Growing Up in Scotland: Birth Cohort 1

Sweep 7.5 (Web-CATI) - Primary 5/Age 9 - 2013/14

Background note to accompany the dataset

Overview

Between the seventh and eighth face-to-face sweeps of data collection with Birth Cohort 1 of the Growing Up in Scotland study (GUS), a web and telephone-based sweep was carried out with a parent/carer of the cohort child. This document contains details about the 'sweep 7.5' web-CATI survey only. For details about sweep 7 and the wider GUS study, see related documentation available elsewhere on the UKDS website:

- http://doc.ukdataservice.ac.uk/doc/5760/mrdoc/pdf/5760_userguide_cohort1_sweep7.pdf
- http://doc.ukdataservice.ac.uk/doc/5760/mrdoc/pdf/5760_data_documentation_cohort1_sweep7.pdf

Methodology

This sweep utilised a significantly shorter questionnaire than that used for face-to-face data collection, taking participants no longer than 15 minutes to complete either online or by telephone.

Respondents were the main carers of children who are members of 'Birth Cohort 1' (BC1). BC1 is comprised of a nationally representative sample of 5217 children living in Scotland when they were 10 months old and who were born between June 2004 and May 2005. At the time of this data collection, children in the cohort were aged 9 years old and were in their first term of Primary 5.

All parents received an advance letter informing them about the survey. The letter highlighted that they would be asked to complete a short, online questionnaire (in contrast with previous face-to-face interviews). Parents were asked to check and update their contact details.

Once the online questionnaire was live, all respondents were sent a further letter and an email (where an email address was available) informing them that the questionnaire was ready to be completed, how to complete it (including providing a unique access code) and providing further information about issues such as confidentiality. Emails included a unique hyperlink which allowed parents to directly access the online questionnaire.

Reminders were sent one week after the online questionnaire went live, via email where this information was available and via post where not. After another week, non-respondents were contacted via email where available and via telephone where not.

Where telephone contact was made, parents were either asked to complete a telephone interview or prompted to complete the online questionnaire.

Fieldwork and response

Two phases of fieldwork were conducted across 2013 and 2014: phase 1 took place from September 2013 to November 2013 and phase 2 took place from September 2014 to November 2014. This phased approach ensured that at the time of data collection, the vast majority of children were aged 9 and in the first term of Primary 5.

The total number of cases issued was 4013. This resulted in 2745 productive interviews, representing a response rate of 68%. Of those respondents that completed an interview, 51% (1390) of them completed the questionnaire online via a computer/laptop (43% n=1180) or tablet/smartphone (8%, n=212) whilst the remaining 49% (1355) took part in a telephone interview.

There were 1268 unproductive cases. Fifty-seven per cent (724) of the unproductive cases were as a result of non-contact (this was despite multiple calls to all the numbers). There were 208 broken appointments, 167 refusals and 15 cases where language or telecommunication issues resulted in the case being unproductive. A full breakdown of productive and unproductive cases is shown in the table below:

Table 1 – Fieldwork outcomes			
	Phase 1	**Phase 2**	**Total**
Issued cases	3238	775	4013
Productive	**2232**	**543**	**2775**
Full telephone	1072	306	1378
Full web – computer/laptop	993	190	1183
Full web – tablet/smart phone	167	47	214
Response rate (%)	69	70	69
Unproductive	**1006**	**232**	**1238**
Non-contact	565	145	710
Broken appointment	177	22	199
Refusals/Information refused	142	25	167
Respondent unable to take part (e.g. for health reasons)	22	4	26
Language/ Telecommunication difficulties	12	3	15
Cohort child no longer living in Scotland	8	1	9
Other non-response/non-productive	80	32	112

Using the data

The GUS Sweep 7.5 data consists of the following SPSS file:

GUS_SW7.5_B.sav	2775 cases	Birth cohort

The data file contains questionnaire variables (excluding variables used for administrative purposes). The variables included in the file are detailed in Appendix 2 at the end of this document. As far as possible they are grouped in the order they were asked in the interview. Please note that variable descriptions in the variable list cannot be relied upon to capture the detail of the question wording, or the answer categories used. For the precise question wording, please refer to the questionnaire documentation. A copy of the questionnaire is provided alongside these notes.

