

Growing Up in Ireland

National Longitudinal Study of Children

COHORT '98 (CHILD COHORT)

**Report on the Pilot and Pilot Extension Stages
of Data Collection for Cohort '98 at 13 years of
age**

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Chapter 1

INTRODUCTION





1 INTRODUCTION

Growing Up in Ireland is the national longitudinal study of children. It was established in 2006 and has followed two groups of Irish children – an older group who were recruited into the study at 9 years of age (the Child Cohort, now called Cohort '98) and a younger group who were recruited into the study at 9 months of age (the Infant Cohort, now called Cohort '08). The *Growing Up in Ireland* study is funded by the Department of Children and Youth Affairs (DCYA), and is overseen by the DCYA in association with the Central Statistics Office. The project has been designed to describe and analyse what it means to be a child in Ireland today and to understand the factors associated with three major areas of children's development over time: their physical health and growth; their social, emotional and behavioural well-being; and their educational achievements and cognitive development. The longitudinal nature of the project allows researchers and analysts to examine the developmental trajectories and the factors which affect development over time. Providing evidence to inform Government policy relating to children, youth and families is a core objective.

Interviews with the older cohort were first completed between September 2007 and April 2008 when the children were 9 years of age. The second round of interviews with this cohort took place when the children were 13 years old, with interviewing taking place between October 2011 and March 2012. This report summarises the procedures, protocols and outcomes of two phases of piloting for the Child Cohort at 13 years. Piloting is an essential development phase for a project as large and as complex as *Growing Up in Ireland*. It is used to test the viability and suitability of both instrumentation and procedures ahead of a nationwide roll-out to many thousands of households and hundreds of schools. The first was the 'main pilot' phase, in which fieldwork was conducted in the Study Child's school and home. The second phase of piloting is referred to as the 'pilot extension'. The 'pilot extension' had three main aims. The first (and principal) objective was to test the feasibility of undertaking all fieldwork with the 13-year-olds and their families in their homes, thus avoiding fieldwork in the Study Child's school. The second was to test the feasibility of using two laptops in the home to administer questionnaires to the 13-year-olds and their parents in parallel, thus substantially reducing contact time and burden for the family. The third was to test the use of alternative cognitive tests which had not been used in the main pilot phase. Chapters 2 to 7 of this report discuss the 'main pilot' phase and Chapters 8-11 discuss the 'pilot extension'.

Chapter 2 describes the procedures and implementation of the main pilot. This includes a brief review of the way in which the sample was generated at Wave 1 when the children were 9 years of age. An understanding of the initial design for Wave 1 is important in describing the procedures and protocols used in the second round of interviewing, when the children were 13 years of age. Chapter 3 discusses response rates in the main pilot while Chapter 4 focuses on the content of the questionnaires and



cognitive tests used in the school component of piloting. Chapter 5 considers the content of the questionnaires used in the home component. The rationale for each measure and a description of all questionnaires and their contents is included. Section 5.12 discusses the collection of a saliva sample from a sub-sample of the 13-year-olds, using a non-intrusive buccal swab method. This includes the Study Team's assessment of the impact that the collection of a saliva sample might have on response and participation in the study. Chapter 6 summarises the scales used in the home-based component of the study and considers how they performed in the main pilot phase. Chapter 7 provides a summary of recommendations which emerged from the main pilot.

Chapters 8 to 11 focus on the pilot extension. Chapter 8 outlines the main objectives of the second phase of piloting. It discusses the moving of fieldwork from a combination of home-based and school-based components to an approach based exclusively in the home. Chapter 9 considers response rates and the questionnaires administered in the pilot extension. Chapter 10 focuses specifically on the cognitive tests used in the pilot extension and Chapter 11 presents a summary and recommendations. The appendices contain the questionnaires and other documents used in both the main pilot and pilot extension phases.





Chapter 2

MAIN PILOT – IMPLEMENTATION AND PROCEDURES





2 MAIN PILOT – IMPLEMENTATION AND PROCEDURES

2.1 INTRODUCTION

The purpose of this chapter is to outline the implementation and procedures used in the main pilot (as distinct from the subsequent ‘pilot extension’). After a brief review of the design adopted in recruiting the cohort at 9 years of age, the procedures adopted in the Wave 2 main pilot (in both the schools and the 13-year-old’s home) are considered. Interviewer training and de-briefing for the main pilot phase are also discussed.

2.2 SAMPLE DESIGN & RECRUITMENT IN WAVE 1 – IMPLICATIONS FOR WAVE 2

The sample for the main pilot phase of Wave 2 was made up of those families who had participated in the pilot at the first round of the Child Cohort in 2006/2007, when the children were 9 years old. A total of 230 children and their families were successfully interviewed at that time.

Recruitment in both the pilot and main fieldwork stages of the first round of the Child Cohort was based on a two-staged clustered design which involved an initial sample of schools followed by selection of children from within each school.¹ A random sample of schools was selected from the national total of approximately 3,400 primary schools. Within each school, all children who fell within the age range were included in the target sample. In larger schools which contained more than 40 9-year-olds, the principal and staff of the school were assisted by the interviewer in selecting² a maximum of 40 pupils for inclusion in the study.³ Further details on the initial recruitment of the pilot sample at Wave 1 are provided in the technical report on the pilot phase for the Child Cohort at 9 years (Williams & McCrory, 2011). The same children and families were used in the pilot sample at Wave 2.

This two-staged design was very important in the implementation of Wave 1. The primary school issued the information leaflets and consent/assent forms for children and families. Sampling in this way also facilitated group self-completion of several components of the child questionnaire and academic achievement tests within the schools. The Study Child’s school-based questionnaire, Drumcondra⁴ school assessment test and Piers Harris II⁵ self-concept questionnaire were all administered in the school on a group self-completion basis. Completion of questionnaires by the principal in respect of the school

¹ For a discussion of the sample design used in Wave 1 of the Child Cohort see, for example, Thornton et al., 2011.

² Using random number tables.

³ By including the threshold of 40 students it was possible to maximise the number of Primary Sampling Units (PSUs).

⁴ This is a school assessment test developed by the Educational Research Centre based in Drumcondra, Dublin and is very widely (though not universally) used in primary schools in Ireland. It is usually referred to as the “Drumcondra test”.

⁵ See for example, Piers and Herzberg, 2002.



(resources, ethos etc.) and the teacher (in respect of both him/herself and each pupil) meant that a large volume of school-based information could be recorded.⁶ Having the child complete questionnaires and tests in the school also substantially reduced respondent burden and survey contact time in the home. From an analytical perspective, recording school, teacher and class details also facilitated the disaggregation of multilevel effects and their influence on outcomes.

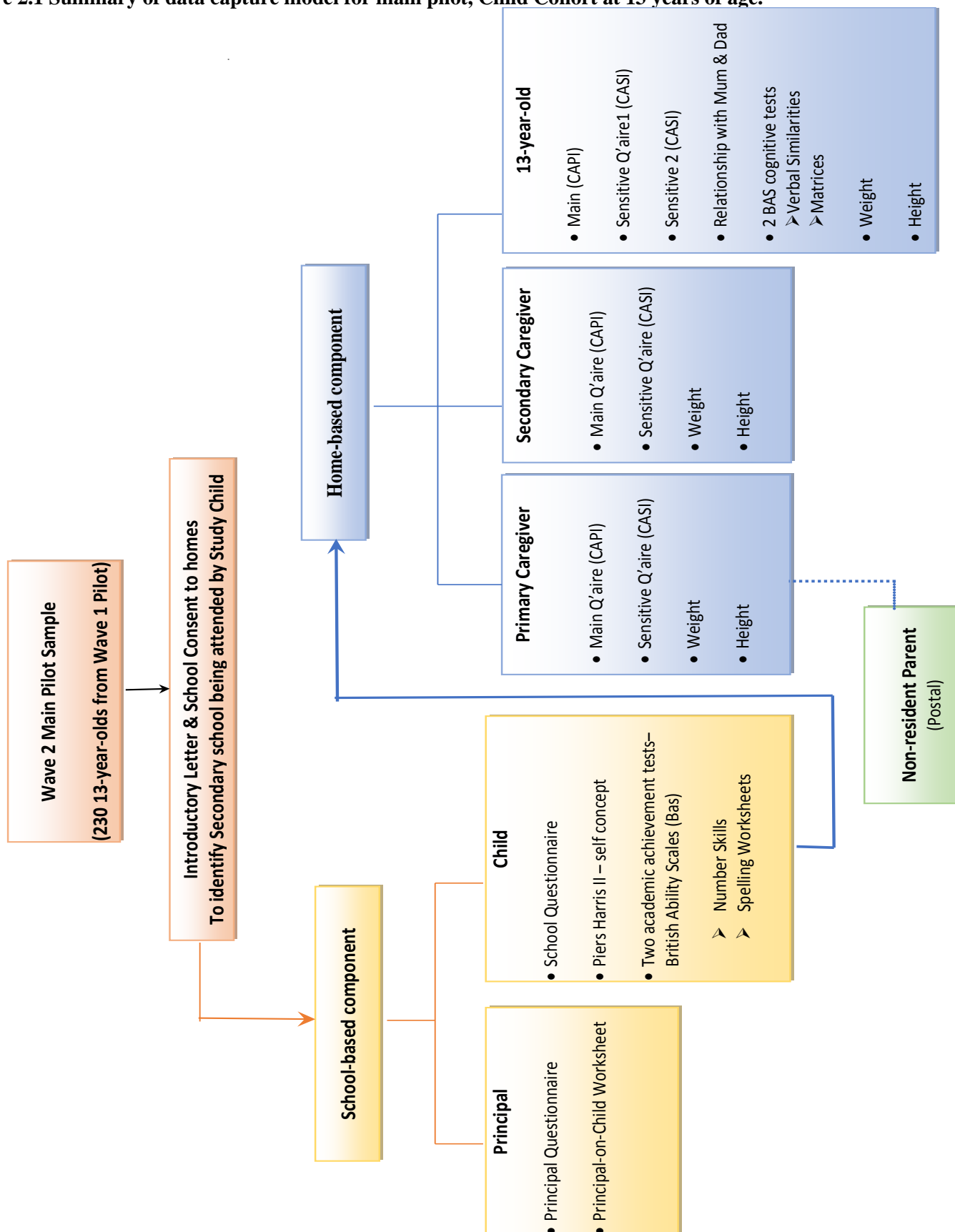
Fieldwork for the main pilot at Wave 2 reflected the initial sample design of the study, with fieldwork taking place in the Study Child's school and home. Figure 2.1 summarises the structure of implementation as well as the respondents in both school and home components. An initial letter was issued to the families who participated in the pilot phase at Wave 1 as a first point of contact in Wave 2. This reintroduced the Study to them and, as many children had since transitioned to secondary school, also asked them to inform the Study Team as to which school was being attended by the Study Child.⁷ This was then followed by initial fieldwork in the schools, followed by interviews in the homes. Each component of fieldwork is discussed in detail below.

⁶ The reader is reminded that in the Irish primary school system the pupil generally has only one teacher for the year. This facilitated recording substantial detail on the Study Child's performance and relationships in school.

⁷ Between the ages of 9 and 13 years, most children had made the transition to a second-level school.



Figure 2.1 Summary of data capture model for main pilot, Child Cohort at 13 years of age.





2.3 SCHOOL INTERVIEWS

2.3.1 INITIAL CONTACT WITH THE FAMILY

The first issue which arose was identifying the school currently attended by the Study Child. As noted above, the 230 children who were included in the main pilot phase at Wave 2 were originally recruited through 22 Primary schools. At 9 years of age interviews and completion of school performance and other tests (including the 60-item Piers Harris scale) were completed in the school, thus substantially reducing respondent burden on the child and family in the home. A very important aspect of the main pilot at 13 years of age was to test the feasibility of replicating this approach for fieldwork in Wave 2 – in other words to identify which school was being currently attended, with a view to carrying out interviews in the school (hopefully on a group self-completion basis) thus reducing respondent burden in the home.

By 13 years of age, however, most had made the transition to secondary school. The first step in fieldwork for the main pilot phase, therefore, was to test the feasibility of identifying which secondary school the child was attending. The only way in which the Study Team could do this was by sending an introductory letter, information sheet and form to the family, asking them to return the name of the school. Parents were informed of the intention to collect school-level information from the principal and were asked to consent to the collection of a small amount of child-specific information from the school. The Study Team anticipated that the response to this initial approach would be relatively low. The pilot was used to identify how low it might be. A copy of this introductory letter and related response form can be found in Appendices A1 and A2 respectively. As expected, the response rate was low – only 45 per cent of families (104) returned the relevant form, from which 46 secondary schools were identified. Only one postal shot of the introductory letter was issued, as it was felt that follow-up or reminder letters might create a negative response to subsequent contact of the families for the home-based component of the study.

The principals of the 46 secondary schools were contacted by post (a copy of the introductory letter to the principal is enclosed in Appendix A5 and the information sheet in Appendix A6). This was followed by phone contact from an interviewer to make an appointment to meet the principal in person and explain what was required of the school. Where the interviewer had difficulty in securing an initial appointment over the phone, s/he went in person to the school to set up the initial meeting with the principal.

2.3.2 SCHOOL-BASED COMPONENT

The school-based component of the main pilot consisted of a questionnaire which was completed by the principal. The Study Children were asked to complete the British Ability Scales (BAS) assessment tests, a school-based questionnaire and the Piers Harris self-concept scale.

2.3.2.1 COMPLETING THE PRINCIPAL'S QUESTIONNAIRE

On meeting with the principal, it was explained that s/he would be asked to:



- Complete a copy of the Principal's Questionnaire – recording information on the school, its ethos, resources and subjects offered.
- Complete the Principal-on-Child worksheet – recording some summary details on the child's base class and the educational or related supports which were required and which were available to the child in the school. The supports in question included: speech therapy; learning support; resource teaching; behavioural management programs; psychological assessment.

At 9 years of age the Study Child's class teacher was asked to complete a detailed questionnaire on the Study Child. Having made the transition to secondary school by Wave 2 the Study Child had numerous subject teachers and it was not possible to identify one teacher who would be able to complete a dedicated questionnaire on the child. The principal was asked (in consultation with subject teachers) to provide summary details on a worksheet for each pupil in the school. This contained less individual-specific information than provided by the class teacher on the child when the latter was 9 years of age.

- Allow access to the school and Study Children in the sample to self-complete questionnaires and related measures as a group. This school-based questionnaire recorded details on: the child's attitude to school, teachers and subjects; educational aspirations; peer relationships; parental involvement in schoolwork; time spent doing homework; perception of being reprimanded or praised by their teachers; extra help received in the form of grinds or related supports; number of days missed from school in previous year. In addition, the child was asked to complete:
 - the Piers Harris self-concept scale
 - academic assessment test in Spelling (British Ability Scales (BAS))
 - academic assessment test in Numbers (British Ability Scales (BAS))

Principals were encouraged to complete the questionnaire and worksheet in the presence of the interviewer – though in practice in almost all cases these were explained to the principal by the interviewer and self-completed in the principal's own time. The objectives and content of each of the instruments and questionnaires completed in the school by both principal and Study Child are discussed in detail in Chapter Four.

2.3.2.2 ACADEMIC ASSESSMENTS

The BAS Spelling and Numbers tests were administered in the schools. The school was asked to provide a room for administration of the child questionnaires and ability tests. Where more than one child in the school participated in *Growing Up in Ireland* the surveys and tests were completed with all relevant children in the school as a group – on a group self-completion basis – using the test materials and



protocols as set out by the test developers in the case of the British Ability Scales. This approach allowed major savings to be made in terms of subsequent respondent burden in the family home.

2.3.2.3 THE STUDY CHILD'S SCHOOL QUESTIONNAIRE AND PIERS HARRIS SELF-CONCEPT SCALE

The children completed a school questionnaire on paper which primarily included questions on their education, subjects being studied and subject preferences, teaching methods adopted in the school and so on. They also completed the 60-item Piers Harris self-concept scale.

2.4 HOME-BASED COMPONENT

2.4.1 CONTACTING THE HOUSEHOLD

The home-based interviews formed the second major component of fieldwork. As noted, the first contact with the family was the initial letter to all Wave 1 pilot families from the Study Team, to remind them of their previous participation in the pilot study when the child was 9 years of age and to ask them to provide details on the school the Study Child was now attending. This initial approach was followed up a few weeks later with an introductory letter to all families about the home-based component of fieldwork, including a further copy of the information leaflet. This approach was made to all families in the main pilot – the 45 per cent who had already returned details on the school being currently attended by the Study Child and the 55 per cent who had not. An interviewer then made a personal visit to each family to explain *Growing Up in Ireland* and to arrange an interview. At that initial visit, interviewers asked to speak to the person listed as the Study Child's Primary Caregiver at the time of the Wave 1 interview. The interviewer reminded the parent/guardian about the letter and information leaflet which they had already received in the post, and answered any queries they may have had about the study. The interviewer asked the parent/guardian and Study Child/Young Person to sign two copies of the parent consent form (see Appendix A8) and young person's assent form respectively (Appendix A10). The interviewer, Primary Caregiver and Study Child each kept one copy of the relevant Consent/Assent form. Only after securing signed consent/assent did the interviewer conduct interviews, tests or measurements.

If the interviewer was unable to make contact with a parent/guardian on the first visit, s/he left a 'called-while-you-were-out' card which contained their contact number. Interviewers were instructed to make the initial visit to the family home plus four personal call-backs at different times of the day and days of the week. Interviewers made repeat visits to the household until a definitive consent or refusal was obtained or until it was confirmed that the family had changed address.

Contact had been maintained with respondents between Waves 1 and 2 with Christmas cards, newsletters and 'change of address' cards. Tracing sheets were also used at Wave 1 to obtain two alternative contacts for the family, which could be used in the event of the family changing address between Waves 1 and 2. These alternative contact addresses were accessed by Head Office and provided



to interviewers when they were unable to contact a family at their last known Wave 1 address. In the course of the main pilot phase of the study these were used in four cases. In addition, the family was also asked to sign a consent form at the time of the first interview (when the Study Child was 9 years of age) to allow the Study Team to use their Personal Public Service Number (PPSN) for tracking purposes (through the Child Benefit Register) in the event of the family changing address between Wave 1 and Wave 2. Where this consent had been secured at Wave 1 the PPSN for the Study Child was forwarded to the Department of Social Protection for tracking through the Child Benefit Register. This system worked very effectively and secured new addresses for all three of the families in the pilot for whom this system was used.⁸

2.4.2 INTERVIEWING IN THE HOME

2.4.2.1 IDENTIFYING THE PRIMARY CAREGIVER AT WAVE 2

When contact was made with the family the interviewer sought to interview the Primary Caregiver of the child (usually the mother) and his/her spouse partner (usually, but not necessarily, the father of the Study Child). The Primary Caregiver was self-defined by the family as the person who provided the most care to the child and was most knowledgeable about his/her development. If the Primary Caregiver from Wave 1 was still resident in the household but was no longer the Primary Caregiver at Wave 2, he or she was asked to review the household grid (based on the forward feed of information which he/she had provided in Wave 1⁹) and make any amendments or revisions as necessary, before the main interview started with the new Primary Caregiver. In situations in which a switch in roles had taken place between Primary and Secondary Caregiver between Waves 1 and 2 but where both were still resident (two families in the main pilot), the Wave 1 Primary Caregiver was asked to complete the Secondary Caregiver interview in the Wave 2 pilot. Notwithstanding this change in roles, however, the respondent who provided the information on the household composition in Wave 1 was asked to review and revise this as appropriate at the Wave 2 interview. When the Wave 1 interview was completed the respondents were told that all the information which they provided in the course of the interview (including that on household composition and related details) would not be shown to anyone else within the household. Accordingly, this guarantee of confidentiality would not have been honoured if the new Primary Caregiver of Wave 2 had been asked to review the details on household composition which had been provided by the former Primary Caregiver when the Study Child was nine years old. A new household grid was completed at Wave 2 in situations in which the respondent who had provided the information on

⁸ The Study Team gratefully acknowledges the work of the relevant staff in the DSP. This proved to be a most important aspect of inter-wave tracing.

⁹ Details on the composition of the household (gender; date of birth; relationship to Primary Caregiver; relationship to Study Child for all members) as well as information on literacy, numeracy, whether or not born in Ireland and height were forward fed in the main pilot at Wave 2).



household composition in Wave 1 was not in a position to review it at the later interview. Equally, if the Primary Caregiver from Wave 1 was no longer resident in the household, a new household grid was completed with the new Primary Caregiver for Wave 2.

As noted, interviewing could only begin after all relevant consent and assent forms were signed by the Primary Caregiver and Study Child respectively. Once this was in order, the following questionnaires and tests were administered in the home:

- Primary Caregiver, Main Questionnaire (Computer Assisted Personal Interview, CAPI)
- Primary Caregiver, Sensitive Questionnaire (CASI Computer Assisted Self-Completed Interview, CASI)
- Secondary Caregiver, Main Questionnaire (CAPI)
- Secondary Caregiver, Sensitive Questionnaire (CASI)
- Child Main Questionnaire (CAPI)
- Child Sensitive, Part 1 (CASI)
- Child Sensitive, Part 2 (CASI)
- Questionnaire modules for non-singletons
- Cognitive tests:
 - British Ability Scale – Verbal Similarities (paper-based)
 - British Ability Scale – Matrices (paper-based)

In addition, the following measurements and other details were recorded:

- Child's height and weight
- Adults' height and weight – (height, if information not available from Wave 1)
- Contact details for non-resident parent – if relevant
- GPS – if new address or not available from Wave 1.
- Early School leaver questionnaire (administered only if child had de facto left the school system)

As noted above, only 45 per cent of families returned details on the school being attended by the Study Child in response to the initial letter sent to all families in the main pilot. The families who did not provide details on the school being attended in response to the initial letter but agreed to be interviewed were



asked in the course of their interview to provide this information and to sign a consent form to allow the Study Team to approach their child's school to record details on the Study Child. This additional information provided in the home on the school attended by the Study Child added a further 18 schools to those initially approached by the Study Team, giving 64 schools in total. These schools were subsequently approached by the Study Team to collect data from the principal using the Principal's Questionnaire and Principal-on-Child Worksheet. The school-based questionnaire, the Piers Harris self-concept scale and BAS Spelling and Numeracy tests which were completed by the Study Children in the schools were completed in the home by those children whose parents had not provided school contact details in response to the initial introductory letter sent by the Study Team.

