUMMARY AND CONCLUSIONS

7.1 SUMMARY

Growing Up in Ireland continues to play a key role in informing child and family policy. As the third wave of data becomes available, it will be possible to describe the lives of the children in truly longitudinal terms, along with the contextual processes of the child's development.

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 (Chapter 1). The Study is multi-disciplinary with information collected on a broad range of variables that can both affect and describe the lives of young children from birth to 5 years with a particular focus on cognitive, physical, social-emotional and behavioural outcome trajectories. These are understood as being influenced, and influencing, the relationships between the child and the actors in the various environments in which he/she operates, as conceptualised by Bronfenbrenner, and described earlier in this report. For example, it is possible to look at the ways in which regularly occurring parent-child interactions (parent-child relationships) vary by the characteristics of the child (say temperament) and also by another relevant aspect of the context of this interaction (different family type or social class), with data which has now been collected at three different time points. One important developmental outcome of how the parent and 5-year-old child interact which is particularly relevant at this time is readiness for primary school.

The Study Team remains conscious of its responsibility to ensure that this study is conducted to the highest ethical standards. The entire project continues to be overseen by a dedicated Research Ethics Committee.⁴⁹ Instruments were developed in consultation with national and international experts and stakeholders, and other contributors (Chapter 3). All stages of the project have been subject to international peer review.

7.2 SUMMARY OF CROSS WAVE MEASURES

The completion of interviews in this phase of the project means that data are now available in Ireland spanning the first five years of life (over 3 waves of data) for a large representative cohort of Irish infants. In designing the instrumentation, the Study Team was aware of the need to adequately capture the multi-faceted and bi-directional nature of the influences on children's development over the life-course, while being sensitive to emerging abilities and developmental milestones, and attempting to maintain cross-wave consistency in terms of measures. Table 7.1 provides a top-level summary of the information

⁴⁹ The Study Team would like to take the opportunity of expressing its appreciation to the Research Ethics Committee (REC) for its enormous input to ensuring that the study is subject to rigorous scrutiny at every stage of its rollout.



collected from the Infant Cohort at 9 months, 3 years and 5 years of age. The focus of the measures has shifted between waves to take account of appropriate developmental milestones and trajectories. The three main outcome domains which are central to the project (see Greene et al., 2010) are summarised in the table: socio-emotional/behavioural (including family relationships); educational/cognitive; and health. In addition, a fourth “classificatory” domain is included.

The main domains are subdivided into several themes and subthemes, these in turn being ultimately broken down into individual questions (not included here). Table 7.1 summarises the main themes included within each of the domains in the first three waves of the Infant Cohort. An illustration is given of how these are broken down by subtheme in Tables 7.2-7.5. As always in discussing outcomes and their correlates, the reader must remember that an outcome in one analytical context may be a predictor or moderating characteristics/variable in another. Accordingly, the classification in these tables may be somewhat arbitrary. Nonetheless it is useful in summarising and understanding the information recorded at this phase of the project.



Table 7.1 Main themes in each of the domains covered by *Growing Up in Ireland*

Main outcome domains			Classificatory
Socio-emotional, behavioural	Education / cognitive development	Health	
1. Child's relationships	1. Childcare arrangements	1. Pregnancy / pre-natal care	1. Household composition
2. Child's lifestyle (habits & routines) / play and activities	2. Child's education / home learning environment	2. Child's birth	2. Parental health and lifestyle
3. Child's socio-emotional development – internalizing/externalizing behaviours	3. Child's cognitive development	3. Child's health / healthcare utilisation	3. Socio-demographics
4. Ease or otherwise of the Study Child settling in to school	4. Child's school readiness / achievement	4. Child's nutrition / diet / breastfeeding	4. Neighbourhood and community
	5. Characteristics of the school environment, including its management, ethos, policies, resources, built environment	5. Child's physical activity levels/exercise/play	5. Family context/parenting
	6. Characteristics of the Principal and Teachers who most involved with the child, ranging from their gender, age, experience, training to teacher-child relationship	6. Child's physical development	6. Marital/Partner relationship
		7. Physical measures	7. Role of non-resident parent(s)