The questionnaire covers several topics including:

- Child's relationship with friends and parent/carer
- Family functioning
- Attitudes towards social issues and engagement

A number of validated items/items developed for other studies have been utilised. Information on these is provided below.

Parenting: autonomy and control (selected items from Epstein's Mother-Father-Peer Inventory Scale)

Parents/carers were asked a series of questions about their parenting practices. These questions drew on selected items from Epstein's Mother-Father-Peer Inventory Scale (Epstein,1983; Verhoeven et al.: 2012).

Epstein's Mother-Father-Peer inventory Scale is a widely used, unpublished 1983 scale (reviewed in Verhoeven et al's 2012 paper) that aims to measure parental behaviour. For each statement, respondents are asked to indicate on a four-point scale whether a response is not true at all, somewhat untrue, somewhat true or very true. Parental behaviour is measured over several dimensions, including autonomy granting, control, acceptance and rejection.

Variables associated with the Mother-Father-Peer Inventory Scale	
Variable name	**Description**
WzPInd01	Wz I encourage child to take own decisions
WzPInd04	Wz I'm always telling child how to behave
WzPInd05	Wz I often worry that child will be hurt or become ill
WzPInd06	Wz I help child to become an independent person
WzPInd09	Wz I encourage child to express opinion
WzPInd12	Wz I encourage child to do things by themselves
WzPInd13	Wz I'm overprotective of child
WzPInd14	Wz I'm always telling child what to do and how to behave

Family ethos/climate (selected items from Bloom's Self-Report Measures of Family Functioning)

Parents were also asked questions about their family ethos/climate which drew on selected items from a scale created by Bernard Bloom (Bloom,1985). This scale is one of the most widely-used instruments for measuring family functioning and includes 75 items across 15 dimensions. These dimensions include family sociability, organisation, religious emphasis, conflict, expressiveness and cohesion. The 10 items used in GUS to measure family ethos/climate were drawn from dimensions measuring 'disengagement' and 'cohesion'. For each item, respondents were asked to indicate their level of agreement with statements on a five-point scale, from 'Strongly disagree' to 'Strongly agree'.

Selected items from this scale are summarised in Table 3 below.

Table 3	Selected items from the family functioning scale
Variable name	**Description**
WzEtho1	Wz Our family members really help and support one another
WzEtho2	Wz In our family, we know where all the family members are at all times
WzEtho3	Wz We really get along well with each other
WzEtho4	Wz Our family members are expected to have the approval of others before making decisions
WzEtho5	Wz There is a feeling of togetherness in our family
WzEtho8	Wz Our family members don't do things together
WzEtho9	Wz Our family members seem to avoid contact with each other when at home
WzEtho10	Wz Our family members are extremely independent

Weighting the data

Two weights were developed for Sweep 7.5 of BC1:

- A cross-sectional weight
- A longitudinal weight

For each sample, the cross-sectional weights should be used for any cross-sectional analysis, i.e. any analysis of Sweep 7.5 data only. All sample members that responded at Sweep 7.5 have a cross-sectional weight.

The longitudinal weight should be used for any analyses of main carers that have responded at every previous sweep of BC1 of GUS. Sample members that have responded at every sweep of GUS have a longitudinal weight.

Further details on the weighting process are included in appendix 1.

Table 4	Description of weight variables in the data file
Variable name	**Label**
WzWTbrth	Birth cohort Sweep 7.5 weight
WzWTbth2	Birth cohort Sweep 7.5 weight - longitudinal

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References

Bloom, B.L., (1985). A factor analysis of self-report measures of family functioning. *Family process*, *24*(2), pp.225-239.

Epstein, S. (1983). Scoring and interpretation of the Mother-Father-Peer Scale. Unpublished manuscript, University of Massachusetts, Department of Psychology, Amherst.

Verhoeven, M., Bögels, S. & van der Bruggen, C. (2012). Unique Roles of Mothering and Fathering in Child Anxiety; Moderation by Child's Age and Gender. Journal of child and family studies, 21(2), pp.331-343.

Appendix 1 – Weighting note

1. Overview

Two weights were developed for Sweep 7.5 of BC1. These two weights were generated for analysis of information collected during the Web-CATI survey with the child's parent/carer.

The two weights were:

- A cross-sectional weight (DzWTbrth) for adults that should be used for any cross-sectional analysis of data collected in the Sweep 7.5 web survey. All main carers that responded at Sweep 7.5 have a cross-sectional adult weight.