A total of 62 of the 64 schools which were identified as having a *Growing Up in Ireland* Study Child agreed to participate in the study at Wave 2 by completing the Principal's Questionnaire. This is discussed more fully in Chapter 3, below, on response rates.

2.4.2.2 CONSENT AND ASSENT FORM

Before any interviews, tests or measurements took place the Primary Caregiver was asked to sign a consent form in respect of their own participation and that of the Study Child. In addition, as will be discussed below, they were asked to sign a dedicated consent form in respect of the Child Sensitive Questionnaire, in light of its contents. Before signing these, the interviewer went through the parent/guardian information sheet with the Primary Caregiver (out of earshot or sight of the Study Child) to explain what was involved in participation in the study. When signed consent had been secured from the Primary Caregiver, the interviewer then went through the child information sheet and secured signed assent from the 13-year-old. Copies of the information sheets and consent forms used in the pilot phase are included in Appendices A2 – A4.

2.4.2.3 CONDUCTING THE INTERVIEW

The main interviews with each respondent were administered by the interviewer using a laptop. As each questionnaire was completed, it was "locked down" so that it could not be re-opened in the field by the interviewer (or anyone else). The more sensitive questions were included in a self-completion module on the laptop. Respondents were given instruction on how to fill out the self-completion questions, completed four sample questions with the interviewer to demonstrate the process, and were then handed the laptop by the interviewer to complete the Primary or Secondary Caregiver Self-Complete Questionnaires (also referred to as the 'sensitive' questionnaire). Respondents could request that the sensitive questionnaire be administered to them by the interviewer in the same way as the main questionnaire was administered (provided no one else was present) or to self-complete on paper if they did not want to use the laptop. None of the respondents took up this option in the course of the main pilot phase.



2.4.2.4 CHILD SENSITIVE QUESTIONNAIRES – PARTS 1 AND 2

As will be discussed in detail in Chapter 5, the Child Sensitive Questionnaire was split into two parts. Part 1 recorded details on peer relationships; experience of depressive symptoms; whom the 13-year-old would turn to if anxious or distressed; bullying; perceptions of weight; perceived unfair treatment by others; perception of parenting style of mother/father figures in their lives. Part 2 of the Child Sensitive questionnaire recorded details on whether the 13-year-old had taken part in the Relationship and Sexuality Education (RSE) program in school; where the respondent would be likely to go for information or advice on sex or relationship issues; whether s/he had discussed sex and/or relationship issue with parent(s)/guardian(s); maturation and stage of pubertal development; anti-social, delinquent and health compromising behaviours.

Given the more sensitive nature of some of the questions on Parts 1 and 2 of the Child Sensitive Questionnaires, a copy of the blank questionnaires (see Appendices C5 and C6 respectively) was shown to the Primary Caregiver (out of earshot and sight of the Study Child) before the interview. The Primary Caregiver was asked to sign a dedicated consent form granting permission for their child to complete this aspect of the interview. The additional consent form for the Child Sensitive questionnaires is included in Appendix A12.

2.4.2.5 COGNITIVE ASSESSMENTS IN THE HOME

Details on the administration of the four assessment/cognitive tests from the British Ability Scales are given in Chapter 4. In summary, the interviewers administered two of the tests (Verbal Similarities and Matrices) directly to the Study Child in the home using paper-based test materials and adhering to the protocols set out by the test developers. A further two tests were administered (Spelling and Number Skills) on a group basis in the school, as detailed later.

2.4.2.6 PHYSICAL MEASUREMENTS

Interviewers recorded the height and weight of the Study Child and the Primary and Secondary Caregivers using a Leicester measuring stick medically-approved SECA analogue weighing scales. The measurements were recorded on the laptop.

2.5 INTERVIEWER TRAINING

Interviewer training took place in Dublin. A total of 22 interviewers worked on the main pilot phase. All interviewers had previously worked on *Growing Up in Ireland*. Each interviewer completed at least five days of training prior to being assessed for fieldwork. Several were recalled for follow-up small group training on specific parts of the process.

The training for interviewers working on the pilot covered a range of topics with the following modules:



General

1. **Background and objectives of the study** – origins, funding, objectives etc. focusing, in particular, on how this phase of the study differed from previous ones.
2. **Detailed instruction on the content of all questionnaires** – this aspect involved a general discussion of each questionnaire as well as a detailed discussion of each question on each instrument. The purpose was to provide the interviewers with the opportunity of seeking clarification from the Study Team on any of the questions included on the instruments.

School Component

3. **Field procedures in the school** – this included a review of field procedures from initial contact with the principal to final disengagement with the school.
4. **Administration of school-based assessments and questionnaires** – a considerable portion of the training concerned the administration of the British Abilities Verbal and Numeracy scales which were administered in the school. These standardised tests are a direct assessment of the child's spelling and numeracy abilities and a key focus of the training was to standardise their administration across interviewers and thus minimise inter-rater variability. Interviewers were taken through the test materials and their administration on paper. Training was also given on administration of the Study Child's school-based questionnaire and the Piers-Harris self-concept scale.

Household Component

5. **Review of CAPI** – this involved taking the interviewers through all sections and all questions on the questionnaires, on the laptop.
6. **Review of CASI** – this involved taking the interviewers through all questions on the Primary and Secondary Caregiver Sensitive Questionnaires. Even though these were in almost all cases self-completed, it was important that the interviewer was familiar with them and knew how to respond to any queries or issues arising.
7. **Role play in CAPI** – interviewers were paired off to administer sections of the instruments to their partner. In the course of these role play sessions the trainers observed and assessed the interviewer's performance.
8. **Administration of cognitive assessments** – as with the school assessments, a considerable portion of the training was concerned with the administration of the British Abilities Scales Verbal Similarities and Matrices tests. These standardised tests are a direct assessment of the child's vocabulary and reasoning abilities, and so a main focus of the training was to standardise their administration across interviewers. Interviewers were taken through the test materials, their administration on paper, and were then given time to engage in role play.



9. **Field procedures** – this module included a review of all field procedures from initial contact to final disengagement with the household. The importance of ensuring that consent/assent forms were completed before any fieldwork or measurements took place was emphasised. All consent forms were signed by the Primary Caregiver and assent forms by the Study Child in the home before interviewing took place. In situations in which the school contact details were provided in response to the initial advance letter to families the signed consent form for permission to approach the principal to complete the Principal-onChild Questionnaire was returned to the Study Team in the post. Where the school contact details were recorded in the home the relevant consent form to collect details about the child from the principal was signed by the Primary Caregiver in the home in the course of his/her interview.
10. **Physical measurements** – this module focused on the physical measurements, i.e., height and weight of the child and parents. It addressed practical issues on using the equipment, for example how and where to set up the weighing scales and height measurement sticks.¹⁰
11. **Child protection protocols and incident reporting** – this module principally focused on the identification of potential child welfare and protection issues, along with reporting protocols and procedures which have been developed by the Study Team.
12. **Ethics** – this module covered the main ethical issues involved in interviewing with families and children, particularly informed consent and how this can be achieved in the context of the survey.
13. **Interviewing practice with emphasis on young people and their families** – this included a review of general best practice in interviewing.
14. **GPS** – this included instruction in the use of the GPS device.

¹⁰ The height of Primary and Secondary Caregivers was recorded in Wave2 only in situations in which the information was not available from the previous interview, or where the data recorded at that interview appeared to be suspect. In such circumstances, the interviewer's Work Sheet asked him/her to check the height recorded in the previous interview.



All interviewers working on the main pilot had previously worked on other phases of **Growing Up in Ireland**. Notwithstanding prior experience, only interviewers who met an acceptable standard when assessed at the end of training were assigned work on the pilot. The assessment criteria were:

1. Understanding of the interview process and procedure
2. Competence with the laptop and administrative paperwork
3. Communications and interpersonal skills
4. Attendance / punctuality at training

In addition, all interviewers were given a CAPI test as well as a test on the administration and paperwork which they had to complete in the course of interviewing. The score achieved on these tests was included in their overall assessment.

In addition to Garda vetting¹¹ and appointment as Officers of Statistics, all interviewers working on the pilot were required to provide:

- a recent employer's reference or, where this was not available, a character reference
- a declaration of appropriate physical and mental health signed by their GP
- confirmation of Class 2 car insurance on their motor policy

2.6 INTERVIEWER DEBRIEFING

Interviewers attended a debriefing after the pilot survey. This provided them the opportunity of recording field experiences and also of commenting in detail on the individual questions in each of the instruments. This information was used in informing recommendations for changes in the questionnaires and procedures used in the study.

¹¹ Clearance by the Police.



Chapter 3

MAIN PILOT – RESPONSE RATES





3 MAIN PILOT – RESPONSE RATES

3.1 INTRODUCTION

This chapter considers response rates attained in both the school- and home-based components of the main pilot phase with the 13-year-olds.

3.2 RESPONSE RATES

3.2.1 SCHOOL-BASED RESPONSES

As mentioned, a total of 45 per cent of families responded to the initial contact letter which asked the Primary Caregiver to provide details on the school being attended by the 13-year-old. This identified 46 second-level schools as containing children who were included in the study. Approaches were made to these 46 schools in the initial stage of fieldwork. In the course of the subsequent home-based fieldwork a further 18 schools were identified as containing Study Children, meaning that a total of 64 second-level schools contained at least one of the Wave 1 Study Children.

Response rates in the schools were very high, with 62 of the 64 schools identified agreeing to participate in the study and to complete the Principal’s Questionnaire.

3.2.2 HOME-BASED RESPONSE RATES

Of the 230 families that were included in the longitudinal sample (i.e. had participated in the Wave 1 pilot and remained in the sample), interviews were successfully completed in the home with 176 of them (76.5 per cent), with 42 families (18.3 per cent) refusing to participate. It is interesting to note that about one-third of the 42 refusals were attributed by the family to the 13-year-old – when contacted the family said that the parent(s) would not have minded participating in the study but the Study Child did not wish to do so. This may not have been declared in all cases and so one-third is a minimum estimate. The overall level may have been higher. The fact that one-third of refusals appeared to originate with the 13-year-old was unexpectedly high. This was very different to the situation at 9 years of age where the Study Child was generally very happy to participate. Based on interviewer debriefing, it appeared that much of the Study Child’s reluctance to participate stemmed from school-based peer pressure, with the respondent not wanting to be identified with the Study in the school setting.

Table 3.1 Response outcomes of home-based fieldwork

Outcome	No	Per cent
Interviewed	176	76.5
Refused	42	18.3
Other*	<30	<13.0
Total	230	100.0

Note: * Fewer than 30 cases this cell.



A systematic refusal conversion exercise was carried out from Head Office, however this resulted in just a very small number of additional completed interviews. The very low refusal conversion rate is not surprising given the intensity of initial contact with the families before recording a refusal.

3.3 RESPONSE ON THE CHILD SENSITIVE QUESTIONNAIRE

As noted in Section 2.4.2 above, given the content of the Child Self-Complete or 'Sensitive' Questionnaires, the interviewer was instructed to show a blank copy of both Part 1 and Part 2 to the parent, to describe the content of each and then to request that the parent sign a dedicated consent form before the 13-year-old was asked to fill them out on a self-completion basis. The reader is reminded that the main content of these instruments was as follows (see Appendix C5 and C6):

Child Sensitive Part 1:

- Friendship networks (Qs 1–5)
- Inventory of Peer Attachment (Q6)
- Mood and Feelings Questionnaire (Q9)
- Relationship with siblings (Qs 11–18)
- Victim of bullying (Qs 19–25)
- Perpetrator of bullying (Qs 26–27)
- Self-image and dieting (Qs 28–35)
- Parental discipline (Q37)

Child Sensitive Part 2:

- RSE and sex education (Qs 1–4)
- Pubertal development (Qs 5–6b)
- Anti-social behaviour (Qs 7–8)
- Smoking (Qs 9a–9d)
- Drinking alcohol (Qs 10a–10e)
- Use of non-prescribed drugs (Qs 11–13)

The interviewer was instructed that discussing the questionnaires and the signing of the parental consent form should not be carried out in earshot of the 13-year-old.



In the course of the pilot, 43 per cent of Primary Caregivers did not sign the relevant consent form. This was much higher than anticipated by the Study Team. It appeared from debriefing interviewers that many parents may have thought the questionnaire recorded much more sensitive information than was actually the case.

Following the pilot, the Study Team realised that the way in which signed consent for the Child Sensitive Questionnaire had been secured from the parent/guardian was overly cautious. The Child's Main and Self-Complete questionnaires were both changed in the light of the pilot. The Child Sensitive Questionnaire Parts 1 and 2 which were used in the pilot phase were amalgamated into a single self-complete questionnaire. A dedicated consent form was signed by the child's Parent/Guardian before the child self-completed this part of the study. This was signed only after the Parent/Guardian was encouraged to review the questionnaire in full.



Chapter 4

MAIN PILOT – SCHOOL-BASED INSTRUMENTS





4 MAIN PILOT – SCHOOL-BASED INSTRUMENTS

4.1 INTRODUCTION

This chapter outlines the topics covered by the various school-based instruments used in the pilot for Wave 2. The full text of each questionnaire is given in Appendix B.

The following is a complete list of all instruments administered in the school during the course of the pilot.

1. Principal Questionnaire
2. Principal-on-Child Worksheet
3. Child school-based Questionnaire
4. Piers Harris Self-concept scale
5. British Ability Scale (BAS) Numeracy assessment
6. British Ability Scale (BAS) Spelling assessment

A brief description of each is given below.

4.2 PRINCIPAL QUESTIONNAIRE (APPENDIX B1)

The school principal received two short questionnaires. The first recorded general information on the school, its ethos, resources, and subjects offered, etc. The questionnaire was administered on paper and recorded details on the following:

- | | |
|---------------|--|
| A1–A2 | Gender and age of principal |
| A3 | How many years s/he had been principal of current or other schools |
| B4 | Gender composition of the school |
| B5 | Religious ethos of the school |
| B6–7 | Type of school and whether or not it had DEIS status |
| B8 | Number of full- and part-time teachers and their gender breakdown |
| BP9-10 | Resources available to the school, including a Home-School Community Liaison Co-ordinator |
| B11 | Perception of adequacy of resources in terms of teachers, classrooms, sports facilities etc. |



- B12** Proportion of pupils in the school with literacy, numeracy or emotional/behavioural difficulties
- B13** The year in which the school was built
- B14** School support to new students (including induction days, class tutor etc.)
- B15–16** Over-subscription to the school and entrance criteria
- B17–18** Attendance and absence levels within the school
- B19** Different demographic groups attending the school (including foreign nationals, members of the Travelling Community, etc.)
- B20** Programmes offered by the school
- B21** Subjects taught specifically in Junior Cycle
- B22** Extra-curricular activities offered by the school
- B23** Criteria used to allocate pupils to their base class
- B24–25** Whether or not the school holds formal parent-teacher meetings at least once per year and the approximate number of parents attending school meetings
- B26** Use of formal anti-bullying programme in the school
- B27** Perception of teacher attitudes within the school (including being open to new developments and challenges and being positive about the school)
- B28** Perception of pupil attitudes and behaviour in general
- B29** Job satisfaction and stress

4.3 PRINCIPAL-ON-CHILD WORKSHEET (APPENDIX B2)

The second instrument which we asked the principal to complete recorded summary details on the 13-year-olds from *Growing Up in Ireland* who attended the school. This information was recorded in a Worksheet format containing the ID, name and gender of each *Growing Up in Ireland* Study Child who was attending the school, followed by a small number of questions on each. The average number of children per school was just over three, but there was quite a range, with one school containing 20 Study Children. The majority of schools contained 1–5 children. Each Study Child has a line on the Principal-on-Child Worksheet. The Worksheet was completed on paper and recorded the following details about the children:

- PC1** Student's base class



PC2 Support received in the school by the pupil (including speech therapy, learning support/ resource teaching, behavioural management programmes, psychological assessment, etc.)

PC3 Whether or not support was needed or received in the school in various areas (including speech impairment, learning disability, discipline problems, poor attendance, etc.)

4.4 SCHOOL-BASED QUESTIONNAIRE FOR STUDY CHILDREN (APPENDIX B3)

This questionnaire was completed by the study participants in a group setting within the school. The questions were mainly oriented towards school/ education issues and were completed on paper.

The Study Child's school-based questionnaire contained the following questions:

SC1 Feelings about school

SC2 Subjects being studied

SC3 Other activities being undertaken in the school, such as drama

SC4–5 Number of primary school friends who were attending the Study Child's secondary school and who were in his/her class

SC6 Perception of parental involvement in schoolwork

SC7 Things which usually happen in class, such as a teacher "giving out" for untidy work, being asked questions by a teacher in class, etc.

SC8 School self-concept measured by 3 subscales of the Marsh's Self-Description Questionnaire II

SC9 Time spent doing homework

SC10 Perception of difficulty of Maths, Irish, English, Science

SC11 Like or dislike of Maths, Irish, English, Science

SC12 Usual teaching methods such as copying notes from the board, using computer facilities etc.

SC13–14 Extra help received both in school and via grinds outside school

SC15 School attendance and sanctions over the last year (including being late, skipping classes, suspended from school)



- SC16** Number of days absent from school in the previous year
- SC17** Expected highest level of qualification on finishing education
- SC18** Future plans with regard to job aspirations
- SC19** Aspirations for when the 13-year-old is 28 years of age.

4.5 SCALES USED IN THE 13-YEAR-OLD'S SCHOOL-BASED QUESTIONNAIRE

Two scaled questions were administered in the school component of the pilot – the Piers Harris self-concept scale and Marsh's Self-description Questionnaire (SDQ II). These are discussed below.

4.5.1 PIERS HARRIS SELF-CONCEPT SCALE

The Piers-Harris II Children's Self-Concept Scale is a 60-item self-report instrument for the assessment of self-concept in children and adolescents between the ages of 7 and 18. The items in the Piers-Harris II are statements which express how people feel about themselves. The domain scales include:

- Behavioural Adjustment – a subscale of 14 items measuring level of problematic behaviours;
- Intellectual and School Status – a subscale of 16 items reflecting the Study Child's assessment of his/her abilities with respect to intellectual and academic tasks; general satisfaction with school and perceptions of future achievements;
- Physical Appearance and Attributes – a subscale of 11 items about perceptions of physical appearance and other attributes such as leadership and ability to express ideas;
- Freedom From Anxiety – a subscale of 14 items exploring a variety of feelings including fear, unhappiness, nervousness, shyness and feeling left out of things;
- Popularity – a subscale of 12 items exploring the Study Child's evaluation of his or her social functioning; and
- Happiness and Satisfaction – a subscale of 10 items reflecting feelings of happiness and satisfaction with life.

The Piers-Harris II was previously used with the 9-year-olds in *Growing Up in Ireland* and was chosen for use in the Study because it is a psychometrically well-validated scale which can be used longitudinally in successive waves of the study. The response burden has been shown not to be unduly heavy for the young respondents.



4.5.1.1 PERFORMANCE IN THE PILOT STUDY

Findings from the 13-year pilot indicated a good spread of answers across the various items with acceptable means and standard deviations which were reasonably similar to those found by the scale authors. Good internal consistency reliability (Cronbach's alpha) was also found for the measure as a whole (0.87) and for four of the subscales, Intellectual and School Status (0.70), Physical Attributes (0.70), Freedom from Anxiety (0.77) and Popularity (0.70), with lower alphas for the Behavioural Adjustment (0.53) and the Happiness and Satisfaction (0.50) scales.

As a check on convergent validity, the measure performed well and correlated (using Pearson's r correlation) with a number of other measures in a way that was conceptually meaningful. For example, Behavioural Adjustment was negatively correlated with total difficulties (on the SDQ) ($r = -0.33$, $p < 0.05$), conflict with the Primary Caregiver ($r = -0.56$, $p < 0.01$) and child-reported depression ($r = -0.59$, $p < 0.01$), as well as delinquency (child report) ($r = -0.67$, $p < 0.01$), and conduct problems (parent report) ($r = -0.55$, $p < 0.01$), using items relating to conduct disorder from the DSM-IV. Behavioural Adjustment was also positively associated with parental monitoring ($r = 0.34$, $p < 0.05$) and control ($r = 0.46$, $p < 0.01$), as well as peer trust ($r = 0.43$, $p < 0.05$).

The Intellectual and School Status subscale was negatively associated with child reported depression ($r = -0.40$, $p < 0.05$), higher ratings of hyperactivity ($r = -0.31$, $p < 0.05$) and total difficulties ($r = -0.31$, $p < 0.05$). The Freedom from Anxiety subscale was negatively associated with depression ($r = -0.42$, $p < 0.05$).

The Popularity subscale was negatively (though moderately) associated with peer problems ($r = -0.30$, $p < 0.05$) and depression ($r = -0.42$, $p < 0.05$) although it was positively associated with child disclosure ($r = 0.38$, $p < 0.05$). Scores on the Happiness and Satisfaction subscale were, not surprisingly, negatively correlated with the child-reported depression score ($r = -0.50$, $p < 0.01$) as well as delinquency scores ($r = -0.45$, $p < 0.05$).