7.2.1 SOCIO-EMOTIONAL AND BEHAVIOURAL

In considering the broader themes, Tables 7.2 to 7.4 highlight the changing emphasis of the nature of the information recorded, while maintaining consistency across key measures to facilitate research on important proximal processes (e.g., the parent-child relationship). For example, at Wave 1 constructs such as temperament were explored for 9-month olds, and by Wave 2, while temperament remained important, the focus had widened to encompass other aspects of the child's development, such as their social, emotional, and behavioural development, and the factors impacting upon these.



The socio-emotional / behavioural domain contains several main themes, including:

1. Child’s relationships
2. Child’s lifestyle (habits & routines) / play and activities
3. Child’s socio-emotional development.

These are broken down into a series of sub-themes such as those outlined in Table 7.2. One can see an increasing emphasis by 3 years of age on parenting, perceptions of parental self-efficacy and discipline styles. Measures of child’s temperament and emotional/ behavioural outcomes (the latter in the form of the Strengths and Difficulties Questionnaire) have assumed greater relative importance by the second Wave of interviewing. Given the developmental age of the child, these constructs remain important at 5 years.

Table 7.2 Socio-emotional, behavioural and family domain

Child’s Relationships	9mth	3yr	5yr
Sibling relationships	✓	✓	✓
Quality of attachment	✓		
Pianta parent-child relationship		✓	✓
Pianta teacher-child relationship			✓
Child’s Lifestyle (Habits and Routines) / Play and Activities	9mth	3yr	5yr
Sleeping patterns	✓	✓	✓
Toilet training		✓	
Comforting behaviours	✓	✓	✓
TV, video, computer games, internet usage and supervision		✓	✓
Child’s Socio-Emotional Development / Wellbeing	9mth	3yr	5yr
ASQ communication subscale	✓		
ASQ personal social subscale	✓		
Strengths and Difficulties Questionnaire (parent-report)		✓	✓
Temperament		✓	✓
Strength and Difficulties Questionnaire (teacher-report)			

7.2.2 EDUCATIONAL / COGNITIVE

Scales from the British Ability Scales (BAS) were introduced at the second wave of the study to assess cognitive development directly with the 3-year-old. The BAS Naming Vocabulary and Picture Similarities scales were used to derive a measure of children’s verbal and non-verbal ability. Clearly it was not appropriate to do these at 9 months; however, communication and problem-solving skills at that time were instead measured by recording information from the parent. At age 5 it became possible to consolidate that information, by retesting the children using the same measures as were used at age 3. It was also timely to explore a new aspect of the child’s development at this wave: their ability to cope with the transitional phase of starting primary school. This is an outcome which has been associated with a number of factors including child gender, household income, parental education, family size, number



of siblings, and urban/rural residence (Al-Hassan & Lansford, 2009), but should also be contextualized in terms of relationships among the child, family, school, and care-giving community, and their interactions with one another. In turn, future waves of the study are likely to show that the manner of coping with school transition will also predict educational outcomes and perhaps be correlated with other coping strategies.

The educational / cognitive domain contains four main themes:

1. Childcare arrangements
2. Child's education / home learning environment
3. Child's cognitive development
4. Child's transition to school.

These are broken down in terms of sub-themes such as those outlined in Table 7.3. Childcare was of particular interest at 9 months and 3 years, although there was a change in focus at the second wave from parental to non-parental care. Attendance at preschool and enrolment in primary school also came into focus at this second Wave. At age 5, while childcare remained a consideration, the transition to primary school and readiness for this move took centre stage. At each stage, relationships between parents and other adults responsible for the child's learning and development are important for establishing experiences that are consistent, coherent, and coordinated as children move between home and community (in this case, school) settings.