- A longitudinal weight (DzWTbth2) for analysis of main carers that have responded at every previous sweep of BC1 of GUS.

The Sweep 7.5 survey followed up all main carers who responded at the Sweep 7 interview and gave NatCen permission to be re-contacted. In addition, certain main carers who had not participated at Sweep 7 but who had responded at previous sweeps were contacted if they were still active participants in the study.

2. Weights for main carer interview data

The Sweep 7.5 sample of adult respondents can be split into two groups. For the purposes of describing the weighting these have been named Sample A and Sample B and are defined as follows:

- Sample A – adults who had responded at all previous sweeps

- Sample B – adults who had responded at Sweep 1 but had missed one or more interviews in Sweeps 2-7.

The two samples were treated separately during the weighting. This is because the Sample B respondents are likely to have different response behaviour to those in Sample A, as suggested by their much lower response rates. There were 883 individuals in Sample B, 288 (33%) of whom responded at Sweep 7.5. The response rate for Sample A (3,130) was much higher at 82%. The issued and responding sample sizes are given in Table 1.

Table 1 Response rates for the two groups of main interview respondents			
	Issued	**Responding**	**Response rate**
Sample A	3,130	2,487	79%
Sample B	883	288	33%
Combined (A+B)	4,013	2,775	69%

Two sets of weights were developed for the responding adults: a cross-sectional weight and a longitudinal weight. Only members of Sample A (who have responded at every sweep of GUS) received a longitudinal weight. This weight is described in more detail in Section 2.1.

All Sweep 7.5 respondents will have a cross-sectional weight (Sample A + B). These are described in more detail in Section 2.2.

2.1 Longitudinal weights for main carer interview data

Longitudinal weights were only generated for respondents in Sample A. A model-based weighting technique was used to develop the Sweep 7.5 longitudinal weights, where response behaviour is modelled using data from previous sweeps. This is the same method used to generate weights for adults who completed the main interview at Sweeps 2 to 7. Ineligible households (deadwood) were not included in the non-response modelling.

Response behaviour was modelled using logistic regression. This models the relationship between an outcome variable (in this case response to Sweep 7.5) and a set of predictor variables. The predictor variables were a set of socio-demographic individual and household characteristics collected from the previous sweeps of the study.

The model generated a predicted probability of response for each individual. A set of non-response weights were generated equal to the inverse of these predicted probabilities. Hence respondents who had a lower than average predicted probability received a higher than average weight, increasing their representation in the sample.

Variables found to predict response at Sweep 7.5 are shown in Table 2. All of them were entered in the non-response model which was used to calculate the non-response weights.

Table 2	Variables used in adult non-response weighting (longitudinal sample)
Family Type	
Mother's age at cohort child's birth	
Highest education level of respondent	
Respondent's employment status	
Mothers employment status	
Number of stories/books read last week	
Number of visits to the address	
Has a limiting disability or illness	
SIMD 2012 quintile	
Last known tenure	
Number of children in household	
Child has a new illness/disability	
Number of missing values in key variables	

The final Sweep 7.5 weight was calculated as the product of the non-response weight and the Sweep 2 interview weight. The final weights were scaled to the responding Sweep 7.5 sample size, so that the weighted sample size matches the unweighted sample size.

2.2 Cross-sectional weights for main carer interview data

Cross-sectional weights were generated for all respondents at Sweep 7.5 (the combined A and B samples) and should be used for any cross-sectional analysis of Sweep 7.5 data.

Calibration weighting was applied to the combined sample to create the cross-sectional weights. This method adjusts a set of starting weights using an iterative procedure so that they match pre-defined population totals. The resulting weights, when applied to the combined data, will make the survey estimates match the population estimates which in this instance were calculated from Sample A, weighted by the longitudinal weight. Since the longitudinal weight corrects for sampling error and non-response bias at each stage of GUS, the weighted Sample A estimates are the best population estimates available.

The choice of the variables used in the calibration was dictated by the differences remaining after the Sweep 7.5 longitudinal weights were applied to Sample A and the cross-sectional weight from the last completed sweep for Sample B. The variables used in the weighting are listed in Table 3.

Table 3	Variables used in calibration of the adult cross-sectional sample
Mother's age at cohort child's birth	
Ethnicity of child	
Device	
Last known tenure	
Sex of child	
Urban or rural classification of the area	
SIMD 2012 quintile	

The calibration adjusts for any differences due to differential non-response between Sample A and Sample B.