Longitudinally (i.e. between nine and thirteen years of age), the Piers-Harris showed some stability in terms of its overall measure of self-concept ($r = 0.33$, $p < 0.05$). The Intellectual Ability, Freedom from Anxiety, and Happiness and Satisfaction subscales were also significantly correlated across time. The only measure whose mean score changed significantly was the Study Child's perception of their popularity which increased from 8.7 to 9.6 ($t = 2.32$, $p < 0.05$). The strength of these correlations are much as one would expect, given the relatively small sample size in the pilot and the fact that they reflect change over a four year period (9 to 13 years) which is characterised by substantial change in terms of the child's maturation, peer and family relationships, and educational transitions from primary to secondary school.



The measure performed well both in the 9-year main study and in the 13-year pilot study and demonstrated good psychometric properties. Given the short completion time – around 10 minutes or less – and ease of completion, it seemed sensible to continue using the Piers-Harris in the main study with 13-year-olds.

4.5.2 MARSH'S SELF-DESCRIPTION QUESTIONNAIRE

Marsh's Self-Description Questionnaire is a self-concept instrument used with early to middle adolescents. It was developed by Marsh (1988) and is based on Shavelson, Hubner and Stanton (1976). The scale taps into some concepts which are comparable to the Piers Harris Intellectual and School subscales. The Piers Harris scale was administered at both 9 and 13 years of age. Notwithstanding the importance of longitudinal consistency in the measures used in the study, Marsh's Self-Description Questionnaire was included in the pilot stage of interviewing with the 13-year-olds following stakeholder consultation and the view expressed by some experts that it was important to assess its potential as a possible alternative to the Piers Harris scale. Accordingly, it was decided to test it in the pilot with the 13-year-olds.

4.5.2.1 INSTRUMENT RATIONALE AND DESCRIPTION

The Self-Description Questionnaire II (Marsh SDQ II) (Marsh, 1992) was designed for use with adolescents aged 13 to 17 years, to provide a multidimensional assessment of self-concept. The full scale has 102 items and 12 subscales which cover three areas:

- Academic (Mathematics, Verbal, General-School)
- Non-Academic (Physical Abilities, Physical Appearance, Same Sex Peer Relations, Opposite Sex Peer Relations, Parent Relations, Emotional Stability, Honesty/Trustworthiness)
- Global (Total Academic, General Self)

The items are rated by respondents using a 6-point Likert scale to indicate how well it describes the respondent – from 'not at all like me' to very much like me'. The three academic subscales (mathematics, verbal and general school) were included in the questionnaire completed by the 13-year-old in the school in the main pilot. Twenty-nine items are included in these three subscales.

4.5.2.2 PERFORMANCE OF THE MARSH SDQ II IN PILOT

In terms of internal reliability consistencies, the Marsh SDQ II performed well in the Study. Alphas of 0.87, 0.86, and 0.81 were found for Mathematics, Verbal and General School respectively, in keeping with previous findings. The means for the subscales were 44.7 (S.D. 11.19), 44.1 (S.D. 9.17) and 49.0 (S.D. 7.69) (based on a very small sample size). Overall there was a good spread of response across all the items.



Positive correlations were observed between the subscales on the Marsh SDQ II and the Piers-Harris measure of self-concept (discussed above). For example, General School self-concept correlated positively (albeit modestly) with Physical Appearance ($r = 0.33$, $p < 0.01$), Popularity ($r = 0.29$, $p < 0.05$), and Happiness and Satisfaction ($r = 0.35$, $p < 0.01$).

Importantly, however, all the subscales used from the Marsh SDQ II were significantly and positively correlated with the Intellectual and School Status subscale on the Piers-Harris scale (General School - $r = 0.64$, $p < 0.001$; Verbal - $r = 0.56$, $p < 0.001$; Maths - $r = 0.27$, $p < 0.05$).

These findings had implications for recommendations for the 13-year main study. Because the Piers-Harris was used at 9 years, and given that it appears to be performing well, it was recommended that the Piers-Harris be retained for continuity, and the Marsh SDQ II be excluded for the main phase of fieldwork at 13 years of age. The inclusion of the test in the pilot phase, however, was important as an assurance to some of the experts on the study's advisory panels.

4.6 COGNITIVE TESTS – THE BRITISH ABILITY SCALES (BAS)

In developing the pilot stage a number of alternative tests of cognitive development and school performance were considered. At 9 years of age the Drumcondra Vocabulary and Maths tests were administered to the children. These are curriculum-based tests which have been developed specifically for children in Ireland and have been used very widely in studies of children of all ages from 9 to 11/12 years of age. Ideally, a comparable curriculum-based test would be used at 13 years of age. The Drumcondra Attainment Tests in English, Irish and Mathematics were considered as an option but these had not been revised in line with the curriculum since the late 1970's (Shiel et al., 2010) and on that basis were felt not to be appropriate and so alternatives were sought.

Overall, there were relatively few development tests available for this age group. Most were UK- or American-based scales which did not relate directly to the Irish curriculum and which took quite a long time to administer.

A wide ranging consultation took place on this aspect of the pilot questionnaire with several options being considered. The Wechsler Abbreviated Scale of Intelligence (WASI) was given very serious consideration by the Study Team. This is a home-administered test which provides an estimate of cognitive function for the 13-year cohort. This test is based on the widely-used Wechsler Adult Intelligence Scale (WAIS) and Wechsler Intelligence Scale for Children (WISC), and has been designed as a short and reliable measure of intelligence.

One of the more widely used sets of cognitive and achievement tests is the British Ability Scales (BAS). Although concerns were expressed by some experts that the achievement subscales were not linked to the curriculum in Ireland it was decided to use the BAS in the pilot stage as it potentially provided more scope for international comparative analysis with other studies of early adolescent children. Two achievement and two cognitive tests from the



BAS were used in the pilot: the spelling and number skills achievement tests as well as the Verbal Similarities and Matrices cognitive subtests. These were chosen as they have a sound theoretical basis (see, for example, Horn, 1965; Cattell, 1941; Carroll, 1993); are age appropriate; and are informed by contemporary developmental psychology. The test developers note that the BAS yield sub-test scores which are separately and individually interpretable so that the full battery of all subscales need not be administered, thus considerably reducing respondent burden. The mix of achievement and cognitive subscales was felt to provide good complementary measures for the Study Children.

In the pilot, the Spelling and Number Skills tests were administered in the school and the Verbal Similarities and Matrices subscales were administered in the home. Dividing the administration of the tests in this way between school and home reduced the burden on the 13-year-old at both points of interview. The Spelling and Number Skills tests in the school were administered by the interviewer after giving the standard introduction and explanation as set out by the test developer to the group of Study Children in the school. These were completed in group sessions, under exam conditions, with as many pupils as possible in the room.

4.6.1 THE SPELLING AND NUMBER SKILLS TESTS

The Spelling Test

The interviewer said each word in isolation, then embedded it in a sentence to provide suitable contextual cues and, finally, repeated the word in isolation. For example, the interviewer would say:

“Friend..... my friend is called Sally.... friend”

The 13-year-old wrote the word on an answer sheet. The test included a total of 45 words.

Number skills

Number Skills focuses particularly on the concepts and skills underlying basic competence in arithmetic. It involved the children performing basic arithmetic operations with whole numbers, fractions and decimals and entering their answer on a record sheet.

For example:

$$3(2.7 + 9.3) =$$

The use of calculators was not allowed for the test (as per the developer’s instructions). The test included some computations which were embedded in text and these items had to be read aloud by the interviewer to reduce the influence of reading skills on performance. For example:



A working machine costs £600. It can be bought in instalments for £60 per month for one year. How much interest is charged annually? £_____

In marking both the Spelling and Number Skills tests, the child receives one point for a correct answer and zero for an incorrect answer. Raw scores are totalled and converted to ability scores, standard scores, t-scores, percentile scores and age equivalents.

4.6.2 PERFORMANCE OF THE BAS SPELLING AND NUMBER TESTS

The results of the BAS tests in the pilot are summarised below.

Table 4.1 Summary scores on Spelling and Numeracy subscales of BAS from pilot, classified by mother’s level of educational attainment

Mother’s Education	Average Ability Score		Average Percentile	
	Spelling	Numeracy	Spelling	Numeracy
Leaving Certificate or less	137.3	149.3	62.5	75.3
Diploma	150.0	168.9	78.7	91.8
Degree or Higher	140.6	160.9	65.9	85.2
Total	141.2	157.2	67.3	82.0

Table 4.1 outlines the summary scores (ability scores and percentiles) according to mother’s highest level of educational attainment. Previous research in Ireland indicates a strong relationship between child’s ability score and mother’s education. However, from the figures in the table this relationship is not apparent. Table 4.2 presents the same data according to the number of books in the home to which the Study Child has access. The question on number of books in the home, although deceptively simple, has proven itself in other research carried out in Ireland (including analysis in *Growing Up in Ireland*) to be strongly related to educational and cognitive outcomes. As is clear from the table, however, the relationship in the data from the pilot is not readily apparent.

Other analysis of pilot data indicated that the correlation between the number of books in the household and the BAS scores is low and non-significant. Although not a definitive measure of the success or otherwise of the subscales in question, these relatively low and non-significant relationships were a cause of concern for the Study Team and some of its advisors in this area.



Table 4.2 Summary scores on Spelling and Numeracy subscales of BAS from pilot, classified by survey question on number of books which the Study Child has access to in the home

No. of books in the home	Average Ability Score		Average Percentile	
	Spelling	Numeracy	Spelling	Numeracy
Less than 30	144.0	158.5	72.4	84.3
31 – 50	129.1	142.7	53.0	66.3
51 – 100	141.3	160.8	65.5	89.8
100 +	144.5	160.6	70.0	83.9
Total	141.2	157.2	67.3	82.0

4.7 ISSUES IDENTIFIED DURING INTERVIEWER DEBRIEFING

On debriefing, the interviewers who worked on the pilot reported an overall positive reaction from students in the schools and the tests were administered with few unanticipated problems. Calculators are usually used by secondary school students in mathematical computation in Ireland and the Study Team was particularly conscious of the potential reaction which prohibiting their use in the test might precipitate from students. On debriefing, however, interviewers noted that this was not an issue.

4.8 MAIN ISSUES ARISING DURING THE SCHOOL PHASE

A key issue to arise in the course of the school component of the pilot was the difficulty for principals in providing the individual-level information on the *Growing up in Ireland* study who were attending their school. As noted above, in the first round of interviews the Study Children were 9 years of age and were all attending primary school¹² where they had one class teacher. The class teacher completed their individual ‘Teacher-on-Pupil’ questionnaire. By 13 years of age they had generally made the transition to secondary school where they had multiple subject teachers, none of whom knew the child sufficiently well to complete the detailed ‘Teacher-on-Pupil’ questionnaire which was completed at 9 years of age. The Principal’s Worksheet on the 13-year-olds in the school was an attempt to record some level of information on the individual child. Even providing this limited level of information, however, proved very difficult for the principal, requiring the collation of details from numerous teachers about a single child.

Two concerns arose in the light of the pilot regarding the cognitive tests completed by the children. First was the lack of a strong relationship between the pilot test results and the child’s background characteristics. It was a source of concern that there was no evidence of the usual relationship between the child’s performance on the cognitive tests and almost all measures of family background characteristics. In general, one would expect children from

¹² A very small number were being home-schooled.



more advantaged backgrounds (measured in terms of parental education; family social class, family income or any other measure of human or social capital) would perform better on the tests. There was no evidence of this trend in the pilot results, however. Secondly, concerns were raised by several educationalists in Ireland on the lack of fit which the performance tests have with the secondary school curriculum.

In planning for the pilot only one test which was related to the Irish curriculum (the Drumcondra Reasoning Test designed by the Educational Research Centre in Dublin) was deemed suitable for this age group. The Drumcondra Reasoning Test (DRT) is an objective, group-administered test of cognitive skills which can be used to assess students in transition between primary and post-primary schooling, or in the early years of post-primary schooling. The test contains two subtests: Verbal Reasoning and Numerical Ability. Answers are marked on a hand-scorable answer sheet, and then scored using a scoring stencil, or on a machine-scorable OCR¹³ basis. The test takes approximately 1½ hours to administer. In preparing the pilot it was felt that this would pose an unacceptably high burden on the child and would have a very negative effect on response rates (cross-sectionally and longitudinally). Respondent burden was the single most important reason for not using the Drumcondra Reasoning Test (DRT) in the pilot. In light of what the Study Team interpreted as an ambiguous experience with the BAS the developers of the Drumcondra Reasoning Test developed a bespoke reduction of the standard test for use with 13-year-olds in *Growing Up in Ireland*. This reduced version of the DRT had an administration time of approximately 15 and 20 minutes on the numeracy and verbal components respectively. The reduced test was based on a subset of items from the main test.

The distinction between ability and achievement is important. The literature on both can be somewhat confusing. Both constructs are referred to by a variety of terms and are measured in a number of different ways. Cognitive ability is also referred to in the literature as aptitude (Martin & O'Rourke, 1984); intelligence or IQ (Duckworth & Seligman, 2006). It attempts to measure scholastic ability unlinked to the school curriculum. A high scholastic ability does reflect a certain element of skill acquisitions (literacy/numeracy) but not a knowledge of the curriculum per se. Academic achievement tests, on the other hand, measure performance and can be strongly influenced by factors such as school attendance and engagement; pupil's personality traits, motivation and effort; the extent of parental support; and the provision of appropriate learning experiences, teaching quality, school ethos, and structure among other possible factors (Deary, Strand, Smith, & Fernandes, 2007).

Tests of cognitive ability were initially developed in an attempt to predict individual differences in educational outcomes and there is a general agreement that the two are

¹³ Optical Character Recognition (OCR).



moderately to strongly correlated (Deary et al., 2007). A large, longitudinal study of over 70,000 English students found a correlation of 0.81 between cognitive ability tests at age 11 and national school examinations at age 16, across 25 individual subjects (Deary et al., 2007). In the Irish context, performance in the verbal and numerical reasoning components of the Differential Aptitude Test was found to be highly predictive of Junior Certificate grades (Hannan, Smyth, McCullagh, O'Leary & McMahon, 1996). Their predictive nature of subsequent performance in State and other examinations underlines the importance of ensuring that the most appropriate test is included in the main phase of fieldwork. As will be discussed in Chapter 10 below, in light of the experience of the cognitive tests used in the main pilot, an important recommendation from that phase of the work is the testing of the Drumcondra Reasoning Test in a further pilot stage with the 13-year-olds prior to main fieldwork.





Chapter 5

MAIN PILOT – INSTRUMENTS IN HOME-BASED COMPONENT





5 MAIN PILOT – INSTRUMENTS IN HOME-BASED COMPONENT

5.1 INTRODUCTION

This chapter outlines the topics covered by the various home-based instruments used in the pilot at Wave 2. The questionnaires are included in Appendix C (with some copyrighted items redacted).

The following is a complete list of all instruments administered in the home in the course of the pilot.

1. Primary Caregiver questionnaire (main and supplementary sections)
2. Secondary Caregiver questionnaire (main and supplementary sections)
3. Questionnaire modules for Twins and Triplets
4. Child Main Questionnaire
5. Child Sensitive (Part 1)
6. Child sensitive (Part 2)
7. British Ability Scales (BAS) Matrices
8. British Ability Scales (BAS) Verbal Similarities
9. Early School-Leaver's Questionnaire
10. *Non-resident parent questionnaire

*This item was issued by the Study Team on a postal basis and self-completed by non-resident parent/regular carer, where relevant (for more details see Section 5.9 below).

A brief description of each is given below, to give a flavour of their content. The reader is directed to Appendix C to review the content more fully. The scales used in the course of the home interviews are discussed separately in Chapter 8.

5.2 THE PRIMARY CAREGIVER QUESTIONNAIRE (APPENDIX C1)

The Primary Caregiver's main questionnaire had nine sections as set out below:

Section A Introduction and Household Composition

- | | |
|--------------|---|
| A1–A5 | Household grid (composition, relationships and changes since last wave) |
| A6 | Primary Caregiver check, respondent's relationship with the child (biological, adopted, fostered) |
| A9 | Details on siblings of Study Child living outside the household |



Section B Child's Health

- B1** Child's current health
- B2–B6** Chronic health conditions
- B7–B9** Chest problems (wheezing and whistling)
- B10–B12** Accidents and injuries
- B13** Hospitalisation
- B14–B15** Use of health services
- B17–B18** Dental care
- B19** Child eats breakfast before going to school
- B20** Primary Caregiver's assessment of child's weight
- B21–B22** Distance to school and method of transport

Section C Respondent's Health

- C1–C6** Primary Caregiver's health
- C7–C8** Anyone in household with chronic health problem that impacts on study child
- C9** Primary Caregiver's exercise
- C10–C11** Primary Caregiver's perception of own weight and dieting habits
- C12–C14** Medical insurance cover/medical card

Section D Child's Emotional Health and Well-being

- D1** Life events
- D2** Strengths and Difficulties Questionnaire
- D3** Personality measure - Ten Item Personality Inventory

Section E Child's Education

- E1** Class which the child is in now
- E2-4** How child has settled in to new school
- E5** Parental contact with the school



- E6** Number of days absent from school and reasons for absence
- E7-8** Time spent on homework and help provided by parents
- E9-12** Perception of how child is doing in his/her schoolwork
- E13** How many close friends the child has
- E14** How far you expect the child to go in his/ her education
- E15-17** Knowledge of bullying
- E18–E22** Learning difficulty, communication or coordination disorder, diagnosis and adequacy of supports
- E23** Number of books child has access to in the home
- E24-27** Childcare arrangements
- Section F Family Context**
- F1** Pianta Child-Parent Relationship Scale
- F2** Monitoring and supervision scale (2 subscales)
- F3** Disclosure scale
- F4** Time spent with the child and activities carried out with him/her
- F5** Time spent with other family members living outside the family home
- F6** Work-life balance
- F7** Perceived fairness of distribution of household tasks
- F8** Conduct disorder scale
- Section G Socio-demographics**
- G1–G4** Details on family's accommodation
- G5–G22** Work status, occupation and working hours of Primary Caregiver
- G23** Occupation of Secondary Caregiver
- G24–G26** Household income
- G27–G30** Social welfare dependency



G31–G33 Deprivation including Basic Deprivation Scale

G34 Car ownership

G35 Effects of recession on family

Section H About You (Primary Caregiver)

H1–H2 Primary Caregiver's education

H3 Child's first language

H4 Literacy

H5, H6 English literacy

H7 Numeracy

H8–H9 Religion and religious beliefs (religious denomination only for new respondents)

H10–H14 Citizenship, country of birth and length of time in Ireland (if new respondent)

H15 Ethnic background

No Section I

Section J Neighbourhood/Community

J1 Time in local area (if address has changed from Wave 1)

J2 Perceptions of local area

J3 Intentions to continue living in Ireland

5.3 THE SECONDARY CAREGIVER'S MAIN QUESTIONNAIRE (APPENDIX C2)

This instrument was administered to the resident spouse or partner of the Primary Caregiver. The questionnaire was a substantially reduced version of the Primary Caregiver instrument, focusing exclusively on the factual information and characteristics of the Secondary Caregiver as well as the relationship between him/her and the Study Child.

Section A Introduction

A1 Relationship to Study Child

Section B Parental Health

B1–B5 Secondary Caregiver's health

B6 Physical activity



Section C Parenting and Family Context

- C1** Pianta Child-Parent Relationship Scale
- C2** Monitoring and supervision (see note d under Section F of Primary Caregiver Questionnaire)
- C3** Disclosure scale
- C4** Work-life balance
- C5** Perceived fairness of distribution of household tasks between partners
- C5, C7** Time spent in activities with the Study Child
- C6** Spirituality

Section D Socio-demographics

- D1–D17** Work status, occupation and working hours
- D18** Reasons for not working (where applicable).

Section E About the Secondary Caregiver

- E1–E2** Secondary Caregiver's education
- E3/E6** Literacy/Numeracy (only for new respondents or those for whom these were an issue at the first interview)
- E4–E5** English fluency
- E7–E8** Religion and religious beliefs
- E9–E13** Citizenship and time living in Ireland (new respondents only)
- E14** Ethnic background

5.4 PRIMARY AND SECONDARY CAREGIVER SENSITIVE SECTIONS (APPENDIX C3)

This questionnaire recorded slightly more sensitive information from the respondent and was self-completed on the laptop (Computer Assisted Self-Completion Interview – CASI basis). The same questionnaire was used for both Primary and Secondary Caregivers, except that reasons for changes to the household grid (forward-fed from the start of the main Primary Caregiver Questionnaire) - which was only asked of the Primary Caregiver.



The sensitive questionnaire started with a number of sample or instruction questions to give the respondent practice at completing the instrument. The questionnaire recorded information on the following:

- AS1–AS3** Details on person(s) from Wave 1 who are no longer resident in the household
- S1** Whether or not the respondent was the biological parent of the Study Child (new respondents only)
- S2–S6** Details on adoptive Study Children (if relevant and a new respondent)
- S7–S11** Details on fostered Study Children (if relevant and a new respondent)
- S12–S16** Marital/cohabitating status
- S17–20** Nature and quality of marital/partner relationship including Dyadic Adjustment Scale
- S21** Parental stressors subscale from the Parental Stress Scale (Berry & Jones, 1995)
- S22** Current pregnancy status (asked only of female respondents)
- S23–24a-e** Alcohol consumption
- S26-27** Current smoking habits
- S28** Current use of illicit drugs
- S30-31** Depression – including Centre for Epidemiological Studies (CES-D) Depression Scale
- S32** Contact with Criminal Justice System
- S34** Knowledge of Study Child’s drug and alcohol use
- S35** Whether or not respondent had discussed sexual health issues with Study Child
- S36-47** Details on non-residency (where applicable) of the Study Child’s other parent. These include: when the parents previous relationship ended; custody arrangements; frequency of contact with the non-resident parent; financial contributions of non-resident parent to the Study Child’s household; quality of relationship between respondent and non-resident parent.