Table 7.3 Educational / cognitive domain

Childcare Arrangements	9mth	3yr	5yr
Use of non-parental childcare	✓	✓	✓
Details of childcare used	✓	✓	✓
Assessment of quality of childcare		✓	✓
Future intentions in relation to childcare	✓		
Impact of problems arranging childcare	✓		
Child's Education / Home Learning Environment	9mth	3yr	5yr
Learning activities with the child	✓	✓	✓
Books in the home		✓	✓
School registration		✓	✓
Attendance (intention) free preschool year		✓	✓
Parental assessment of quality of preschool		✓	✓
Attendance at school			✓
Parental assessment of child's school readiness			✓
Parental assessment of quality of school			✓
Child's Cognitive Development	9mth	3yr	5yr
ASQ problem solving subscale	✓		
BAS picture similarities		✓	✓
BAS naming vocabulary		✓	✓
Child's specific learning difficulties		✓	✓
Child's Education / School Environment	9mth	3yr	5yr
Characteristics, size and resources of the school			✓
School ethos, policies and management			✓
Characteristics of the Principal and Teachers, including: gender, age, experience, qualifications			✓
Classroom management and teaching style			✓

7.2.3 HEALTH

The section on diet and nutrition has also evolved from an initial interest in early feeding behaviours such as breastfeeding, and timing of exposure to solid foods (Wave 1), to encompass other aspects of children's nutritional status such as dietary intake, parental feeding style and parental awareness of the child's weight status (Wave 2). Other major developmental milestones assumed greater importance by Wave 2 such as when the child took his/her first steps, as well as some other details on gross motor skills. At age 5 some of the information gathered at age 3 was consolidated and enhanced, with the introduction of a more in-depth dietary measure to enable measurement of intake of different food groups, as well as daily calorie intake, to add further to the research on childhood obesity. Questions around structured/unstructured play and sedentary activity (e.g., screen time) were introduced in order to link types of behaviour to particular outcomes (e.g., obesity). In terms of consistent measures, a question around the general health status of the child was asked at this Wave as in previous waves. This type of information is important in terms of, say, identifying the time points when social gradients begin to widen, immensely important in terms of policy focus.



The health domain contains several themes as follows:

1. Pregnancy / prenatal care
2. Child's birth
3. Child's health / healthcare utilisation
4. Nutrition / diet / breastfeeding
5. Child's physical activity levels / exercise / play
6. Child's physical development
7. Physical measures.

There has been an obvious shift in emphasis from issues around pregnancy, prenatal care and labour in the 9-month interview to a greater focus on the child's health and health care utilisation by 3 years of age, with a more focussed approach to the child's diet, structured and unstructured activities, and sedentary activities at age 5.

Table 7.4 Health domain

Pregnancy / Prenatal Care	9mth	3yr	5yr
Ante-natal care	✓		
Weight gain during pregnancy	✓		
Pregnancy complications	✓		
Folic acid/iron use before and during pregnancy	✓		
Medical fertility treatments	✓		
Age of first pregnancy	✓		
Currently pregnant	✓	✓	✓
Pregnancy intention	✓		
Stress during pregnancy	✓		
Smoking and drinking during pregnancy	✓		
Drug use during pregnancy	✓		
Child's Birth			
Place of birth	✓		
Pain relief in labour	✓		
Mode of delivery	✓		
Gestation	✓		
Weight and length at birth	✓		
Birth complications	✓		
Special care after birth	✓		
Duration of hospital stay after birth	✓		