2.3 Sample efficiency of main carer interview data

Weighting affects the statistical efficiency of a sample: the more variable weights the larger the variance of the (weighted) survey estimates. More variable weights will result in larger standard errors and wider confidence intervals, so there is less certainty over where the "true" population values lie.

The precision of weighted survey estimates is indicated by the effective sample size (neff) which measures the size of an (unweighted) simple random sample that would provide the same precision (standard error) as the weighted sample. The efficiency of the weights is given by the ratio of the effective sample size to the actual sample size. The range of the weights, the effective sample size and sample efficiency for both sets of weights are given in Table 4.

Table 4	Range of adult weights and sample efficiency					
	Min	Max	Mean	N	Neff	Efficiency
Main carer longitudinal weight	0.51	8.81	1	2,487	1,659	67%
Main carer cross-sectional weight	0.52	9.18	1	2,775	1,907	69%

3. Applying the weights

For each sample, the cross-sectional weights should be used for any cross-sectional analysis, i.e. any analysis of Sweep 7.5 data only. All sample members that responded at Sweep 7.5 have a cross-sectional weight.

The longitudinal weight should be used for any analyses of more than one sweep of data. Sample members that have responded at every sweep of GUS have a longitudinal weight.

Appendix 2 – Variable List

Idnumber	Id Number
WzPhase	Web-CATI Phase
WzHGsx1	Wz - Sex of child
DzAgeMth	Wz - Age of child at interview, months
DzHGag1	Wz - Age of child at interview, years
WzHGrsp03	Wz - If this is a different respondent to Sweep 7
DzRSex	Wz - Respondent Sex (dv - ALL)
DzHGrsp07	Wz - Relationship to study child (dv - ALL)
DzRespAg	Wz - Respondent Age (dv - ALL)
WzFriOft	Wz - Apart from school, how often does child spend time with friends?
WzFriWkd	Wz - How often, if at all, does child spend time with friends, but without adults, at the weekend
WzFriAft	Wz - How often, if at all, does child spend time with friends, but without adults, after school?
WzPInd01	Wz - I encourage child to take own decisions
WzPInd02	Wz - I often do things for child even though they might manage it
WzPInd03	Wz - I support child when they do new, exciting things
WzPInd04	Wz - I am always telling child how to behave
WzPInd05	Wz - I often worry that child will be hurt or become ill
WzPInd06	Wz - I help child to become an independent person
WzPInd07	Wz - I let child decide how to spend own money
WzPInd08	Wz - I like to control what child does
WzPInd09	Wz - I encourage child to express opinion
WzPInd10	Wz - I encourage child to do things own way
WzPInd11	Wz - I tell child that if they really love me, they wont misbehave
WzPInd12	Wz - I encourage child to do things by themselves
WzPInd13	Wz - I am overprotective of child
WzPInd14	Wz - I am always telling child what to do and how to behave
WzSocCap1	Wz - Justifiable: Claiming government benefits which you are not entitled to
WzSocCap2	Wz - Justifiable: Buying something you know is stolen
WzSocCap3	Wz - Justifiable: Lying in your own interests
WzSocCap4	Wz - Justifiable: Dropping litter in a public place
WzSocCap5	Wz - People like me have no say in what the government does
WzSocCap6	Wz - The government generally treats people like me fairly
WzEtho1	Wz - Our family members really help and support one another
WzEtho2	Wz - In our family, we know where all the family members are at all times
WzEtho3	Wz - We really get along well with each other
WzEtho4	Wz - Our family members are expected to have the approval of others before making decisions
WzEtho5	Wz - There is a feeling of togetherness in our family
WzEtho6	Wz - It is difficult for me to keep track of what other family members are doing
WzEtho7	Wz - Our family members do not check with each other when making decisions
WzEtho8	Wz - Our family dont do things together
WzEtho9	Wz - Our family members seem to avoid contact with each other when at home
WzEtho10	Wz - Our family members are extremely independent

WzLifeSatis	Wz - All things considered, how satisfied are you with your life as a whole these days?
WzPSpwpy	Wz - What primary year is child currently in?
DzWTbrth	Wz - Birth cohort weight - crossectional
DzWTbth2	Wz - Birth cohort weight - longitudinal