5.5 STUDY CHILD’S MAIN QUESTIONNAIRE (APPENDIX C4)

This questionnaire recorded information directly from the 13-year-old and was administered by the interviewer on a Computer Assisted Personal Interview (CAPI) basis. The questionnaire



ranged across all aspects of the Study Child's life, including sporting activities, food eaten in the previous 24 hours and internet usage.

The 13-year-old's main questionnaire recorded the following specific information:

- CQ1–5** Activities undertaken such as watching TV, computer use and reading for pleasure
- CQ6–7** Rules about watching TV or videos or particular video games
- CQ8** TV access in bedroom
- CQ9–14** Internet access, use, and experiences
- CQ15-16** Participation in voluntary work
- CQ17** Spending money and source of pocket money
- CQ19–21** Incidence of walking for pleasure or exercise
- CQ22–273** Participation in sporting activities including where the activity took place, length of participation and effort involved
- CQ24** Reasons for non-participation (if appropriate)
- CQ25-26** Participation in a range of general other activities and whether or not these had to be paid for, including special responsibilities such as team leader, etc.
- CQ27** List of common pastimes to be ranked 1, 2 or 3 in order of preference
- CQ28** Whom the 13-year-old would most likely do things with in his/her spare time
- CQ29** Time spent alone at home on an average school day
- CQ30** Perception of parental control
- CQ31–32** Eating habits (incl. adapted Sallis-Amherst Diet Inventory)
- CQ33** Frequency of brushing teeth
- CQ34** Chores done in the home and frequency
- CQ35** Perception of family wealth compared to classmates, neighbours and other families in Ireland
- CQ36–37** Worries in relation to self, family and the wider world



5.6 STUDY CHILD'S SENSITIVE QUESTIONNAIRES

There were two parts to the Study Child's sensitive questionnaire which were completed by the respondent on the laptop. This questionnaire contained more sensitive questions. As noted previously, permission was secured from the Primary Caregiver before completion of either part of the sensitive questionnaire.

5.6.1 STUDY CHILD'S SENSITIVE QUESTIONNAIRE – PART 1 (APPENDIX C5)

Part 1 of the sensitive questionnaire contained questions on issues such as peer relationships, bullying and sibling relationships. As with the adult interviews, the CASI interview started with sample questions to give the respondent practice at using the computer and negotiating the different formats of questions contained in the questionnaire.

Following the sample questions, the 13-year-old's sensitive questionnaire (Part 1) was structured as follows:

- CS1–6** Peer relationships including the Inventory of Parent and Peer Attachment (IPPA)
- CS7-8** Whether or not the 13-year-old felt s/he missed out on things or activities because the family could not afford them
- CS9** Depressive symptoms (Short Mood and Feelings Questionnaire)
- CS10** Whom the 13-year-old would turn to if anxious or distressed
- CS11–18** Sibling relationships including positive and negative aspects
- CS19–27** Bullying – victim and perpetrator
- CS28** Perception of own weight
- CS29–34** Actions taken to lose weight, including frequency of weight monitoring
- CS35** Whether trying to lose/ gain/ stay the same or do nothing about their weight
- CS36** Perceived unfair treatment by others, including its frequency and perceived reasons, such as gender, age, skin colour, nationality etc.
- CS37** Questions on discipline

Overall, the experience of the main pilot phase of the project indicated that the topics included in this part of the sensitive questionnaire did not present themselves as being particularly sensitive to either 13-year-olds or their parents and could be easily moved to the Child's Main Questionnaire for the Main Phase of fieldwork at this phase of the project.



5.6.2 STUDY CHILD'S SENSITIVE QUESTIONNAIRE – PART 2 (APPENDIX C6)

Part 2 of the Study Child's sensitive questionnaire recorded details on issues relating to smoking, alcohol and drug use, as well as anti-social or risky behaviours; sex and relationship guidance; and maturation. Given the highly sensitive nature of the questionnaire, it was emphasised to both parents and children that when the questionnaire was completed by the Study Child, no feedback would be given to parents on the information provided by their child.

- CZ1-2** Current and past relationship and sexuality education, including:
- CZ3** Whether or not the respondent had discussed sex and/ or relationship issues with parent(s)
- CZ4** Where the 13-year-old would be most likely to get information or advice on sex or relationship issues
- CZ5-6** Maturation/ stage of pubertal development
- CZ7** Anti-social activity and risky behaviours – including their nature and frequency
- CZ8** Contact with the Gardaí (Police)
- CZ9-10** Smoking and alcohol use
- CZ11-13** Use of other illicit drugs or inhalants.

A blank copy of both sensitive questionnaires (Part 1 and 2) was shown to and discussed with the Primary Caregiver (out of earshot of the 13-year-old) at the start of the interview. Signed consent was secured prior to their completion by the Study Child. Only 57 per cent of Primary Caregivers provided signed consent. On debriefing the interviewers it was felt that this was due, for the most part, to the content of Part 2 and to the emphasis which the interviewer put on the sensitive nature of the content. In hindsight, and with the benefit of the pilot phase, the Study Team realised that it had been overly zealous in its procedures for securing signed consent for the Child Sensitive Questionnaire – Part II.

All questions were answered fully by participants, with a good spread of answer patterns to each. This included the scaled items on the Sensitive Part 2 which also showed a good spread of answering which was largely in line with other research among children of this age. For example, the 13-year-olds were asked a sequence of questions about anti-social behaviour. These behaviours ranged in seriousness from not paying the correct fare on a bus to carrying a knife or weapon; using force or threats against the person; hitting, kicking or punching someone to hurt or injure them.

As expected, the proportion of children who recorded that they had been involved in the specified anti-social activities was small and zero prevalence was found for some of the more



serious acts, such as joyriding, burglary or arson. Behaviours such as not paying the correct fare on the bus or train, or taken something from home without permission were more common but still the majority of 13-year-olds (over 80% had never done these things). The reader is reminded that the main pilot sample was relatively small.

5.7 COGNITIVE TESTS – THE BAS VERBAL SIMILARITIES AND MATRICES SUBSCALES

In Chapter 4 we discussed the British Abilities Scales and, specifically, the administration of the Spelling and Numeracy subscales which were administered in the school component of the main pilot. In the home component of the main pilot the Study Child was asked to complete two cognitive tests from the BAS – the Verbal Similarities and Matrices subscales. The rationale for the choice of these two subscales (as well as the two administered in the school) is provided in Chapter 4 above).

Verbal Similarities

The Verbal Similarities test measures verbal knowledge and reasoning. It also reflects abstract and logical thinking, vocabulary and general knowledge and verbal fluency. The test consisted of 37 items. The interviewer read out three words and the Study Child was required to state how the three were similar or went together. For example, the test included:

Syrup, Toffee, Cake – what could you call all these things?

[Acceptable answers: sugary things; sweet things]

Matrices

The Matrices test comprises 33 items and measures the 13-year-old’s non-verbal reasoning ability. It also reflects the Study Child’s ability regarding visual-spatial analysis, including perception of shape, relative size and orientation. In this test, the child was shown an incomplete matrix of abstract figures. S/he was asked to select from among six choices the figure that correctly completed the matrix.

As with the Number Skills and Spelling tests above, the BAS Verbal Similarities and Matrices tests were converted to ability scores, percentile ranks, T-scores and age equivalents. The results of the home-based BAS tests used in the main pilot are summarised in Table 5.1 below.

Table 5.1 Summary scores on Spelling and Numeracy subscales of BAS from pilot, classified by mother’s level of educational attainment

Mother’s Education	Average Ability Score		Average Percentile	
	Matrices	Verbal Similarities	Matrices	Verbal Similarities
Leaving Certificate or less	119.5	126.5	57.9	59.1
Diploma	123.2	131.8	67.9	70.1
Degree or Higher	123.6	124.7	68.0	56.1
Total	121.5	127.1	63.0	60.6



The table outlines the summary scores (ability scores and percentiles) according to mother’s highest level of educational attainment. As noted in Chapter 4 in discussing the Spelling and Numeracy subscales, previous research in Ireland indicates a strong relationship between child’s ability score and mother’s education. From the figures in the table one can see that there is some evidence of a weak relationship on the matrices test but none on the verbal similarities test. Table 5.2 presents the same data according to number of books in the home to which the Study Child has access. As noted in Chapter 4, the question on number of books in the home has proven itself in other research carried out in Ireland (including analysis in *Growing Up in Ireland*) to be strongly related to educational and cognitive outcomes. As is clear from the table, however, the relationship in the data from the main pilot is not readily apparent. Other analysis of pilot data indicated that the correlation between the number of books in the household and the BAS scores on the matrices and verbal similarities tests is low and non-significant. As was the case with the results from the Spelling and Numeracy tests administered in the school, although not a definitive measure of the success or otherwise of the Matrices and Verbal Similarities subscales these relatively low and non-significant relationships were a cause of concern for the Study Team and some of its advisors in this area.

Table 5.2 Summary scores on Spelling and Numeracy subscales of BAS from pilot, classified by survey question on number of books which the Study Child has access to in the home

No. of books in the home	Average Ability Score		Average Percentile	
	Matrices	Verbal Similarities	Matrices	Verbal Similarities
Less than 30	121.4	126.7	62.6	59.5
31 – 50	121.1	128.7	56.0	61.3
51 – 100	119.3	122.6	62.1	54.5
100 +	122.5	129.1	66.4	64.3
Total	121.5		63.0	60.8

5.8 EARLY SCHOOL-LEAVER’S QUESTIONNAIRE (APPENDIX C8)

This questionnaire was developed by the Study Team for those 13-year-olds who had dropped out of school or who never made the transition to secondary school in the event of early school-leaving being identified among study participants. It was designed to be completed on paper. The prevalence of school drop-out at the end of Primary school in Ireland is very low and no early school-leavers were, in fact, encountered in the main pilot phase.

The questions in the Early School Leaver’s questionnaire were as follows:

- ES1-3** Date of leaving school and school year when left
- ES4** Main factors which influenced early school leaving



- ES5** Perceptions of different aspects of school (including school work, discipline, relationship with teachers etc.)
- ES6** Frequency of skipping classes in the last year of school
- ES7** Frequency of missing classes in the last year of school
- ES8** Number of friends who left school at the same time
- ES9** Factors which would have helped the respondent to stay in school (including support from parents, help with classwork and homework, etc.)
- ES10** School self-concept measured by 3 subscales of the SDQ II
- ES11** Whether or not respondent had a job (full or part-time) while still at school
- ES12–13** Participation in education or training since leaving school and whether or not this had been completed
- ES14** Current economic situation
- ES15** Plans for the future with regard to education and work
- ES16** If respondent's intention is to return to school, their highest level of education expected by the time education is finished
- ES17** Future plans with regard to job aspirations
- ES18** Aspirations for when they are 21 years of age (including living in Ireland, living abroad, being married, having a job, etc.)

5.9 NON-RESIDENT PARENT QUESTIONNAIRE (APPENDIX C9)

The purpose of this instrument was to record details from a non-resident parent (where relevant and possible). The resident parent/guardian was asked to provide contact details of his/her non-resident counterpart.¹⁴ The instrument was administered on a postal self-completion basis. It recorded details on issues such as contact between non-resident parent and the 13-year-old, and details on current and past relationship between the biological parents.

¹⁴ Experience at the 9-year wave of the study suggested that about 12% of families had a non-resident parent of which about 41% of PCGs provided contact details. The numbers involved in the pilot at age 13 were too low to report here for reasons of disclosure control.



- NR1 – NR4** Length and timing of contact visits
- NR5 – NR6** Perception of quantity of time spent with Study Child
- NR7** Locations where contact visits take place
- NR8** How contact arrangements were decided
- NR9** Roles perceived to be most important for a parent to do with his/her child
- NR10 – NR11** Other types of communication with Study Child
- NR12** Rating of quality of time spent with Study Child
- NR13** Involvement in routine caring tasks for the 13-year-old
- NR14-NR18** Financial arrangements (maintenance, etc.) between non-resident and resident parents
- NR19-NR23** (Where non-resident parent is the 13-year-old's father) nature of the relationship with 13-year-old's mother when she became pregnant with child, timing of separation and guardianship status
- NR24-NR26** Current relationship with the 13-year-old's other parent of and input to his/her upbringing
- NR27 – NR38** Socio-demographic characteristics of the non-resident parent.

A small number of non-resident biological parents were identified in the course of the main pilot phase. Contact details and permission to approach the non-resident parent was secured for most of the parents in question. All were issued with a copy of the non-resident parent questionnaire, but the response from these was very low.

5.10 PHYSICAL MEASUREMENTS

The weight of adult respondents and the Study Child were recorded in the course of the household interview. Interviewers also measured the height of all 13-year-olds but only the height of parents where it was unavailable from the previous wave. All heights and weights were recorded using the Leicester height stick and a SECA analogue weighing scales. Participants were asked to remove their shoes and wear only light clothing (no heavy jumpers or outerwear) before measurements were taken.



5.11 QUESTIONNAIRE TIMINGS – SCHOOL AND HOME-BASED COMPONENTS

5.11.1 SCHOOL-BASED COMPONENT

Table 5.3 summarises the mean time taken to complete the questionnaires and tests in the school. These figures do not include set-up time spent with the principal or other staff in arranging the visit but refer only to the direct administration of the questionnaires and tests. One can see that this was, on average, 49 minutes. This extended over two class periods (the maximum target time), allowing for distribution and collection of the questionnaires and test scripts. Arranging the visit to the school generally took place with an interviewer over the phone, in the first instance with the principal and (in some schools with adequate support staff) with the school secretary. This set-up time extended over several phone calls, often over an extended period of time.

Table 5.3 Summary timings completing the questionnaires and tests in the school

Questionnaire/Instrument	Average Minutes
Child questionnaire	14.9
Piers Harris	5.2
BAS Spelling test	12.7
BAS Number Skills	16.2
Total direct administration time in school	49.0

Time for completion of the worksheet completed by the principal on the individual *Growing Up in Ireland* pupils in the school is not included in Table 5.3 as this was filled out on a self-completion basis by the principal, in consultation with the children’s teachers. The pilot in the school was based on relatively small numbers of children in any single school. The Study Team expected these timings to increase in the main study, where the number of pupils in each school would increase substantially, so increasing the time required for clarifying points raised on completion the tests and for distribution and collection of test booklets.

5.11.2 HOME-BASED COMPONENT

The time spent in the home on various questionnaires is outlined in Table 5.4. With an average of almost three hours this clearly exceeded the target contact time of 90 minutes by a substantial amount.

Table 5.4 Summary of times taken to complete the questionnaires and tests in the school

Questionnaire/Instrument	Average Minutes
Primary Caregiver (Main)	64.0
Primary Caregiver (Sensitive)	13.8
Secondary Caregiver (Main)	8.8
Secondary Caregiver (Sensitive)	9.2
Child (Main)	16.8
Child Sensitive, Part 1	9.4



Questionnaire/Instrument	Average Minutes
Child Sensitive, Part 2	8.4
Child on Mum (Parenting inventory)	5.1
Child on Dad (Parenting inventory)	4.8
BAS Verbal Similarities	15.4
BAS Matrices	12.7
Total direct administration time in home	168.4
Saliva sample (estimate)	11

These figures relate to direct administration time and do not include engagement, arranging appointments, weights and heights, disengagement and so on. Based on interviewer debriefing, the Study Team estimated that a further 20-25 minutes could be added to the direct administration time in explaining the study, going through the information sheets, signing of consent forms and so on. Disengagement at the end of the interview also requires that the interviewer spends a little time with the family, outside the direct administration of the questionnaires and measurements. The substantial contact time with the family in the home-based component of the pilot underlined the clear need for significant reductions in administration time for the main phase of the project.¹⁵

5.12 COLLECTING A SALIVA SAMPLE

In the course of the pilot with the 13-year-olds a random sub-sample of 100 families was selected from the full pilot sample of 230. These 100 families were asked to participate in a genetic sampling exercise by providing a saliva sample from both the Study Child and his/her parents. The remaining 130 families were not asked to provide an actual saliva sample but instead to answer two additional questions on the Primary Caregiver Questionnaire on whether or not they would, hypothetically, provide a saliva sample if asked to do so and impact on participation in *Growing Up in Ireland*. The initial introductory letter which was sent to the sub-sample of 100 families from whom the saliva sample was to be requested included the standard information sheet on *Growing Up in Ireland*, along with a dedicated Information Sheet on the genetic sampling exercise.

When the field interviewer called to the homes of the 100 families in question to discuss the overall study and to arrange an appointment to administer the interviews s/he explained the information sheets on both the core *Growing Up in Ireland* main pilot and also on the genetic sampling. The information sheets and the interviewers emphasised that the family could participate in the core *Growing Up in Ireland* main pilot study without providing the saliva sample if the family decided not to. The interviewer emphasised that the latter was part of a

¹⁵ It should be noted that the overrun in time reflects the extent to which the pilot was used to test various questions, tests etc., for possible use in the main phase.



separate project, separately funded and run by an independent group of researchers¹⁶ from that involved in ***Growing Up in Ireland***.

The Primary and Secondary Caregivers were asked to sign a consent form for their own sample as well as a consent form for the collection of the 13-year-old's saliva sample. The 13-year-old was also asked to sign an assent form. These consent/assent forms were explained and signed at the beginning of the interview as part of the overall consenting process, before any interviews were administered or measurements taken. The saliva samples themselves were collected from the 13-year-olds and their parents using the Oragene collection kit. This was a readily available kit which involves the respondent spitting into a small plastic container to a pre-specified mark and placing a lid on it.

Whether or not families participated in the survey did not appear to vary in relation to being in the saliva-collection sub-group: 79 per cent of respondents who were asked to provide a saliva sample participated in the ***Growing Up in Ireland*** pilot, compared to 75 per cent among the other pilot families (who were not asked to provide a sample but were asked some questions about their attitude to the idea).

As noted above, a saliva sample was requested from the 13-year-old, the Primary and Secondary Caregiver (where relevant). Among this subgroup of families, 76 per cent donated some or all saliva samples requested of them. Full compliance was achieved with 46 families – just over 58 per cent..

5.12.1 HYPOTHETICAL QUESTION ON WILLINGNESS TO PROVIDE A SALIVA SAMPLE

The Primary Caregiver in the 130 families in the pilot who were not included in the saliva sub-sample was asked two hypothetical questions on:

- a. their willingness to consent to providing a sample of their child's saliva if requested and
- b. the effect (if any) which the taking of a saliva sample would have on their participation in the ***Growing Up in Ireland***.

It was emphasised that they were not being asked to provide a sample of their own or their child's saliva at this time but that the questions being put to them were purely hypothetical in nature. A total of 72 per cent of Primary Caregivers from the 'non-saliva group' who participated in the pilot said they would consent to providing the saliva samples. The

¹⁶ Separate from the core team headquartered at the ESRI who administer the main elements of the ***Growing Up in Ireland*** survey.



remaining 28 per cent were equally split (14 per cent each) between those who said they would not consider it at all and those who would be willing to consider it if they were provided with more information on the matter. When asked if inclusion of a request for a saliva sample would affect their participation in the core **Growing Up in Ireland** main pilot study, 87 per cent said it would have no effect; 7 per cent said it would make them less likely to participate and 7 per cent said it would make them more likely to participate.

The saliva samples which were collected in the pilot were returned to the Study Team by the field interviewers. The samples were marked back as having been provided by the respondent and then irreversibly anonymised. In anonymising the saliva kits they were identified only as coming from a Primary Caregiver, Secondary Caregiver or 13-year-old. All family identifiers were removed so that neither the Study Team nor the laboratory to which the samples were sent was able to identify the family from which they had come from. The samples were assessed to determine the quantity and quality of the DNA which could be extracted from them, before being destroyed. It was assessed that the quantity and quality of DNA would be sufficient to allow genome-wide genotyping and sequencing.

For number of reasons it was decided not to pursue the genetic sampling component in **Growing Up in Ireland** wave with the 13-year-olds. Had the samples been collected in the main phase of the study they could not have been anonymised as they were in the pilot phase. The pilot phase established proof of principle on the collection of the samples. Following anonymization the saliva samples were used only to establish whether or not they would be of a sufficiently high quality to allow genome-wide genotyping. It was felt that collecting and retaining the saliva samples in the main phase of interviewing in a manner which allowed the genotypic data to be linked to the survey data and which would allow researchers to analyse them to their maximum potential would raise a series of legal, ethical and budgetary difficulties. For these reasons it was decided not to pursue the possibility of saliva sampling in the main round of data collection with the 13-year-olds.



Chapter 6

MAIN PILOT – SCALES USED IN HOME-BASED QUESTIONNAIRES





6 MAIN PILOT – SCALES USED IN HOME-BASED QUESTIONNAIRES

6.1 INTRODUCTION

This chapter considers the scaled items used in the questionnaires which were administered in the home-based component of the main pilot phase, beginning with two scales which were administered to the children before moving to the scales which were administered to the Primary and/or Secondary Caregivers.

6.2 SCALED QUESTIONS ADMINISTERED TO THE 13-YEAR-OLD IN THE HOME

Two main scales are administered: The Inventory of Parent and Peer Attachment (IPPA) and the Short Mood and Feeling Questionnaire (SMFQ).