Child's Health / Healthcare Utilisation	9mth	3yr	5yr
General health status	✓	✓	✓
Vaccination and early health checks	✓	✓	✓
Chronic illness	✓	✓	✓
Acute illness	✓		✓
Respiratory illness	✓	✓	✓
Child's exposure to environmental tobacco smoke	✓	✓	✓
Health care utilisation/hospital admission	✓	✓	✓
Barriers to medical care	✓	✓	✓
Health insurance/medical card coverage	✓	✓	✓
Accidents	✓	✓	✓
Speech	✓	✓	✓
Developmental concerns	✓		✓
Antibiotic use		✓	✓
Teeth cleaning/dental care		✓	✓
Sight/hearing problems	✓	✓	✓
Parent's perception of child's weight		✓	✓
Child's Nutrition / Diet / Breastfeeding	9mth	3yr	5yr
Breastfeeding initiation	✓		
Duration of breastfeeding	✓		
Reasons for stopping breastfeeding	✓		
Use of formula, cow's milk, other milk	✓		
Transition to solids	✓		
Dietary inventory		✓	✓
Parental feeding style		✓	
Child's Physical Activity Levels / Exercise	9mth	3yr	5yr
Participation in physical activities	✓	✓	✓
Play/activities (structured)			✓
Play/activities (unstructured)			✓
Child's Physical Development	9mth	3yr	5yr
ASQ gross motor subscale	✓		
ASQ fine motor subscale	✓		
Age when child took first steps	✓	✓	
Observation of gross motor development		✓	
Observation of gross motor development		✓	
Physical Measures	9mth	3yr	5yr
Parental height	✓	✓	✓
Parental weight	✓	✓	✓
Child length/height	✓	✓	✓
Child weight	✓	✓	✓
Child head circumference	✓		

7.2.4 CLASSIFICATORY AND BACKGROUND CHARACTERISTICS

In keeping with the conceptual framework underlying the study, there is a clear need to record details on the child's family and other background characteristics to assist in analysis and understanding of child



outcomes. In fact, these are essential for assessing the processes discussed earlier. This background information has been recorded throughout the study to date, in what may be broadly defined as the 'fourth' domain.

The Study Team was aware of the need to be sensitive to socio-historical context within which the study is being carried out. For example, while there was an unprecedented boom at the time of the first wave of the study, the second and third waves have taken place in the context of a deep and enduring recession. In response to this, the instruments at waves 2 and 3 included questions which were designed to assess the impact of the recession on households participating in the study, both generally and specifically. This allows for a comparison of how families were coping both before and during recession, and with future waves of data, post-recession. This allows us to account for the macro-time referred to by Bronfenbrenner, by exploring the impact of a particular historic event, in this case the recession.

Table 7.5 Classificatory domain

Household Composition	9mth	3yr	5yr
Number of people in household	✓	✓	✓
Parental relationship to child	✓	✓	✓
Gender, age, relationship of all members to the Primary Caregiver (PCG) and Study Child	✓	✓	✓
Gender and age of any siblings of Study Child living outside the household	✓	✓	✓
Parental Health and Lifestyle	9mth	3yr	5yr
Hours of sleep / bedtime / rising	✓	✓	
Current general health status	✓	✓	✓
Chronic illness	✓	✓	✓
Current smoking and drinking	✓	✓	✓
Current drug use	✓	✓	✓
Age of first period	✓		
Depression, anxiety, nerves	✓	✓	✓
Family Context / Parenting	9mth	3yr	5yr
Parental stress	✓	✓	✓
Family members with chronic illness	✓		✓
Social support	✓	✓	✓
Contact with grandparents	✓	✓	✓
Work life balance	✓	✓	✓
Role of fathers	✓		
Division of childcare chores between parents	✓		✓
Maternal/paternal leave	✓		
Trouble with Gardaí / prison	✓	✓	✓
Parenting style		✓	✓
Child discipline		✓	✓
Parental self-efficacy	✓	✓	✓
Marital / Partner Relationship	9mth	3yr	5yr
Marital status/history	✓	✓	✓
Quality of couple relationship	✓	✓	✓