6.2.1 THE INVENTORY OF PARENT AND PEER ATTACHMENT (PEER SUBSCALE)

Instrument rationale and description

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

The Inventory of Parent and Peer Attachment (IPPA) (Armsden and Greenberg, 1987) was developed in order to assess adolescents' perceptions of the positive and negative affective/cognitive dimensions of relationships with their parents and close friends – and particularly how well these figures serve as sources of psychological security. The theoretical framework is attachment theory, originally formulated by Bowlby (e.g. 1958) and since then expanded by others. Three broad dimensions are assessed: degree of mutual trust; quality of communication; and extent of anger and alienation. The development samples were 16 to 20 years of age; however the IPPA has been used successfully in several studies with adolescents as young as 12. The instrument is a self-report questionnaire with a five point Likert-scale response format. Only peer relationships were examined here.¹⁷ The measure comprises 25 items, but because of time constraints only the 17 items making up the Trust and Alienation subscales were used in the pilot. Measures of communication are already included in other scales in the 13-year old questionnaire.

¹⁷ The IPPA was used at 13 years to measure peer attachment. The Pianta was used at 13 years to measure the parent-child relationship to ensure longitudinal continuity and measure individual-level change over time, as it was used with this cohort at 9 years of age.



Performance in the Pilot Study

Internal reliability consistency of the subscales was found to be moderate for the Alienation subscale (0.57) and high for the Trust subscale (0.88). The scores for each subscale are calculated by summing the items (some have been reverse coded). The subscales showed reasonably good differentiation of scoring across the items. The means for Alienation and Trust were 13.1 (S.D. 3.37) and 43.4 (S.D. 6.26), both close to the lower and upper ends of the scales (respectively), reflecting a highly skewed distribution. The number of respondents was small, given the relatively low levels of parental consent to the relevant Child Sensitive questionnaires.

To look at the convergent validity of the measure items were cross-referenced with other measures and positive correlations were found between peer alienation and the Study Child's self-reported depression (as measured by the Short Mood and Feelings Questionnaire) ($r = 0.40$, $p < 0.01$), while it was negatively associated with the 13-year-old's overall self-concept (Piers-Harris) ($r = 0.38$, $p < 0.05$). Peer trust on the other hand, was positively associated with Behavioural Adjustment (Piers-Harris) ($r = 0.44$, $p < 0.05$).

Peer relationships become much more salient in adolescence and are quite distinct from parent-child relationships – although there are still clear similarities between them. Since peers are such an important reference group for young people in adolescence, it was felt that the measure should be used in its present form (i.e. excluding the parent part of the inventory, and with two of the three subscales) in the 13-year-old questionnaire.

6.2.2 SHORT MOOD AND FEELINGS QUESTIONNAIRE

Instrument rationale and description

A US prevalence study of mental disorders in children and adolescents, using a structured diagnostic interview, estimated the 12-month prevalence of mood disorders among 12-15-year-olds to be 4.8% (Merikangas, He, Brody, Fisher, Bourdon & Koretz, 2010). Although depressive disorders are relatively common in children and adolescents, many depressed youth do not seek or receive either psychiatric evaluation or treatment: in the above study by Merikangas et al. only 44% of those children and youth who met the diagnostic criteria for a mood disorder had used a mental health service in the past year. Lundervold, Breivik, Pooserud, Stormark and Hysing (2013), in a review of the Short Mood and Feelings Questionnaire, note previous research on both the increased frequency of psychiatric



disorders in adolescence and associations between depressive symptoms and other mental health issues¹⁸, problems at school and in relationships, and substance use¹⁹.

The Short Mood and Feelings Questionnaire (SMFQ) (Angold et al., 1995) was chosen for use in the *Growing Up in Ireland* study as it is a well validated scale which is widely used in studies of adolescents as “a self-report measure of childhood and adolescent depression” (ibid.). The developers of the 13-item SMFQ found it to have good internal reliability (0.87). The 13 items come from the original Mood and Feeling questionnaire (MFQ) and focus on affective and cognitive symptoms, including one item pertaining to low mood (I felt miserable or unhappy) and one item addressing anhedonia (I didn't enjoy anything at all). The informant rates each statement as 2 (true), 1 (sometimes true), or 0 (not true) over the past two weeks, yielding a maximum total score of 26. Rhew et al (2010), using a school-based sample of 521 11-13-year-old children, also found internal reliability to be good, at 0.84. From an operational perspective it is also a relatively brief (13-item) self-report measure which is comparatively easy to administer.

Performance of the SMFQ in *Growing Up in Ireland*

The score for depressive symptoms is calculated by summing across the items. The authors recommend a cut-off score of 8 or above to differentiate between those who are likely to be depressed²⁰. The maximum score on the SMFQ is 26. There was a reasonably good spread of scores ranging from 1 to 23, with a good spread of answering on each item, although clearly skewed towards the more positive end of the scale.

In *Growing Up in Ireland* the reliability coefficient for the SMFQ was 0.81, replicating the previous findings for this measure. Following the authors' scoring instructions 12.8 per cent of the young people in the pilot sample scored above the 'depression' threshold.

Many of these results have already been considered in our discussions in other sections. In summary: Child depressive symptoms was negatively associated with parental monitoring (Primary Caregiver report) ($r = -0.31, p < 0.01$), parental control ($r = -0.25, p < 0.05$), peer alienation ($r = -0.48, p < 0.01$), and positively associated with total difficulties (SDQ) ($r = 0.27, p < 0.05$), maternal stress ($r = 0.35, p < 0.01$), and delinquency ($r = 0.26, p < 0.05$).

Although some of the literature suggests that by age 13 more than twice as many girls as boys become depressed (Nolen-Hoeksema & Girgus, 1994), this was not observed in the pilot

¹⁸ Citing Angold et al. 1999.

¹⁹ Citing Birmaher et al. 2007.

²⁰ In the original study by Angold et al. (1995) a cut-off score of 8 had 60% sensitivity and 85% specificity when compared to the criterion of a diagnosis of depression using the Diagnostic Interview Schedule for Children depression scale.



findings, as there was no significant difference between the proportion of boys and girls who were recorded as displaying depressive symptoms. This could possibly be attributed to small cell sizes.

Given the negative impact that depression can have both in adolescence and in later years (if recurring), it was deemed essential to include the SMFQ in the 13-year-old questionnaire. With longitudinal research, a stronger evidence base can be provided on depression in childhood for policy-makers and others.

6.2.3 PARENTING STYLE INVENTORY

Instrument description

The term 'parenting style' refers to the degree of warmth and control that parents use when interacting with their children, such as when responding to challenging behaviour. Three parenting styles of authoritative (warmth and control), authoritarian (emphasis on control) and permissive (warm but lacking control) were initially described by Baumrind (1966). This was later extended to a four-fold classification to include neglectful parenting (lacking both warmth and control) by Maccoby and Martin (1983). Parenting style was assessed using the child's own report in the first round of interviewing at 9-years of age.

The Parenting Style Inventory (PSI-II) (Darling and Toyokawa, 1997) was originally designed to assess the construct of parenting style independently of parenting practices. Parenting style refers to the overall emotional climate in which particular parent-child interactions occur. Limitations of previous scales have been that they confound parenting style with parenting practices that are directed towards particular goals, for example social or academic (Steinberg et al., 1992; Dornbusch et al., 1987).

At 9 years of age the adapted PSI-II was used, as it was short and simple for the children to read. Study Children completed the Responsiveness and Demandingness subscales from the PSI – II. The third subscale, Psychological Autonomy-Granting, was not used in the first wave as it was thought to be less appropriate for 9-year-olds than for the adolescents for whom it was originally developed, but it was included for the pilot at 13 years. The Study Child completed the scales in respect of the adults who completed the Primary and Secondary Caregiver interviews in the household. They also completed one in respect of a non-resident biological parent if relevant.

The Parenting Style Inventory II subscales of Responsiveness, Demandingness and Autonomy are most closely related to the concepts of warmth and control in parenting, which are the dimensions commonly used to categorise parenting styles as authoritarian, authoritative, neglectful or permissive. Parenting style is widely acknowledged as being an important input



into child development and later well-being²¹ (e.g. see literature review in Greene et al. 2010) particularly in relation to the positive impact of an authoritative parenting style (high warmth combined with high control). In addition, for this particular inventory, the combined subscales were much shorter than most of the inventories aimed at adult respondents, which are commonly 40 items or more in length; and the scale was entirely self-report requiring no direct observations of parenting behaviour.

For the pilot at 13 years of age the original measure was used, where the questions were answered by the Study Child on a five-point scale of Strongly disagree, Disagree, I'm in between, Agree, Strongly agree.

Performance in the Pilot Study

The measure performed reasonably well in the pilot, with internal consistency reliabilities of 0.77, 0.63 and 0.66 for the responsiveness, demandingness and autonomy-granting subscales respectively for the child report of mother's parenting style. The scores were calculated by summing across the 5 items in each of the subscales (range = 5-25). The scale items showed a good spread of responses with a minimum and maximum score achieved for most items. Subscale scores ranged from 9 to 25 with a mean of 21.3 (S.D. 3.20) for responsiveness; 9 to 25 with a mean of 18.8 (S.D. 2.97) for autonomy; and 11 to 25 with a mean of 18.6 (S.D. 2.76) for demandingness.

The criterion validity of the measure was supported by predicted correlations with other relevant measures related to parenting, such as parental control ($r = 0.29, p < 0.01$) and child disclosure ($r = 0.24, p < 0.05$). Findings also indicated a significant positive association between responsiveness on the parenting scale and overall self-concept (measured by the Piers-Harris) ($r = 0.42, p < 0.01$) as well as some of the self-concept subscale measures, namely behavioural adjustment ($r = 0.47, p < 0.01$) and intellectual and school status ($r = 0.42, p < 0.01$). It was also negatively associated with other important child outcomes such as child reported depression ($r = -0.39, p < 0.01$) and delinquency ($r = -0.27, p < 0.05$), but positively related to prosocial behaviour ($r = 0.43, p < 0.01$).

The autonomy-granting subscale (which was not used at 9 years) also proved an appropriate measure in terms of how it correlated with other relevant measures. For example, higher levels of autonomy granted to young people were associated with less likelihood of peer alienation ($r = -0.40, p < 0.01$), parental reports of conduct problems ($r = -0.32, p < 0.01$) or

²¹ See, for example, *Growing Up in Ireland* - Review of the literature pertaining to the second wave of data collection with the Child Cohort: Development at age thirteen.



parent-child conflict ($r = -0.31, p < 0.01$). It was also negatively associated with parental stress ($r = -0.29, p < 0.01$).

The results from the pilot showed that authoritative parenting was the most common style (81 per cent), which is in keeping with the nine year results, while neglectful was the least common style of parenting, with only one parent falling into that category in the 13-year pilot.

Parenting style is clearly an important measure which is associated directly with many salient child outcomes, as well as being a potential mediating factor. Therefore the PSI-II was retained for the main study, and given the findings on the autonomy-granting subscale, it was also maintained for its relevance to this age-group.

6.3 SCALED QUESTIONS ADMINISTERED TO PRIMARY CAREGIVERS

A number of scales were also used in the Primary (and sometimes Secondary) Caregiver questionnaires. These included:

1. The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997)
2. The Pianta Parent-Child Questionnaire (Pianta, 1992)
3. Child personality – Ten Item Personality Inventory (TIPI) (Gosling, Rentfrow and Swann, 2003)
4. Parental Stress (Berry and Jones, 1995)
5. Monitoring and Supervision (Kerr and Stattin, 2000)
6. The FAST alcohol screening test (Hodgson et al., 2002)

The first three scales were included in the questionnaires used at 9 years of age, the last four were introduced at 13 years. Each is considered below.

6.3.1 STRENGTHS AND DIFFICULTIES QUESTIONNAIRE

Instrument description

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) is a brief (25 item) measure of the prosocial behaviour (one subscale) and socio-emotional and behavioural difficulties of 3-16-year-olds. It can be completed by parents, teachers or children/adolescents themselves. Both the Primary Caregiver and the Study Child's teacher completed the SDQ in the course of the main pilot phase, thus allowing a degree of triangulation and comparison of the assessment from both parent and teacher.

The SDQ produces scores for each of five subscales; Emotional symptoms, Conduct problems, Hyperactivity/inattention, Peer problems and Prosocial behaviour. Each subscale comprises 5



items and a Total Difficulties score is obtained by summing scores across the four deficit-focused scales (i.e. all except the prosocial behaviour scale). Respondents are required to indicate their level of agreement to each item on a three-point scale with 0 = 'not true', 1 = 'somewhat true' and 2 = 'certainly true'. Subscale scores vary from 0 to 10 and the total difficulties score ranges from 0 to 40. Higher scores on the problem-oriented scales are indicative of more problems. This scale is very widely used in child cohort studies and has proven itself to be an extremely useful measure of socio-emotional well-being. It has very good psychometric properties (see discussion in the 13 year design report, Thornton, Williams, McCrory, Murray & Quail, 2016). It was included in the 9-year interview with the Study Child's Primary Caregiver and teacher and worked very well (in terms of technical and other performance) and has proven itself to be a very valuable measure in the study. Inclusion in the 13-year study was felt to be important longitudinally to provide a consistent measure of socio-emotional well-being which lends itself to international comparisons, and so will allow researchers and other analysts to investigate how children are faring in Ireland relative to their peers in other countries.

Performance in the Pilot Study

In terms of internal consistency reliability, findings from the SDQ completed by the parents were mixed for the subscales. For example, alphas were moderate to high for the hyperactivity ($\alpha = 0.79$), prosocial behaviour ($\alpha = 0.74$), peer problems ($\alpha = 0.62$) and emotional symptoms subscales ($\alpha = 0.64$), and slightly lower for conduct problems ($\alpha = 0.58$). Previous investigators have also reported mixed reliabilities for the SDQ subscales (see for example, Goodman 2001; Van Roy et al, 2008). The alpha for the Total Difficulties scales was acceptable at 0.63.

Overall, the scores on the Total Difficulties score were relatively low for the pilot group (maximum score of 21 out of 40) with a mean score of 6.6, although this is not surprising since only about 1.4 per cent of 9-year-olds in the first wave of interviewing scored above 21 on the SDQ.

Using the 90th percentile to define children with an 'abnormal' or 'problematic' profile on the SDQ (as per the author's recommendation), it was noted that young people who fell into this category were more likely to have conduct problems (as rated by the Primary Caregiver), although there was no difference in terms of self-reported delinquency. Primary Caregivers of these children were more likely to report higher levels of parenting stress. Children from lower socio-economic backgrounds (indexed using maternal education) were also more likely to fall into the 'problematic' group, which is consistent with findings in the literature and with previous findings from the *Growing Up in Ireland* 9-year cohort (e.g. Williams, et al, 2009).

The total difficulties measure and all the subscales from the SDQ showed moderate stability over time: total difficulties ($r = 0.54$, $p < 0.001$); emotion ($r = 0.43$, $p < 0.001$); hyperactivity ($r = 0.59$, $p < 0.001$); conduct ($r = 0.30$, $p < 0.05$); peer problems ($r = 0.51$, $p < 0.001$) and prosocial behaviour ($r = 0.48$, $p < 0.001$).



The recommendation from the pilot regarding the SDQ was to retain it in the questionnaires in the 13-year-old wave to ensure continuity from the first wave of *Growing Up in Ireland*, and also so that it could be used (as with many of the measures in the Study) in international comparative work.

6.3.2 PIANTA PARENT-CHILD RELATIONSHIP SCALE

Instrument description

The Pianta parent-child relationship scale is a parent reported assessment of the quality of the relationship with the child. The scale gives measures of perceived conflict and closeness in the parent-child relationship.

Both Primary and Secondary Caregivers completed the Pianta Child-Parent Relationship Scale (Pianta, 1992) in respect of the Study Child during the course of the main interview. Respondents indicated the current applicability of each of 15 statements (as opposed to the longer 30-item version used in the 9-year wave). The 15 statements form two subscales reflecting Conflicts (8 items), and Positive Aspects of the Relationship – or closeness – (7 items). The Conflicts subscale includes items on the parent's perception of difficulties in the relationship with the Study Child and the interpersonal temperament traits of the Study Child. The Positive Aspects (Closeness) subscale includes items relating to getting on with the Study Child and feelings of effectiveness as a parent. The respondent is asked to record the extent to which they feel each of the 15 statements applies to their relationship with Study Child. A five-point scale is used: 'Definitely does not apply', 'Not really', 'Neutral, not sure', 'Applies somewhat', and 'Definitely applies'. An answer option of 'Not applicable' was allowed for one of the statements relating to being at work for those who were not employed outside the home.

The measure is easy to administer and has been used in the 9-year wave of *Growing Up in Ireland* (hence ensuring longitudinal consistency in the measure) as well as multiple other child cohort studies in other countries, including, for example, in the Millennium Cohort Study.

Performance of the Pianta in *Growing Up in Ireland*

The internal consistency reliability of both the positive aspects and conflict subscales (on the 15-item version) was good for both the Primary Caregiver (0.74 and 0.88) and the Secondary Caregiver (0.77 and 0.76).

The validity of the Pianta scores was supported by predicted correlations with measures of relevant aspects of emotional and behavioural outcomes as measured by the SDQ. Findings indicated a positive association between conflict in the parent-child relationship and emotionality ($r = 0.37$, $p < 0.01$), conduct ($r = 0.71$, $p < 0.01$), hyperactivity ($r = 0.36$, $p < 0.01$),



peer problems ($r = 0.37$, $p < 0.01$), and total difficulties ($r = 0.65$, $p < 0.01$), and a negative association with the child's prosocial behaviour ($r = -0.56$, $p < 0.01$).

Scores on the Pianta for the Primary Caregiver were correlated with other measures, such as maternal depression (as measured by the CESD). Lower depression scores were associated with more positive parent-child relationships ($r = -0.51$, $p < 0.01$). The level of couple conflict (measured by frequency of arguments) was also significantly negatively associated with parent-child positive aspects for the Secondary Caregiver ($r = -0.20$, $p < 0.05$), but not the Primary Caregiver. This difference may be related to previous research findings (e.g., Parke, 2002), which have found that the association between marital conflict and the quality of the parent-child relationship to be stronger for men than women.

Longitudinally, the Pianta seems to be a moderately stable measure of the parent-child relationship. Overall, aggregate levels of conflict and positive aspects with the Primary Caregiver were not significantly different at 9 and 13 years. At an aggregate level the mean conflict score among 9-year olds was 13.7 (out of 40), compared to 14.6 at 13 years and the mean positive aspects score was 32.6 (out of 35) at 9 years, compared to 32.5 at 13 years of age. The correlation in the scores between 9 and 13 years, however, indicated a degree of change at the level of the individual child ($r = 0.47$, $p < 0.001$ for conflict and $r = 0.45$, $p < 0.001$ for positive aspects).

The Pianta performed well in the 9-year main phase and the 13-year pilot. Given the significance of the measure in terms of its association with important child outcomes, it was decided to keep the measure in its 15-item format for the 13-year wave.

6.3.3 CHILD PERSONALITY – TEN ITEM PERSONALITY INVENTORY (TIPI)

Instrument rationale and description

Personality, which is a major source of individual difference, is associated with social and psychological well-being and vulnerability to behavioural and psychosocial difficulties. Personality was measured in the pilot at 13 years using the Ten Item Personality Inventory (TIPI) (Gosling, Rentfrow and Swann, 2003). The scale was completed by the Study Child's parent.. The scale has been widely used with older adolescents and subsequently across the life course, thus making it a good longitudinal scale for *Growing Up in Ireland* and providing a good 'forward link' to data sweeps at 17 and 20 years of age with this cohort. The ten item personality scale measures the 'Big-Five' dimensions: openness, conscientiousness, extraversion, agreeableness and emotional stability. Many of the personality scales measuring the 'Big-Five' personality dimensions are very long and, because of time limitations, not appropriate for use within the current Study.

At 9 years of age the Emotionality, Activity and Sociability Scale (EAS) (Buss and Plomin, 1984) was administered. This is a measure of temperament which is appropriate for children aged 1 to 9 years of age. By 13 years the EAS temperament scale was no longer age-appropriate



and the Study Team decided to replace this temperament measure with a measure of personality that could be used with the cohort members into later adolescence and adulthood. The TIPI is widely used (thus allowing international comparisons of children in Ireland with those in other countries); can be used into adulthood (thus ensuring longitudinal consistency in subsequent waves of the project) and has good psychometric qualities. The TIPI is also recognised as a measure of a complex concept which can be feasibly administered within a largescale quantitative study like *Growing Up in Ireland*, without too much added respondent burden.

Performance in the Pilot Study

Total scores for each of the subscales ranged from 1 to 7 and responses ranged from 1 to 7 on three of the subscales and 2 to 7 on two of the subscales. Means and S.D.s for the subscales – extraversion 4.8 (1.57); agreeableness 5.9 (1.18); conscientiousness 5.14 (1.51); emotional stability 5.53 (1.37); and openness 5.8 (1.11) were not dissimilar to the normative data reported by the authors.

Child's temperament – as measured at 9 years of age – was found to be associated with developmental outcomes, such as emotional and behavioural difficulties (measured by the SDQ), as well as relationships with others (parent-child relationship). With this in mind, the convergent validity of the personality measure used in the 13-year pilot was assessed by comparing some of the scale scores from the personality measure with scale scores on other measures, such as the child's behaviour, as reported by the Primary Caregiver; the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997), the Pianta child-parent relationship scale, and the Inventory of Parent and Peer attachment (IPPA). Some of these findings are summarised below.