Non-resident parent			
Nature of previous relationship with non-resident parent	✓	✓	✓
Formal/informal custody/parenting arrangements	✓	✓	✓
Contact child has with non-resident parent	✓	✓	✓
Maintenance payments	✓	✓	✓
Quality of resident parent relationship with non-resident parent	✓	✓	✓
General Family Characteristics and Socio-demographics	9mth	3yr	5yr
Current parental employment status	✓	✓	✓
Type of accommodation	✓	✓	✓
Housing tenure	✓	✓	✓
Social welfare benefits	✓	✓	✓
Highest level of education	✓	✓	✓
Language spoken in the home	✓	✓	✓
Parental literacy and numeracy	✓	✓	✓
Country of birth	✓	✓	✓
Citizenship	✓	✓	✓
Ethnicity	✓	✓	✓
Religion	✓	✓	✓
Household income	✓	✓	✓
Condition of accommodation		✓	✓
Impact of recession		✓	✓
Household deprivation	✓	✓	✓
Car ownership		✓	✓
Neighbourhood and Community	9mth	3yr	5yr
Length of time living in neighbourhood	✓	✓	
Physical condition of the neighbourhood	✓		✓
Safety of the neighbourhood	✓	✓	✓
Service availability	✓		✓
Community integration	✓		✓
Population size of the local area	✓		✓

The information recorded is classified above in terms of main domains for ease of presentation and discussion. It is, of course, very important to emphasise the cross-domain analysis which is one of the strengths of a study which is as comprehensive as *Growing Up in Ireland*. Equally, as noted at several points throughout this report, the information in each domain may be viewed as an outcome, explanatory, confounding or mediating variable, depending on the specific analysis being undertaken at any point in time.

It is envisaged that the *Growing Up in Ireland* study will continue to grow, develop and change in an age-appropriate fashion with the children to enrich understanding of the factors influencing their development. Such data form the foundations for effective policy-making and implementation designed to optimise children's well-being. The longitudinal nature of the study has already allowed for the production of a wealth of information on contemporary issues such as that linking screen time and diet, behaviour, and obesity.



7.3 CONCLUSIONS

The objectives laid out for the Study continue to be met through the collection of both age-appropriate and policy relevant data. Below are some examples of the ways in which data such as those provided by *Growing Up in Ireland* can inform researchers and policy makers alike.

To date, *Growing Up in Ireland* has collected a vast array of information on the child, including their development through interactions with others, mainly those in closest proximity - their parents. With three waves of data, it will now be possible to build a more complete picture of the child's development as they move from the pre-natal period, through infancy, through early childhood, and begin their transition from the home and childcare/preschool settings, to the school. How they and those around them cope with this important process will mean the success or failure of reaching this important developmental milestone, which in turn will have implications for other aspects of their development in both the short and the longer term.

While previous research has established typical chronological ages associated with developmental milestones, there is considerable variation in the achievement of milestones, even between children with developmental trajectories within the normal range. As discussed in previous reports, some milestones are clearly more variable than others. For example, expressive language at 3 years: there is wide variation in when children reach this milestone, supporting the need for measures at more than one point in time. For the cohort at 5 years, there are also likely to be variations in school readiness and the transition to the school environment. Variations in issues around early enrolment or registration in formal school, number of schools in which the child is enrolled, preparation for attending formal school, school readiness and the settling-in process can all be investigated by the data recorded in the first three waves of the study. The importance of the home and school learning environments (including school resources and characteristics of Principals and Teachers) in that process can all be examined using data from the project. Differences in reaching developmental milestone around school readiness and the 'settling in' process will, of course, be of major interest to policy makers.

Since one of the main aims of *Growing Up in Ireland* is to generate evidence through research, having both current and retrospective data means that the analyst can explore the child's development from pre-birth (to a certain extent) through infancy and early childhood and into the school transition period (at 5 years). Furthermore, identifying the factors most strongly correlated with important aspects of child wellbeing was a priority for the Study Team. The *Growing Up in Ireland* data offer a unique opportunity to look at the 'whole child'.



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