Parental report of the Study Child's conduct (DSM-IV items) was negatively associated with agreeableness ($r = -0.42$; $p < 0.01$), conscientiousness ($r = -0.30$; $p < 0.01$) and emotional stability ($r = -0.26$; $p < 0.01$). The total difficulties score on the SDQ was found to be negatively associated with agreeableness ($r = -0.53$; $p < 0.01$) and emotional stability ($r = -0.56$; $p < 0.01$) on the TIPI. Higher scores on the SDQ conduct problems subscale were negatively associated with conscientiousness on the TIPI ($r = -0.49$; $p < 0.01$), while the prosocial behaviour was positively associated with agreeableness ($r = 0.56$; $p < 0.01$). Emotionality as measured by the SDQ was negatively correlated with emotional stability ($r = -0.63$; $p < 0.01$).

The parent-child relationship (Pianta) was also associated with some of the dimensions on the TIPI personality scale. For example, parent-child conflict was negatively associated with agreeableness ($r = -0.65$; $p < 0.01$) and emotional stability on the TIPI ($r = -0.37$; $p < 0.01$), while a positive parent-child relationship was positively associated with the child being rated as agreeable ($r = 0.49$; $p < 0.01$). Caution is, of course, required when interpreting the results cited above as the measures of personality and of the child's conduct (DSM-1V), the SDQ and the Pianta parent-child relationship were all rated by the parent.



In terms of peer attachment (as measured by child report on the Inventory of Parent and Peer Attachment (IPPA)), trust was associated with agreeableness on the personality measure ($r = 0.23$; $p < 0.05$).

To explore how some of these concepts held up longitudinally, some of the temperament scores (at nine years) were correlated with the personality measures (at 13 years) using Pearson's r for the pilot respondents. It was noted that shyness in temperament at Wave 1 was significantly negatively correlated with extraversion at Wave 2 ($r = -0.35$, $n = 68$, $p < 0.01$); emotionality at Wave 1 correlated negatively with emotional stability at Wave 2 ($r = -0.46$, $n = 67$, $p < 0.01$); and sociability at Wave 1 was positively associated with extraversion at Wave 2 ($r = 0.29$, $n = 67$, $p < 0.05$).

In summary, the TIPI is a short measure which held up well psychometrically in terms of its criterion validity, and as such was deemed suitable for *Growing Up in Ireland*, which does not have personality as its main focus.

6.3.4 PARENTAL STRESS

Instrument rationale and description

Children's socio-emotional, cognitive, and physical development is optimised when parenting is supportive and sensitive to their individual needs. However distress in the parenting role can have both short- and long-term effects on children. It has been linked to harsh reactive parenting and can interfere with parents' ability to respond constructively to their children (Deater-Deckard, 2005).

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 to 90) with higher scores indicating higher levels of stress.

Although all four subscales are significantly related to child outcomes, it was felt that inclusion of all 18 items would present a serious response burden to respondents. With a view to reducing response burden (especially important in a longitudinal study) only the 6-item parental stressors subscale was used for the pilot study at Wave 2. Parenting stress was chosen as it is associated with negative parenting attitudes, negative parenting behaviours, and parental well-being (Crnic, Gaze & Hoffman, 2005). Much research has focused on the determinants of parenting stress, which include poverty, social disadvantage, lack of education, and poor child health (Warfield, 2005). It is the consequences of parenting stress for children's developmental outcomes that is of interest in the present context. For example, studies have shown that parenting stress can interfere with parents' abilities to interact positively with their child (Deater Deckard, 2005), and is associated with a range of adverse



child outcomes, including behavioural problems (Crnic & Low, 2002). As the economic recession and its impact on families and parental stress were particularly relevant when planning for the 13-year phase of interviewing, it was considered very important to include a measure of parental and/or family stress.

Performance in the Pilot Study

Analysis of the pilot data indicated high levels of internal reliability consistency for the parental stressors subscale (0.77 for the Primary Caregiver and 0.80 for the Secondary Caregiver). Higher scores indicate more stress and a total stress score is calculated by summing across the 6 items (range = 6 – 30). Overall the scale items showed a good spread of responses with a minimum and maximum score achieved for all items, although scores were somewhat skewed towards the lower end of the scale for mothers. Total stress scores for the Primary Caregiver ranged from 6 to 30 with a mean of 10.6 (S.D. = 4.55) and 11.7 (S.D. = 4.25) for the Secondary Caregiver.

Cross-referencing against other criteria with theoretical links to parental stress helped to establish convergent validity for the measure. For example, maternal stress was positively related to parent-child conflict ($r = 0.44, p < 0.01$), and conduct problems (measured on the SDQ) ($r = 0.36, p < 0.01$). Higher maternal stress scores indicated a greater likelihood of belonging to the 'hazardous' drinking group (as measured by the FAST) ($r = 0.21, p < 0.05$), while the depression status (measured by the CESD) of both the Primary and Secondary caregivers was associated with parental stress ($r = 0.29, p < 0.01$; $r = 0.26, p < 0.05$). Maternal stress was associated with family type, single parents indicating they were more stressed than those in two-parent households ($r = 0.20, p < 0.05$),

Parental stress is an important measure which is linked to several important child outcomes. It was proposed that the stressors subscale was retained for the 13-year-old wave.

6.3.5 MONITORING AND SUPERVISION (KERR AND STATTIN, 2000)

Instrument rationale and description

Monitoring of children's behaviour is a core element of parenting in adolescence. High levels of monitoring in adolescence have been associated with lower levels of anti-social behaviour and substance use (e.g. Criss et al. 2015; Pesola et al. 2015). Monitoring has also been linked to academic achievement (Steinberg et al., 1992), depression (Gil-Rivas et al., 2003), as well as levels of parental involvement (Laird, Pettit, Dodge et al., 2003).

Some evidence suggests that the extent to which adolescents share information on their activities and behaviour with their parents (adolescent disclosure or 'right-to-know' patterns) may be a stronger predictor of both parental knowledge and adolescent adjustment than parents' active efforts at monitoring their children (Kerr & Stattin, 2000; Stattin and Kerr, 2000).



The Monitoring and Supervision Scale (Stattin and Kerr, 2000) comprises four subscales: monitoring (9 items); parental solicitation (5 items); child disclosure (5 items); and parental control (6 items), with items being rated on a five-point Likert-type scale ranging from 'almost never or never' to 'almost always or always'.

With a view to reducing respondent burden, only the monitoring, disclosure and control subscales were included in the pilot. Questions in both subscales were asked of the Primary and Secondary Caregivers (the latter where relevant). The control questions were asked of the Study Child.

Performance in the Pilot Study

Analysis of the pilot data indicated that the internal reliability of the monitoring subscale was 0.61 for the Primary Caregiver and 0.82 for the Secondary Caregiver. For the disclosure subscale it was 0.68 for the Primary Caregiver, 0.69 for the Secondary Caregiver.

The child-reported control measure returned a reliability coefficient of 0.71. The scores for each subscale are calculated by summing across the items (some have been reverse coded).

All three subscales show a reasonably good spread of scoring across the items, although skewness is an issue for all the subscales.

Analysis of Variance was used to explore whether gender of the child was associated with different levels of monitoring, disclosure or control. No differences were found except in the area of disclosure, where girls were significantly more likely to spontaneously disclose information to their mothers ($F=11.53$, $p<0.01$). These findings replicate those of the original authors. Girls also reported slightly higher parental control than boys, although this difference was not significant.

As with previous research findings (e.g., Stattin and Kerr, 2000), child disclosure (Primary Caregiver report) was positively associated with parental monitoring ($r = 0.35$, $p<0.01$) and negatively associated with child-reported depressive symptoms ($r = -0.40$, $p<0.01$). Disclosure was also related to closeness in the parent-child relationship ($r = 0.55$, $p<0.01$), and negatively associated with child reported delinquency ($r = -0.28$, $p<0.05$). Monitoring was also found to be negatively associated with levels of delinquency ($r = -0.40$, $p<0.01$).

Both monitoring and disclosure (Secondary Caregiver report) were associated with parent reported behavioural and emotional difficulties in the child (measured on the SDQ). Higher reported levels of monitoring and disclosure were negatively associated with peer problems (monitoring - $r = -0.35$, $p<0.01$; disclosure - $r = -0.39$, $p<0.01$), as well as emotionality (monitoring - $r = -0.45$, $p<0.01$; disclosure - $r = -0.31$, $p<0.01$).

Child-reported parental control was shown to be positively associated with Pianta's positive aspects for the Primary Caregiver ($r = 0.37$, $p<0.01$), and negatively associated with conflict in



both the Primary Caregiver ($r = -0.24, p < 0.01$) and Secondary Caregiver ($r = -0.33, p < 0.01$) relationships. Control was also negatively associated with both child-reported delinquency ($r = -0.37, p < 0.01$) and parent-reported conduct problems ($r = -0.26, p < 0.01$).

These are important measures in terms of predicting child outcomes and in the general context of child relationships and parenting style. The measures have worked well with both parents and young people in the pilot and it was therefore proposed to use them in the 13 year wave.

6.3.6 FAST ALCOHOL SCREENING TEST (FAST)

Instrument rationale and description

The Fast Alcohol Screening Test (FAST) (Hodgson et al., 2002) measure was developed in the UK as a short screening tool for alcohol misuse. It follows in the path of work done in a WHO study that resulted in a 10-item questionnaire called the AUDIT (Allen, Litten, Fertig & Babor, 1997); but with average administration time on the FAST reported to be 20 seconds by the test authors.

The scale comprises four items, however the test authors assert that 50% of people may be classified as 'hazardous' or 'not hazardous' drinkers using the answer to the first item "how often do you have EIGHT or more drinks on one occasion?" (six drinks for women) – five answer categories range from 'never' through to 'daily'.

The maximum score is 16. A total score of 3 or more indicates hazardous drinking. If a person answers 'never' on the first question, he or she is not a hazardous drinker and the remaining questions are not necessary. If a person answers 'weekly' or 'daily or almost daily' on the first question, he or she is considered a hazardous drinker and the rest of the questions are skipped. If a person answers 'monthly' or 'less than monthly' to the first question, the other three questions are needed to complete the screening for hazardous drinking. The questions cover (a) not able to remember the night before, (b) failed to do what was normally expected of you, and (c) other person concerned about your drinking.

The items are included in the sensitive supplementary section of both the Primary and Secondary Caregiver questionnaires.

Performance of the FAST in Pilot study

The percentage of Primary and Secondary Caregivers classified as hazardous drinkers in the *Growing Up in Ireland* 13 year pilot was 12.2 per cent and 16.7 per cent respectively.

Although a larger proportion of Secondary Caregivers fall into the 'hazardous' drinking group than would be expected, it was 'hazardous' drinking on the part of the Primary Caregiver that



was more significantly associated with negative child outcomes.²² Analysis of variance indicated that higher levels of drinking were associated with lower levels of parent-child positive aspects ($F = 12.72, p < 0.01$), prosocial behaviour ($F = 8.87, p < 0.01$) and spontaneous disclosure from the child ($F = 9.46, p < 0.01$). Alcohol misuse was also associated with higher levels of child-reported delinquency ($F = 5.98, p < 0.05$) and conduct problems reported by the parent ($F = 4.57, p < 0.05$) as well as parental stress ($F = 6.14, p < 0.05$) – pilot data suggesting that both increased with parental alcohol consumption

This is an extremely important measure given the findings from the 13 year pilot, and the well documented impact on children that a parent's alcohol misuse can have. Given its obvious merits for policy makers, the measure was retained for inclusion in the self-complete supplement of the questionnaires for both Primary and Secondary Caregivers.

²² The reader is reminded that Primary Caregivers are more likely to be the Study Child's mother, Secondary Caregivers to be their father.



Chapter 7

MAIN PILOT – SUMMARY AND RECOMMENDATIONS





7 MAIN PILOT – SUMMARY AND RECOMMENDATIONS

7.1 INTRODUCTION

The pilot with the 13-year-olds demonstrated the value of such an exercise in providing essential information on the likely problems and/or success for different components of the instrumentation and issues with procedures that could be usefully improved before the national roll-out of the study. First, there were logistical issues associated with the actual fieldwork itself at this stage. The participants and their families were recruited through the primary school system at Wave 1, when they were nine years of age. By 13 years the children had mostly moved to secondary school and had become much more dispersed and not as easy to access within the school system. For this reason it was important to reassess the focus of fieldwork and specifically, to assess the efficiency of adopting the same model of interviewing in Wave 2 as in Wave 1, i.e. a model based on an initial interview in the school followed by one in the home. Secondly, there was a clear need to find the right balance between the inclusion of new topics which were age-appropriate for 13-year-olds, the exclusion of variables that were no longer appropriate (or did not need to be asked again), while maintaining the longitudinal nature of the study.

The proposed changes which arose from the pilot are summarised in this chapter. The change in the focus of fieldwork and data collection from a combination of school and home to one based only in the home is discussed first as it was the most substantial change to be recommended on foot of the pilot. This is followed by a discussion of some of the more important changes which were recommended for the instruments.

7.2 RECOMMENDATIONS FOR CHANGE IN APPROACH TO DATA COLLECTION

As described earlier in the report, the design adopted for the pilot at Wave 2 was very similar to that used in Wave 1 (when the children were 9 years of age). This involved school and home-based fieldwork. In the earlier wave the sample was recruited through the schools. Self-completion of some parts of the questionnaire and cognitive tests by each Study Child, gathered in a group substantially relieved respondent burden in the home. Having the Study Child's teacher complete a detailed questionnaire on the Study Child provided a large amount of information on the child, not least allowing triangulation of details recorded from Primary Caregivers in their interview (e.g. on the Strengths and Difficulties Questionnaire). Recording details on the class teacher, school principal and school-level information greatly facilitates subsequent multi-level analysis. At 9 years old, when the school-based component was completed the fieldwork commenced in the home. This was a logical progression from school to home. By 13 years of age, the Study Children had made the transition to Secondary school. A major consequence of this was that they went from a situation where they had one class teacher in Primary school to one where they had multiple subject teachers in Secondary school. This meant that it was not possible to get a detailed questionnaire completed about each child by his/her teacher, as it was less likely that the subject teachers would have a sufficiently rounded knowledge of the child to complete a full questionnaire about him/her. As a compromise, the Study Team attempted in the pilot phase to collect some basic data about the Study Child from the school's



principal (discussed in Chapter 4 above). Even this, however, proved problematic and the collection of child-level information from a number of subject teachers placed a very heavy burden on the principals. Accordingly, with regret, the Study Team decided not to pursue the recording of individual-level information on the Study Children in the school. Details on the actual school, such as size, facilities, attendance etc would, however, continue to be recorded from school principals in the main study.

In the main pilot phase, the Study Team attempted to identify schools with cohort members in advance of the home interview. As noted in Chapter 3, the introductory letter to the families identified 46 secondary schools which were being attended by relevant study participants. A further 18 schools were identified in the course of the home-based fieldwork. Identifying the first 46 schools allowed the Study Team to approach them at an early stage in the process and recruit them into the study.

Although this approach worked relatively well, some problems were encountered. The most important of these included:

- After the schools were identified, substantial lead time was required to access and recruit them into the Study.
- Following recruitment, most interviewers found that multiple visits were required to the school in order to administer the tests to all children due to individuals being absent on the day of the original visit. These repeated visits placed a major burden on the school.
- The logistics of connecting the home-based and school-based fieldwork were substantial. Following the move to secondary schools, the children were no longer clustered by school to the same extent as when they were first recruited in primary school – so there were smaller numbers of sample children in an individual school and schools were more dispersed.
- In addition, some families withdrew their consent for the school phase of data collection after their home interview had been completed. This appeared to be connected to a more general issue of the 13-year-olds not wanting to be ‘singled out’ in secondary school as participants in the study.

For these reasons the Study Team recommended at the end of the pilot phase that a further pilot (which it referred to as the ‘pilot extension’) should be carried out to test the feasibility of undertaking all of the fieldwork exclusively in the home. This was to involve interviewing the Primary and Secondary Caregivers as in the first stage of the pilot phase as well as the 13-year-old him/herself. The questionnaire for the Study Child would incorporate the issues addressed in the school-based fieldwork of the first stage of the pilot. It was proposed that all cognitive testing would also be carried out in the home.

The Study Team also proposed administering a reduced version of the Drumcondra Reasoning Test (DRT) which had been generated by the test developers in the Educational Research Centre,



Drumcondra in Dublin, with a view to assessing the feasibility of administering the new (reduced) test in the home in the main phase of interviewing.

In summary, the Study Team recommended testing an alternative model for data collection from the Study Child, from an approach based on a combination of the school and home to one based exclusively in the home. This approach would involve complementing the home-based interviews with the 13-year-olds and their main caregivers with an interview with the principals in schools which were attended by Study Children. The information recorded from the principal would focus exclusively on the school, its resources, ethos and related issues, and would not record any individual-level information on the Study Children. This was most likely to be the way interviewing would have to take place as the children grow older, say at 17 years, when the school would become even less of an option for implementing fieldwork.

7.3 TIME USE DIARY PROPOSED FOR NEXT STEP

Included in Appendix E8 is a “light” one-day time use diary which would be completed by the Study Child on a day specified by the Study Team. The reference day for the diary would be allocated so as to ensure a good spread of days across the week and weekend. Because the diary had worked very well with the 9-year-olds it was not included in the first stage of the pilot but was included in the pilot extension. The diary was explained to the Study Child and his/her Primary Caregiver and was left for self-completion on the specified day, for postal return to the Study Team.

7.4 SCHOOL-BASED INTERVIEW

In light of the proposed design changes outlined above the Study Team also recommended that as part of the subsequent national roll-out of the 13-year fieldwork, it would attempt to carry out a census of all Secondary schools in Ireland in the winter of 2011. This would involve sending the Principal’s Questionnaire to all schools in the country. This attempted census would be based on all 735 Secondary schools on a postal basis. In this way it was hoped to record details at the school level which would be linked to the survey information recorded in the home-based interview, and which could be ultimately be used to control for school-level characteristics in subsequent analysis of the child and family-based data.²³ This would make it possible to record substantial amounts of child-, family- and school-level data but its collection would not depend on a link between the family and school components. Doing so would relieve a lot of the constraints encountered in the pilot phase with the 13-year-olds.

²³ The name and address of the school being attended by the 13-year-old was recorded in the course of the home-based interview.



7.5 INFORMATION LEAFLETS AND CONSENT AND ASSENT FORMS

All of these worked well in the pilot. The Study Team recommended their continued use in the pilot extension.

7.6 DETAILS OF CHANGES PROPOSED TO THE INSTRUMENTS FOR THE PILOT EXTENSION

In this section the main changes recommended to the instruments for the pilot extension phase are summarized.

7.6.1 THE SCHOOL-BASED COMPONENT

7.6.1.1 THE PRINCIPAL QUESTIONNAIRE

The Principal Questionnaire yielded good information, except for Q13 – ‘Year school was built’. The question was ultimately trying to record information on the condition of the school building, but was not successful in this regard. The question needed to be replaced with something more informative, such as asking directly about the physical condition of the school and whether or not it was fit for purpose.

7.6.1.2 THE PRINCIPAL-ON-CHILD WORKSHEET

The worksheet was difficult and time-consuming for principals to complete and yielded very little usable information as the principals found difficulties in providing the information at the level of the individual child at this stage in their school career. The same problems did not arise in Primary School where the child generally has only one teacher who is very well placed to record details on the child’s educational performance and social integration in the school setting. It was recommended that the worksheet be dropped and that questions on special needs assistance required by the 13-year-old be asked of the Primary Caregiver instead.

7.6.2 THE HOUSEHOLD-BASED COMPONENT

7.6.2.1 THE CHILD MAIN QUESTIONNAIRE

As per the proposal to move all interviews to the household, the pilot work highlighted that the structure of the interviews needed to change quite a lot. It was recommended that the Child Main Questionnaire in the home include the questions from the Child School questionnaire and the Child Sensitive Part 1. It was felt that, in light of its content, the Child Sensitive Part 2 should remain separate from the other questionnaires, and retain its own consent form.

7.6.2.2 CHILD SENSITIVE QUESTIONNAIRE PART 2

As noted, it was recommended that this questionnaire should be included in a single Child Sensitive Questionnaire. The questionnaires were also to be presented in a Male and Female format, which were to be differentiated by the maturation questions. Boys would be asked about changes in their voice, while girls would be asked about having their period and when it started. Although age of menarche is a good measure of pubertal status in girls, the measure chosen for the boys is not as precise as desirable but (following consultation with experts in this area) was felt to be the best



available for use in a study like *Growing Up in Ireland*. All other questions remained unchanged, with the exception of an additional three items which are screeners for psychotic experiences and have been used to good effect with children of this age (e.g. Poulton et al, 2000). The late addition followed a suggestion from the member of the Scientific Advisory Group on the potential usefulness of collecting information on such experiences as the cohort members enter adolescence, and the comparative dearth of information on this area in the Irish context. These additional questions were:

- Have you ever heard voices or sounds that no one else can hear?
- Have you ever seen things that other people could not see?
- Have you ever thought that people are following you or spying on you?

The response categories to each were: No, never; Maybe; Yes, definitely.



Chapter 8

PILOT EXTENSION – BACKGROUND, STRUCTURE AND OPERATIONAL DETAILS





8 PILOT EXTENSION – BACKGROUND, STRUCTURE AND OPERATIONAL DETAILS

8.1 INTRODUCTION

This section summarises the procedures, protocols and outcomes of the pilot extension which was undertaken at Wave 2 of the Child Cohort (at thirteen years).

As noted in the first part of this report, the two main recommendations from the pilot were that (a) the pilot extension should involve testing the feasibility of administering all fieldwork with the Study Child and main caregivers in the home (in contrast to the combined school and home-based approach adopted in the pilot phase); and (b) the pilot extension would further explore the cognitive tests to be used with this cohort at thirteen years. This involved consideration of a reduced form of the Drumcondra Reasoning Test (DRT) and also use of the Wechsler Abbreviated Scale of Intelligence (WASI). The full Drumcondra Reasoning Test takes approximately 60 minutes to administer and so was excluded from the first pilot on the grounds of respondent burden. In discussions with the test developers, a reduced form of the test was agreed with the Study Team. This could be administered in approximately 25 minutes and was based on two subtests – verbal reasoning and numerical ability.²⁴ Similarly, the Study Team considered two subscales from the WASI – matrix reasoning and similarities subscales.

In this chapter the operational details of the pilot extension are outlined. Section 8.2 begins by briefly describing the sample used in this phase (specifically its origin and size) and interviewer training. Section 8.3 then discusses the procedures used to contact the families with Section 8.4 considering the questionnaires and instruments administered in the home. Section 8.5 outlines a three-way split sample design used to test three different modes of implementation based on:

- a. all questionnaires being administered on a single laptop in the home;
- b. the Primary and Secondary Caregivers' questionnaires being administered on a single laptop in the home with the Study Child's questionnaires being administered on paper, in parallel with the questionnaires for the parents/guardians;
- c. all questionnaires being administered on one of two laptops in the home – a laptop for the Primary / Secondary Caregivers' questionnaires and another for the Study Child's questionnaires and cognitive tests. Section 8.6 outlines the procedures for securing and implementing consent to administer the Child Sensitive questionnaires and also the Parenting Style Inventories completed by the young people.

²⁴ The Study Team gratefully acknowledges the assistance of Dr Gerry Shiel, Dr David Miller and Dr Peter Archer from the ERC for their work in developing the short form of the DRT for the pilot extension.



8.2 THE SAMPLE AND INTERVIEWER TRAINING

A total of 110 13-year-olds and their families were randomly selected from the main sample of 8,568 children and families who had participated in the first wave of the project (at 9 years) for inclusion in the pilot extension. In planning the pilot extension it was decided not to re-interview this set of families in the subsequent main phase of the study. It was agreed that the information recorded in the pilot extension would constitute their main phase interview, albeit with potentially some missing values on individual questions which were changed between the pilot extension and the main phase of fieldwork.

Eighteen interviewers worked on the pilot extension. All interviewers had previously worked on the pilot. Using only interviewers who had previously worked on the pilot meant that they were already familiar with the issues involved in interviewing 13-year-olds and also with a large proportion of the substance and content of the questionnaires. All interviewers were given two days training covering the following:

- Background and objectives of the pilot extension
- Field procedures and general training on administration of instruments and questionnaires in the home, including the split sample design to assess the feasibility of three options for administering the questionnaires in the home
- Detailed review of CAPI and CASI programs
- Detailed review of all paper-based questionnaires
- Detailed instruction in the Drumcondra Reasoning Test (DRT) and Wechsler Abbreviated Scale of Intelligence (WASI)
- Physical measurements
- Ethics and child protection protocols, including incident reporting
- Completing administrative documents

8.3 CONTACTING THE FAMILIES

All families in the pilot extension were sent an introductory letter in the post, along with an information leaflet about *Growing Up in Ireland*. This was followed up 3–5 days later by a personal visit from the interviewer to explain *Growing Up in Ireland* and what their participation involved; to secure signed consent; and to arrange for the questionnaires to be completed during data collection.

8.4 QUESTIONNAIRES

The following questionnaires were administered in the pilot extension:

- Primary Caregiver Main Questionnaire
- Primary Caregiver Self-Complete Sensitive Questionnaire



- Secondary Caregiver Main Questionnaire
- Secondary Caregiver Self-Complete Sensitive Questionnaire
- Child Main Questionnaire, including Piers Harris
- Child Sensitive Questionnaire adapted from Sensitive Part 1 and Sensitive Part 2 as used in the pilot phase (Male and Female versions)
- Child's Parenting Style Inventory
- Time Use Diary
- Cognitive Tests – Drumcondra Reasoning Test or Wechsler Abbreviated Scale of Intelligence (on a split sample basis).

All questionnaires used in the pilot extension are contained in Appendix E. The content of the questionnaires was very similar to that used in the pilot of 13-year-olds. The broad outline of each of the questionnaires is sketched below.

8.4.1 PRIMARY CAREGIVER MAIN QUESTIONNAIRE

This questionnaire was administered by the interviewer in CAPI mode. It contained the following sections:

Section A	Introduction and Household Composition
Section B	Child's Health
Section C	Respondent's Health
Section D	Child's Emotional Health and Well-being
Section E	Child's Education
Section F	Family Context
Section G	Socio-demographics
Section H	About You (Primary Caregiver)
Section J	Neighbourhood/Community

8.4.2 SECONDARY CAREGIVER MAIN QUESTIONNAIRE

This questionnaire was administered by the interviewer in CAPI mode. It contained the following sections:

Section A	Introduction
Section B	Parental Health



- Section C Parenting and Family Context
- Section D Socio-demographics
- Section E About You (the Secondary Caregiver)

8.4.3 PRIMARY CAREGIVER AND SECONDARY CAREGIVER SELF-COMplete SENSITIVE SECTIONS

The sensitive supplement for both the Primary and Secondary Caregivers was self-completed in CASI mode, unless there were clear literacy or related issues or the respondent asked the interviewer to administer it, for whatever reason. At training, interviewers were instructed that in such circumstances they should explain that it contained some slightly more sensitive questions. They were also instructed that if the Sensitive Questionnaire was being administered, the interviewer and respondent should be alone in the room with no-one else (adult or child) present. The sensitive questionnaire recorded the following information:

- AS1–AS3** Details on person(s) from Wave 1 who are no longer on household grid
- S1** Whether or not respondent is biological parent (new respondents only)
- S2–S6** Details on adoptive Study Children (if relevant and a new respondent)
- S7–S11** Details on fostered Study Children (if relevant and a new respondent)
- S12–S16** Marital/cohabitating status
- S17–20** Nature and quality of marital / partner relationship including Dyadic Adjustment Scale
- S21** Parental stressors subscale of the Parental Stress Scale (Berry & Jones, 1995)
- S22** Current pregnancy status (asked only of female respondents)
- S23–25** Problematic alcohol consumption
- S26–28** Current smoking habits
- S29** Current use of illicit drugs
- S30–S31** Depression – including CES-Depression Scale
- S32–S33** Contact with Criminal Justice System
- S34** Knowledge of 13-year-old’s drug and alcohol use
- S35** Whether or not respondent had discussed sexual health issues with the 13-year-old
- S36** Where other biological parent lives (if relevant)



S37-S46 Details on non-residency (where applicable) of the Study Child's other parent. These include: when the parent's previous relationship ended; custody arrangements; frequency of contact with the non-resident parent; financial contributions by a non-resident parent to the 13-year-old's household; quality of relationship between respondent and non-resident parent.

8.4.4 CHILD MAIN QUESTIONNAIRE

The structure of the Child questionnaires changed substantially from the pilot to the pilot extension. The number of questions in the 13-year-old's Sensitive Questionnaire was reduced in the pilot extension. This meant that some of the questions which had previously been included on the 13-year-old's Sensitive Questionnaire Part 1 were now included in their Main Questionnaire – not requiring separate consent. Some of the very sensitive questions (which had been included in Part 2 of the Child Sensitive questionnaire in the main pilot) remained in a single Study Child Sensitive Questionnaire. Interviewers were instructed to show a blank copy of this questionnaire to the Primary Caregiver, and then request that the parent sign a dedicated consent form before the 13-year-old was asked to fill it out on a paper questionnaire. The main content of the main Child questionnaire in the pilot extension was as follows:

- Q1–12** School and Education: the child's attitude towards school; subjects taken favourite and least favourite subject; relationship with teachers; length of time spent on homework; perceived difficulty or otherwise of subjects; additional help in some subjects; prevalence of being late for school, getting into trouble in class, etc.; absenteeism.
- Q13–23** Activities: usual time spent on daily activities, focusing in particular on computer activity and internet use.
- Q24** Rules and limits set by parents
- Q25-26** Availability of pocket money
- Q27–31** Participation in sports and related activities
- Q32-33** Food consumption
- Q34** Dental care
- Q35** Chore participation
- Q36–40** Friendship networks
- Q41** Emotional well-being
- Q42–53** Bullying – as a victim and perpetrator



Q54–58 Self-perception – including losing weight and dieting

Q59 Parental discipline when the Study Child misbehaves

Q60–61 Piers Harris Self-concept Scale

8.4.5 CHILD SENSITIVE QUESTIONNAIRE

In the pilot extension, the Child Sensitive Questionnaire was shorter than it had been in the earlier pilot and it covered the following issues:

Q1–3 Relationships and Sexuality Education

Q4 Pubertal development (age of menarche for girls and breaking of voice for boys)

Q5a Anti-social behaviour

Q5b Psychotic experiences

Q6 Ever in trouble with Gardaí

Q7a–7c Smoking

Q8a–8d Drinking alcohol

Q9–11 Taking of non-prescribed drugs.

As noted above, a blank copy of this questionnaire was shown to the Study Child's Primary Caregiver (out of earshot of the respondent him/herself) and a dedicated consent form was signed before it was completed by the Study Child.

8.4.6 CHILD'S PARENTING STYLE INVENTORY

This was a standard self-completion inventory for children to describe their interactions with parents using the concepts of demandingness, responsiveness and autonomy. It contains a total of 16 questions (Appendix E7) – see section 6.3.3 for further details.

8.4.7 TIME-USE DIARY

The time-use diary was included to record basic details on time spent in each of 21-precoded main activities in the course of a day which was specified by the Study Team so as to ensure representativeness of the 7 days of the week. The 21 activities were chosen on the basis of consultation with the children in the Children's Advisory Forum; review of time-use diaries used in comparable studies with children; and consultation with experts in the field. Although it would have been highly desirable to have recorded details on simultaneous multiple activities, location of activities and with whom each activity was undertaken, it was decided not to do so. Inclusion of these additional items of information would have made the self-complete diary too complex for self-



completion and would have placed an unreasonable burden on the respondents in an already detailed survey.

The time-use diary divided the day into ninety-six 15-minute blocks. As noted, a total of 21 pre-coded activities were set out in the diary, with the option for a further four open-ended activities to be defined by the 13-year-old. The respondent was asked to fill out the diary by drawing arrows through the time slots to indicate what s/he was doing in each of the ninety-six 15 minutes periods. The interviewer explained the diary to the 13-year-old and went through a worked example with him/her. The diary was then left for self-completion and return in the post. The interviewer asked the respondent to complete it in respect of a specified day (writing this day and date on the form). The “diary day” for completion of the time-use diary was selected so that each of the seven days was equally represented in the completed diaries.

8.4.8 COGNITIVE TEST – DRUMCONDRA REASONING TEST OR WASI

Two subscales from the British Ability Scale were used in the main pilot of the 13-year-olds. It was found that the results of these tests were not strongly correlated with any of the expected socio-demographic characteristics of the child or family. Given that it was very difficult to reliably assess if this was due to the content of the test (developed in the UK) or was a robust feature of this particular pilot sample, it was decided to trial two alternative cognitive tests in the pilot extension – viz. the Drumcondra Reasoning Test (DRT) and the Wechsler Abbreviated Scale of Intelligence (WASI).

8.4.9 DRUMCONDRA REASONING TEST

The Drumcondra Reasoning Test (DRT) is a test of cognitive skills. It is a broadly-based test of verbal and numerical ability, not a school-performance test. It can be used to assess students in transition between Primary and Secondary school or in the early years of Secondary school. It comprises Verbal Reasoning and Numerical Ability subtests. It was designed by the Educational Research Centre in Drumcondra, Dublin and although it is centred to a degree on the Irish School Curriculum it does not purport to be a performance test but instead a reasoning test which measures scholastic ability. Although not a performance test per se, the Drumcondra Reasoning Test has been found to be highly predictive of later achievement in Junior and Leaving Certificate examinations (Hannan et al. 1996). The test administered in the pilot extension was a modified version of the main Drumcondra Reasoning Test. The modification was carried out by the test developers based in the Educational Research Centre in Drumcondra, Dublin.

8.4.10 WECHSLER ABBREVIATED SCALE OF INTELLIGENCE

The Wechsler Abbreviated Scale of Intelligence (WASI) provides a measure of intelligence which has been used in a wide range of research and other settings. The test can be administered in approximately 15 minutes. The WASI is individually administered and was standardised on an English speaking U.S. population aged from 6 to 89 years. The Matrices and the Similarities subscales (from



the four subscales in the full WASI²⁵) were administered in the pilot extension with the 13-year-olds. These two were chosen to provide measures of verbal and non-verbal reasoning. Both the Drumcondra Reasoning Test (DRT) and the WASI are described in detail in Chapter 10 below.

The cognitive test was assigned in the pilot extension on a split half-sample basis so that 50 per cent of the 13-year-olds completed the DRT, the other 50 per cent the WASI. Assignment to the respective tests was on a random basis.

8.5 THREE-WAY SPLIT IN SAMPLE DESIGN

8.5.1 THE THREE GROUPS

Following the experience of the pilot phase it was clear that administering all fieldwork in the home would have many advantages. The major disadvantage of this approach, however, is the burden on the respondent family in terms of contact time necessary in the home to complete all 13-year-old and Caregiver questionnaires and tests. A three-way split design was adopted in the pilot extension with a view to assessing the response burden on the families and testing ways of minimizing this. The three groups in this split design are summarised in Table 8.1.

²⁵ Vocabulary; Similarities; Block Design; and Matrix Reasoning.



Table 8.1 Three-way split sample design used in the pilot extension

Group One		Group Two		Group Three		
One laptop – all informants in sequence		One laptop – Parent(s) on laptop. Child on paper. Parents / Child in parallel		Two laptops – Parent(s) / Child in parallel		
Laptop	Paper	Laptop	Paper	Laptop1	Laptop2	Paper
1. Primary Caregiver Main (CAPI), Sensitive (CASI). 2. Secondary Caregiver Main (CAPI), Sensitive (CASI). 3. Child - Main - Sensitive - Parenting Inventory (all 3 CASI)	Cognitive Test Drumcondra or WASI (split sample)	1. Primary Caregiver Main (CAPI), Sensitive (CASI). 2. Secondary Caregiver Main (CAPI), Sensitive (CASI).	Child - Main - Sensitive - Parenting Inventory Cognitive Test Drumcondra or WASI (split sample)	1. Primary Caregiver Main (CAPI), Sensitive (CASI). 2. Secondary Caregiver Main (CAPI), Sensitive (CASI).	Child - Main - Sensitive - Parenting Inventory (all 3 CASI)	Cognitive Test Drumcondra or WASI (split sample)
No. Families	40		40			30

In Group One households the interviewer used one laptop. It was used to administer all questionnaires to the Primary Caregiver, Secondary Caregiver and Study Child sequentially. The Main and Sensitive questionnaires with the Primary and Secondary Caregivers were respectively administered in CAPI or completed in CASI as appropriate. The questionnaires with the 13-year-old (Main and Sensitive²⁶) and Parenting Style Inventory were all self-completed by the respondent in CASI. The cognitive test (either DRT or WASI) was completed by the Study Child on paper.

In Group Two families the interviewer used one laptop. This was principally used to interview the Primary and Secondary Caregivers. Their main questionnaires were administered by the interviewer in CAPI, their sensitive questionnaires were self-completed in CASI. While the Primary and Secondary Caregivers were being interviewed the 13-year-old was self-completing his/her questionnaires and

²⁶ Subject to Primary Caregiver consent.



cognitive test on paper. In Group Two households the interviewer explained the paper questionnaires to the 13-year-old and prepared him/her to complete them before interviewing the Primary Caregiver. The Study Child completed his/her questionnaires in a separate room so that the Primary and Secondary Caregivers could be interviewed in privacy. The key issue with Group Two families was that the adult(s) and 13-year-old were being interviewed in parallel (the latter on paper), thus reducing the overall contact time with the household.

In Group Three families the interviewer used two laptops. As summarised in Table 8.1 the Primary and Secondary Caregivers were interviewed in the usual way (in CAPI and CASI) on the first laptop. The interviewer set up the second laptop for the 13-year-old and explained how to use it (going through practice questions with him/her) before commencing the interview with the Primary and Secondary Caregivers. The 13-year-old self-completed in CASI in a separate room to allow maximum privacy for the Primary and Secondary Caregivers when they were being interviewed. One aspect of the interviewer's preparation of the laptop for the 13-year-old was setting it up to allow the Study Child gender-specific Sensitive Questionnaire and Parenting Style Inventory to be administered only in situations where the parent/guardian had previously given consent (see Section 8.6 below)

The cognitive test was administered in a common fashion in each of the three split design samples. The Drumcondra Reasoning Test (DRT) was explained by the interviewer and self-completed on paper by the 13-year-old. The WASI was administered by the interviewer. The Study Child completed it on paper in all scenarios.

Families were assigned to each of the three groups on a random basis. Interviewers were also assigned to the three groups on a random basis so that each interviewer had an approximately equal number of families within each group.

8.5.2 ADVANTAGES AND DISADVANTAGES OF THE THREE GROUPS

Group One: One laptop – sequential interviewing of Primary Caregiver, Secondary Caregiver and 13-year-old

Advantage:

- The main advantage was that all respondents were interviewed on the laptop. This meant that the data were subject to all routing and range checks in the CAPI/CASI programs as they were being collected. The data were also available for checking in almost real time as soon as the completed questionnaire was uploaded from the field.

Disadvantage:

- The main disadvantage was the substantial “down time” in each home when the interviewer was waiting with the Primary Caregiver while the 13-year-old self-completed on the laptop. Only the heights, weights and the cognitive test could be completed in parallel in these families. The main consequence of this, of course, was the lengthy contact time in the home.



Group Two: One laptop for adults; child on paper in parallel

Advantage:

- Substantial reduction in contact time with the family. Total respondent time was very similar to Group One. The reduction in family contact time was solely due to the parallel data collection from the adult(s) and Study Child.

Disadvantages:

- The 13-year-old completed the questionnaires on paper. These had to be subsequently entered into the data base.
- As the questionnaires were being completed on paper they were subject to more routing errors (this cannot be controlled for in the same way as if the data are recorded in CAPI or CASI).
- The data were not available for some considerable time, until after data entry.
- It was not possible to provide the 13-year-old with any forward-fed information.
- The process was less secure than on a laptop as this option means that paper questionnaires are completed in the home without direct supervision by an interviewer at all times.

Group Three: Two laptops – adult(s) and children in parallel

Advantage:

- Substantial reduction in overall contact time with the family, due to the parallel data collection from the adults and Study Child. There was very little difference in contact time between Groups Two and Three. The mode of implementation for the 13-year-old (on paper or on laptop) was not a major issue. The experience in the pilot extension was that all 13-year-olds in Group Three families were able to complete their questionnaires on the laptop.

Disadvantage:

- The main disadvantage with this approach was the budgetary implications of a second laptop in every home.

8.6 SECURING CONSENT FOR CHILD SENSITIVE QUESTIONNAIRE

8.6.1 CONSENT FOR CHILD SENSITIVE QUESTIONNAIRE

In the pilot extension the Primary Caregiver was asked to sign the “Parental Consent Form for the Child Sensitive Questionnaire” (see Appendix D6). This was done out of earshot of the Study Child. The Primary Caregiver was shown a blank copy of the questionnaire which was explained in full before requesting the signing the consent form. The interviewer then adjusted the 13-year-old’s CASI questionnaire (for those in Groups 1 and 3 above) depending on whether or not consent had been



given.²⁷ Only if the interviewer set the laptop to indicate that consent had been given did the Child Sensitive Questionnaire appear on the screen. For respondents in Group 2 households (where the 13-year-old completed the questionnaire on paper) the interviewer gave the paper copy of the 13-year-old's Sensitive Questionnaire to the Study Child (after parental consent had been secured) and explained how to complete it. On completion, it was sealed in an envelope with other paper questionnaires completed by the 13-year-old. None of the other household members had access to the 13-year-old's paper questionnaires. All electronic questionnaires were locked down by the respondent on completion.

The parental consent form which was signed by the Primary Caregiver explicitly noted:

"I understand that neither I nor my spouse/partner (where relevant) will have access to the information given by my child in the child sensitive questionnaire."

8.6.2 THE PARENTING STYLE INVENTORY

The 13-year-old was asked to fill out the Parenting Style Inventory to describe their interactions with both the Primary and Secondary Caregivers and also (where relevant) of non-resident biological parent(s) in situations where he/she had on-going contact with the Study Child. To do this, the interviewer had to identify which family structure was relevant to the respondent and also the level of contact with the non-resident parent (where relevant), so as to distribute the relevant questionnaire modules on parenting style to the 13-year-old (i.e. on Mother, Father, Mother's Partner or Father's Partner). This was done with the Primary Caregiver when the interview was being arranged by the interviewer using the "Family Situation" card in Appendix D7. The discussion on family structure and which forms of the Parenting Style Inventory to administer took place out of earshot of the 13-year-old. The interviewer then adjusted the Study Child's CASI Parenting Style module (or distributed relevant paper questionnaires as appropriate) on the basis of family structure and (if relevant) contact with non-resident biological parent.

²⁷ At the start of the interview, all Study Children were told that they could decline to answer any of the questions (this applied to the Main and Sensitive Questionnaires).





Chapter 9

PILOT EXTENSION – RESPONSE RATES AND QUESTIONNAIRE RESPONSE TIMES





9 PILOT EXTENSION – RESPONSE RATES AND QUESTIONNAIRE RESPONSE TIMES

9.1 INTRODUCTION

This chapter considers response rates in the pilot extension followed by a discussion of the time taken to administer the survey, using each of the three methods described in the last chapter.

9.2 RESPONSE RATES

9.2.1 OVERALL RESPONSE RATES

From the 110 households in the sample, interviews were successfully completed in the home with 95, representing a response rate of 87.2 per cent. The reader should note that the response rate of 87 per cent in the pilot extension compares with 76.5 per cent achieved in the pilot for this cohort.

An important issue in a longitudinal study is differential attrition related to characteristics of the family. The literature suggests that attrition rates are higher among more socially disadvantaged groups. There was some (albeit limited) evidence that this was the case in the pilot extension. The reader is reminded that the sample size (110 families in total) was small. Table 9.1 shows aggregated figures on inter-wave attrition according to family social class at Wave 1. This shows that 89.4 per cent of families who were in the Professional/Managerial group in Wave 1 participated in the study in Wave 2, compared with 78 per cent in other class categories. As one would expect in view of the small sample size, the association was not statistically significant.

Table 9.1 Inter-wave attrition classified by family social class in Wave 1 of the Study

Family Social Class in Wave 1	Participated in pilot extension
Professional / Managerial	89.4
Other non-Manual / Skilled Manual	77.8
Semi-skilled / Unskilled Manual	77.8
Total	87.2

Similarly, Table 9.2 suggests that attrition is higher among families with less well educated mothers. The relationship was also not statistically significant. The link between attrition and socio-demographics characteristics of participants in longitudinal surveys is, unfortunately, common to all longitudinal studies. Attrition bias will be a problem in longitudinal surveys if attrition is systematically related to characteristics such as educational attainment, economic status or social class. The importance of keeping in contact with respondents between waves to minimise attrition is discussed by Couper and Ofstedal (2009) and the more general issues around attrition in panels is discussed in Tortora (2009). In *Growing Up in Ireland* both proactive and reactive measures are used to minimise attrition and maximise response in each wave. These include recording details on alternative addresses from respondents at previous waves of interviewing; and leaving ‘change of address’



postcards when interviews are being conducted. An extremely important aspect of minimising attrition is an exercise of ‘refusal conversion’ which is carried out in each data sweep. When a family refuses to participate in the study it is usually re-assigned to an alternative interviewer and a new contact attempt made a few weeks after the initial unsuccessful approach.²⁸

Table 9.2 Interwave attrition classified by mother’s highest level of educational attainment in Wave 1 of the Study

Mother’s highest level of educational attainment in Wave 1	Participated in pilot extension
Leaving Certificate or less	83.3
Diploma / Certificate	88.0
Degree or above	90.3
Total	87.2

9.2.2 RESPONSE ON THE CHILD SENSITIVE QUESTIONNAIRE

As discussed in the previous chapter, the structure of the Child questionnaires changed substantially from the pilot to the pilot extension. This involved a reduction in the number of questions in the 13-year-old’s Sensitive Questionnaire and moving some questions to their Main Questionnaire – not requiring separate consent.

Contrary to the experience in the earlier pilot (where only 57 per cent of Primary Caregivers gave consent to complete the Study Child’s Sensitive Questionnaire), the response was much more positive in the pilot extension, with nearly all Primary Caregivers allowing their 13-year-old to complete the Child Sensitive.

9.3 QUESTIONNAIRE RESPONSE TIMES

One of the main advantages of splitting the fieldwork between the school and home was that a substantial proportion of the child’s questionnaire (including the Piers Harris and cognitive test) could be administered in the school – self-completed by each Study Child in a group setting. This resulted in a substantial reduction in respondent burden and contact time in the home, subsequent to the school-based phase of fieldwork. One of the main objectives in the pilot extension was to test the feasibility of concentrating all fieldwork in the home and, in particular, testing the interview and contact time.

The response times for each of the questionnaires, for each of the three-way sample splits are summarised in Table 9.3. Allowing for random fluctuations within a small sample, the time taken to administer each of the questionnaires and related instruments was quite similar for each of the three groups. Overall, the total interview time was 158 minutes (based on the Drumcondra Reasoning Test

²⁸ Not all refusals are re-assigned for ‘conversion’. In circumstances in which a family very strongly expresses its unwillingness to participate in the survey or requests that it should not be subsequently approached as part of the project it will not be included in a refusal conversion exercise.



(DRT), which took about 5 minutes longer to administer than the WASI). As discussed above, this time was all sequential for families in Group 1. In contrast, the household contact time was shorter for families in Groups 2 and 3 as the child’s questionnaires and cognitive test were administered in parallel with the questionnaires for their Primary and Secondary Caregivers. This meant that 60–65 minutes of the 13-year-old’s interview time was run in parallel with their parent(s) / guardian(s) – the time shaded in grey in Table 9.3 for Groups 2 and 3. Accordingly, in situations in which the 13-year-old’s questionnaires could be completed in parallel with the relevant Caregiver questionnaire, the direct contact administration time for Groups 2 and 3 was reduced by approximately one hour compared to situations in which the various components of the study were completed sequentially. The Study Team notes, however, that this would not be possible in every family and interviewers were instructed that they had to accommodate the family in their participation in the surveys. The extent to which the parallel completion of surveys could take place in practice was very dependent on the circumstances of the individual family. Nonetheless, the figures in Table 9.3 clearly indicate that substantial savings in terms of direct survey contact time with the family could be achieved by adopting the approach used with Groups 2 or 3 in the pilot extension – the timings of sections that could run in parallel are shown in the highlighted boxes: so for example the 65 minutes it would take for the child’s participation in Group 2 (assuming the DRT) would run concurrent, rather than subsequent to, the time taken for the parent interview.

Table 9.3 Questionnaire response times for each of the three design splits

Questionnaire/Instrument	Group 1 Aver Mins	Group 2 Aver Mins	Group 3 Aver Mins
Primary Caregiver (Main)	42.4	36.8	39.8
Primary Caregiver (Sensitive)	7.5	8.3	9.8
Secondary Caregiver (Main)	35.2	32.0	29.6
Secondary Caregiver (Sensitive)	9.5	10.4	10.0
Total PCG and SCG	94.6	87.5	89.2
13-year-old’s (Main) – incl. Piers Harris	29.2	30.6	35.6
13-year-old’s (Sensitive)	3.1	4.9	3.6
13-year-old’s on Mum (Parenting Style Inventory)	2.0	2.6	2.4
13-year-old’s on Dad (Parenting Style Inventory)	1.7	2.4	1.9
Total 13-year-old (without cognitive test)	36.0	40.5	43.5
Drumcondra Reasoning Test (DRT) OR	25	25	25
Wechsler Abbreviated Scale of Intelligence (WASI)	20	20	20
Total 13-year-old incl. DRT	61.0	65.5	68.5
Total 13-year-old incl. WASI	56.0	60.5	63.5
Total Interview Time (for individuals) with DRT	155.6	153.0	157.7
Total Interview Time (for individuals) with WASI	150.6	148.0	152.7

It is clear from Table 9.3 that running adult and 13-year-old questionnaires in parallel makes the administration of the survey in the home (to the exclusion of the school) a very viable option.



The figures in the table for questionnaire administration time have been taken from the laptop or (where completed on paper) from the start and end times entered by the interviewer for the relevant questionnaire. In addition to the direct interview time there is the very important set-up time involved in discussing the study generally with the family and securing their full signed consent. This involves ensuring that the family is fully acquainted with all aspects of the study, its background, funding and what their participation in the study involves, including the expected time commitment. Time for assembling the measurement equipment and recording the physical measurements is also necessary as well as time for disengagement in a professional and mannerly fashion. The disengagement process is particularly important in a longitudinal study in which the Study Team will be approaching the family in subsequent waves for a further substantial commitment of time and input. From interviewer debriefing it was conservatively estimated that this adds, on average, an additional 10 – 15 minutes to the family contact time.





Chapter 10

PILOT EXTENSION – THE COGNITIVE TESTS





10 PILOT EXTENSION – THE COGNITIVE TESTS

10.1 INTRODUCTION

In the pilot extension it was decided to test two measures of performance / cognitive development which had not previously been used in the pilot phase — the Drumcondra Reasoning Test (DRT) and the Wechsler Abbreviated Subscale of Intelligence (WASI).

10.2 THE DRUMCONDRA REASONING TEST (DRT)

As noted above, the Drumcondra Reasoning Test (DRT) is an objective test of cognitive skills. It reflects the ability of students to reason with words and numbers and is not intended to measure reading or mathematics achievement. It is used to assess students in transition between Primary and Secondary school or in the early years of Secondary. It comprises Verbal Reasoning and Numerical Ability subtests. It was designed by the Educational Research Centre in Dublin. The full DRT is an 80 item test (40 items each in the numeracy and verbal components) and usually takes over an hour to administer. As this is too onerous in the overall context of *Growing Up in Ireland*²⁹ and the demands of other instruments which are being administered in the course of interview a reduced version (Form C) of the full DRT was designed by the Educational Research Centre at Drumcondra (Dublin), specifically for use in *Growing Up in Ireland*. The reduced version used in the pilot extension contained 20 Verbal Reasoning questions (Part 1) and 20 Numerical Ability questions (Part 2), designed for individual or group administration. The respondent is given a maximum of 25 minutes to complete the test. Students record their answers on a machine-scorable answer sheet.

The Verbal Reasoning component of the test involves two types of questions. There are ten 'nearest in meaning' type questions, in which the young person has to select from four options the word nearest in meaning to the target word. There are also ten 'odd-one-out' type questions, in which the young person has to select from four options the word which is semantically different from the others. The Numerical Ability component of the test contained items on computation, sequences, number sentences, indices, and operations with fractions and decimal numbers. The Study Children did not have access to a calculator during the Numerical Ability test.

The reduced (40-item) form of the Drumcondra Reasoning Test was chosen for use in the pilot extension for a number of reasons. Ideally an achievement or performance test directly comparable to the Drumcondra English and Mathematics tests used at 9 years of age with this cohort would have been used when the children were 13 years old. Unfortunately, in Ireland there was a lack of up-to-

²⁹ It was because it was too onerous and demanded too much time from the respondent (in addition to the various questionnaires) that it was felt that the standard version of the DRT should not be administered in the main pilot with the 13-year-olds. Only after the main pilot and further discussions with the test developers did concrete discussions take place on the possibility of developing a bespoke shortened version of the DRT for *Growing Up in Ireland*. It was ultimately this shortened 40-item version which was administered in the pilot extension.



date achievement tests related to the school curriculum for this age group. The 13-year-olds in *Growing Up in Ireland* were mostly in first or second year of Secondary school at the time of interview and standardized curriculum-based testing does not generally start in schools until third year. Drumcondra Attainment tests in English, Irish and Mathematics do exist but these had not been revised in line with curriculum since the late 1970s (Shiel et al, 2010) and it was felt best not to try to use them in *Growing Up in Ireland*. The Drumcondra Reasoning Test is a long-standing test of ability and at the time of the pilot with the 13-year-olds was used in a lot of Secondary schools, in some cases as a basis for allocating children to streamed classes in first year.

The **Verbal Reasoning test** is completed first. It involves the 13-year-old answering 20 verbal reasoning questions such as the following:

Q1. Which word is nearest in meaning to: **FURY**?

- A. Haste B. Ignorance C. Rage D. Anxiety

The **Numerical Ability test** also had 20 questions, such as the following:

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

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

While not described as an achievement test, the DRT has been found to be highly predictive of later achievement in Junior and Leaving Certificate examinations (Hannan et al. 1996). There are national norms for sixth class, first and second year students. It was the only Irish-specific test available in Ireland for children/young people of this age. The DRT was piloted with 55 students during the pilot extension.

10.3 THE WECHSLER ABBREVIATED SCALE OF INTELLIGENCE (WASI)

The WASI consists of four subtests: Vocabulary, Similarities, Block Design, and Matrix Reasoning. Two subtests were piloted with 55 students during the pilot extension – the Matrix Reasoning and the Similarities sub-test to provide a verbal and non-verbal reasoning components. The test was included on a split-sample basis along with the Drumcondra Reasoning Test so that a comparison could be made of any operational issues arising with each test and also to compare the results between the two subgroups.

10.3.1 SIMILARITIES SUBTEST

The Similarities subscale is a measure of verbal reasoning. In administering the subtest the 13-year-old is asked to record how 18 couplets of items are similar in nature. Examples include the following:

7. Grapes – Strawberries

18. Child – Adult



The interviewer records the 13-year-old's response on a verbatim basis. The answers are scored '0', '1', or '2' by reference to a manual from the test developers.

10.3.2 MATRIX REASONING SUBTEST

The Matrix Reasoning Subtest is a measure of non-verbal reasoning. It involves the 13-year-old being asked to identify which of five potential shapes is missing from a group of four. There are 29 items in this subscale, with the items getting progressively more difficult as the respondent moves through the test.

10.4 RESULTS OF THE COGNITIVE TESTS

10.4.1 PERFORMANCE OF THE DRT

As noted above the Drumcondra tests in Maths and Vocabulary were used with this cohort when the children were 9 years of age. These two tests were performance tests which were linked to the curriculum for 9-year-olds in the Irish education system when fieldwork with the cohort took place.

At 9 years of age maths scores were associated with particular household characteristics, and clear social gradients emerged at that time in relation to family structure ($F=59.80$, $p<0.001$), household income ($F=93.59$, $p<0.001$) and mother's education ($F=6.97$, $p<0.001$); such that children from households with a more advantaged socio-demographic profile tended to get higher scores. Reading scores were also associated with these variables in the same direction: family structure ($F=45.87$, $p<0.001$), household income ($F=130.38$, $p<0.001$), and mother's education ($F=4.27$, $p<0.01$) although a significant gender difference which was evident in maths scores ($F=64.02$, $p<0.001$) was not evident in reading scores.

Although the Drumcondra Reasoning Tests used in the pilot extension with the 13 year-olds are not directly comparable with those used at 9 years of age the current measures still correlated well with those used at the first wave of interviewing. The Verbal Reasoning used at 13 years was positively associated with reading scores at 9 years ($r = 0.67$, $p<0.001$) and Numerical Ability was strongly correlated with Maths scores at 9 years ($r = 0.82$, $p<0.001$). Mean scores of 67 per cent (S.D. = 22.6) for Verbal Reasoning and 57 per cent (S.D = 23.9) for Numerical Ability were found. At 9 years scores for reading averaged 71 per cent for reading and 57 per cent for maths.

Although the numbers who completed the DRT in the pilot extension were relatively small ($n=40$);³⁰ in keeping with our previous ability tests, the results were quite well differentiated by household characteristics such as social class (DRT_Verbal – $F = 9.15$, $p<0.01$), (DRT_Numerical – $F = 4.72$, $p<0.05$); and mother's education (DRT_Verbal – $F = 3.10$, $p<0.05$), (DRT_Numerical – $F = 3.90$, $p<0.05$) – with

³⁰ The reader is reminded that the full sample for the pilot extension had 110 families, 95 of whom participated. A split sample of the 110 families was used in the pilot extension for administering the Drumcondra Reasoning Test and the Wechsler Test, giving just over 40 13-year-olds in each test.



children from more advantaged backgrounds tending to get higher scores. Equivalised income also had a positive and significant correlation with maths ($r = 0.21$; $p < 0.001$) and reading scores ($r = 0.41$; $p < 0.001$) in the same directions.

10.4.2 PERFORMANCE OF THE WASI IN THE STUDY

The other half of the pilot extension sample completed the WASI Matrices and Similarities subscales. The average percentage score was 71 per cent (S.D. 12.03) for the Matrices and 65 per cent (S.D. 8.62) for the Similarities subscales respectively. The distributions for these scores did not, however, show any evidence of a linear trend in terms of associations between background household characteristics such as social class, mother's education or household income and either of the WASI subscales (Matrices or Similarities).

The summary scores for each of the tests (DRT and WASI) and their subscales are given in Table 10.1.

Table 10.1 Summary of scores for the DRT and WASI

	Raw scores				Percentage scores			
	Mean Score	SD	Min	Max	Mean Score	SD	Min	Max
DRT_Numerical (n=40)	11.5	4.72	2.0	20.0	57.4	23.59	10.0	100.0
DRT_Verbal (n=40)	13.5	4.41	3.0	20.0	67.3	22.07	15.0	100.0
WASI_Matrices (n=44)	25.9	4.36	14.0	32.0	73.9	12.47	40.0	91.4
WASI_Verbal (n=41)	31.7	4.29	23.0	41.0	66.1	8.95	48.0	85.0

For a number of reasons, the Study Team recommended not to proceed to main fieldwork with the WASI tests but, instead, to administer the Drumcondra Reasoning Tests (verbal reasoning and numerical ability). The administration times for the WASI and the reduced version of the DRT that was developed for *Growing Up in Ireland* by the Educational Research Centre in Drumcondra were very similar, so there was little difference in respondent burden. The Drumcondra Reasoning Test is not a measure of academic achievement per se but is a test of cognitive skill and ability of the student to reason with words and numbers; based on the Irish school population. As noted above, an achievement test that was directly comparable to the English and Maths tests used at 9 years of age with this cohort would ideally have been used at 13 years, but no such achievement test was then available in Ireland.

Although the DRT is not an achievement test, it has been used extensively in Ireland and has been found to be predictive of later achievement in the Junior and Leaving Certificate examinations (Hannan, Smyth, McCullagh, O'Leary & McMahon, 1996). It was also found in the pilot that the DRT correlated with family and other background characteristics in a very similar manner to the relationships identified with the Drumcondra Reading and Maths tests administered to this cohort at 9 years of age. No such relationships were apparent with the results of the WASI. Taking everything into consideration, including administration time (respondent burden); longitudinal consistency with the interview at 9 years of age; and trends in the pilot data, the Study Team recommended that it



proceed with the Drumcondra Reasoning Tests in preference to the WASI. These were further complemented with the BAS matrices subscale: a measure tapping into visuo-spatial ability and believed to be largely independent of school-based maths and vocabulary skills.



Chapter 11

PILOT EXTENSION – SUMMARY AND RECOMMENDATIONS





11 PILOT EXTENSION – SUMMARY AND RECOMMENDATIONS

11.1 SUMMARY

The principal objective of the pilot extension was to test the feasibility of administering all fieldwork in the home, thus avoiding substantial lead time for fieldwork in the school. This also meant avoiding the negative effects of peer pressure on response and participation rates of Study Children when tested within the school. Response rates in the pilot extension were 87 per cent.³¹ This compares with 76.5 per cent in the pilot, when fieldwork was split between the school and home.

Response burden is clearly one of the main concerns when all fieldwork is concentrated in the home. To assess the scale of respondent burden a three-way split sample design was implemented. This was based on (a) one laptop, with adult and 13-year-old questionnaires being completed in sequence; (b) one laptop for adults, with children completing questionnaires on paper (in parallel with their main Caregivers); (c) two laptops (Caregiver's and Study Child's questions being completed in parallel). The logistics as well as advantages and disadvantages of each approach were considered in Chapter 9. Although running all fieldwork in the home involved a direct interview time of the order of 150 – 155 minutes (depending on which cognitive test was implemented), approximately 60 minutes of this could be run in parallel with caregiver data collection – with young people completing their questionnaires either on paper or on a second laptop.

Response on the Child Sensitive in the pilot extension was very high compared to the pilot. In the latter, 43 per cent of families refused to allow their child to participate in this section of the survey. In the pilot extension nearly all of 95 families gave consent.

A final major point tested in the pilot extension was the cognitive test. Two options were used on a split-half design – a reduced form of the Drumcondra Reasoning Test (DRT) and the Wechsler Abbreviated Scale of Intelligence (WASI). The DRT results were found to be significantly related to the expected range of socio-demographic variables but the same relationship was not in evidence in respect of the WASI results.

11.2 RECOMMENDATIONS FOR THE MAIN STUDY

On foot of the experiences of the pilot and pilot extension the Study Team recommended the following for the main data collection of the Child Cohort at 13 years:

³¹ This represented 95 families from 109 who were still living in Ireland at the time of the pilot extension. In the case of 94 of the 95 families, the main Caregiver(s) and the 13-year-old participated. In one case the child did not.



1. All fieldwork (including cognitive testing) should be carried out in the home, provided this could be accommodated on one of the “parallel” approaches outlined above in the report (i.e. on the basis of Groups 2 or 3). The preferred option was clearly the two laptop solution.
2. The Study Team recommended that the questionnaires used in the main phase would be as those used in the pilot extension with only two additions:
 - a. Three additional items on psychotic experiences on the 13-year-old Sensitive Questionnaire
 - b. The addition of a question on teaching style in the classroom to the 13-year-old Main Questionnaire. This involved a number of questions on whether or not the 13-year-old copied notes from the board; participated in group work with others in the class; use of CDs or DVDs in class and so on.

Both additions have been identified in previous longitudinal studies as being highly predictive of child outcomes in later life. Both performed without any difficulties in the pilot extension and provided well differentiated data across respondents.

3. The consent procedures used for the 13-year-old Sensitive Questionnaire in the pilot extension should be implemented in the Main Phase of the fieldwork.
4. The Drumcondra Reasoning Test has been found in other longitudinal studies to be predictive of future outcomes. On the basis of its relationships with family characteristics and previously identified predictive properties the Study Team recommended its use in the Main data collection.
5. In parallel with the fieldwork in the home the Study Team recommended running a separate survey of secondary schools. This would collect school-level data on resources, management, ethos and characteristics. As the Primary Caregiver is asked to provide details on which school is being attended by the Study Child this information from the school principal could then be linked to the survey data collected in the home on (and from) the Study Child. These details are important from an analytical perspective, especially in the identification of school-level effects on child outcomes. This survey of schools would be separate from the home-based survey. In de-coupling it from the home-based survey one would avoid the lengthy lead-times experienced in the pilot between the school and home-based components.





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